BASF Evaluation of the Engenia™ herbicide Vegetative Vigor Study (MRID 48718015) Consistent with the EFED Evaluation of the Clarity® herbicide Vegetative Vigor Study, based upon the April 25, 2013 EFED Addendum to the Date Evaluation Report on the Toxicity of the Clarity® 4.0 SL herbicide (AI:Dicamba) to Terrestrial Vascular Plants: Vegetative Vigor (MRID 47815102)

The following analysis from the EFED Addendum to the Clarity® herbicide Vegetative Vigor DER is used to make a similar analysis for the Engenia Vegetative Vigor study.

1.

(Clarity® herbicide) After re-evaluating the most sensitive dicot endpoints identified in the attached Data Evaluation Report (DER), the reviewer, in consultation with the Plant Technical Team (PTT), determined that use of the ICos for soybeans (*Glycine max*) is not necessary given the following:

- The lowest concentration tested (0.000261 lb ae/A) in the study exhibited a 9.15% difference from the control for soybeans. Though the natural variability between plants of the same species is not thoroughly understood, it is likely, given the other lines of evidence considered, that this difference is within the range of variability under the conditions of the test.

(Engenia™ herbicide) In the Engenia study, the second-lowest concentration tested (0.0003 lb ae/A) is approximately equivalent to the lowest concentration of Clarity tested in 2009 (0.000261 lb ae/A). Similar to Clarity, this treatment exhibited soybean height as the most sensitive endpoint. In the case of Engenia, the result was 4.79% difference from the control. This lower amount of inhibition is numerically about half of the Clarity result, but may be considered practically equivalent to the Clarity result and the untreated control due to natural variability as pointed out by EFED. This equivalence to the untreated control was confirmed in each case statistically by EFED using the Dunnett's mean comparison, although both were found to be different from the untreated control using the more conservative William's test.

2.

(Clarity® herbicide) There is substantial overlap in the 95% confidence intervals for the untreated control (49.73 and 57.34) and lowest concentration tested (43.52 and 53.75). This, combined with the minimum significant difference in the test of 4%, resulted in a relatively small percent difference triggering a significant effect at the lowest concentration tested.

(Engenia™ herbicide) As in the case of Clarity, there is substantial overlap for the untreated control and the 0.0003 lb ae/A treatment of Engenia. In this case, the untreated control 95% confidence interval was 43.9 and 47.9 while for the 0.0003 lb ae/A treatment the 95% confidence interval was 41.2 and 46.2. Also note that the CV% was much lower in the Engenia study, indicating even lower MSD's with more tendency to trigger a significant effect at low concentrations. In the 2009 Clarity study the CV% in the untreated control and lowest treatment were 6.78% and 10.02%, respectively. In the Engenia study, the CV% was 4.16% in the untreated control and 5.45% in the 0.0003 lb ae/A treatment.

3.

(Clarity® herbicide) The non-linear regression used to calculate the ICx for this study is in better agreement with the measured percent effect at higher concentrations. For example, the

concentrations with observed percent effects of roughly 25% and 50% were 0.000751 and 0.00676 lb ae/A, respectively. From the non-linear regression, the calculated IC25 and IC50 were 0.000513 and 0.00669 lb ae/A, respectively. However, the concentration with an observed percent effect of roughly 10% (0.00026 lb ae/A) is an order of magnitude less sensitive than the calculated IC10 value (0.0000508 lb ae/A). This significant disagreement calls into question the ability of the non-linear regression to accurately represent effects at the low levels observed in the study.

(Engenia™ herbicide) In the case of the Engenia study, as with most non-target plant studies, the calculated IC50 and IC25 were in fairly good agreement with the values estimated by linear interpolation of mean inhibition (Figure 1). The values calculated by EFED using nonlinear regression were 0.00552 lb ae/A and 0.000826 lb ae/A for the IC50 and IC25, respectively. The corresponding endpoints estimated by linear interpolation in Figure 1 were 0.0063 and 0.001, respectively. The calculated IC05 value of 0.0000537 was well below the lowest concentration tested in the study of 0.0001 lb ae/A. Furthermore this 0.0001 lb ae/A lowest rate was definitively confirmed to be equivalent to the untreated control by both Dunnett's and William's statistical comparisons.

4.

(Clarity® herbicide) As a result of this re-evaluation, the reviewer believes that the lowest concentration tested in the study (0.000261 lb ae/A) represents the no adverse effect concentration (NOAEC) and should be used in all future risk assessments for the DGA salt of dicamba. The IC25 value of 0.000513 lb ae/ A will remain the same.

(Engenia™ herbicide) Based on EFED's evaluation of the data in the case of the 2009 Clarity vegetative vigor study as related in the 2013 addendum to the Date Evaluation Report, BASF agrees that 0.000261 lb ae/ A is the appropriate no-observed effect concentration for Clarity. For all of the same reasons listed by EFED, BASF strongly believes that the equivalent concentration of 0.0003 lb ae/ A is the appropriate no-effect endpoint determined for Engenia. BASF contends that the DGA salt and BAPMA salt of dicamba exhibit nearly equivalent phytotoxicity to non-target plants exposed to low concentrations of the active ingredient.

®Registered Trademark for BASF

™Trademark of BASF

TITLE:
BASF Review and Analysis of Granted US Patents Relating to Mixtures of Dicamba and Glyphosate and Possible Herbicidal Synergy

DATA REQUIREMENTS:
N/A

AUTHORS:
Stephen Lehmann
Karen Ware

SPONSOR:
BASF
26 Davis Drive
Research Triangle Park, NC 27709-3528

DATE:
November 14, 2016

This Report Contains 55 Pages

BASF Reg. Doc. No.

2016/7011110

ED_002084_00043253-00001

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality, on any basis whatsoever, is made for any information contained in this document. I acknowledge that information not designated as within the scope of FIFRA §10(d)(1)(A), (B), or (C) and which pertains to a registered or previously registered pesticide is not entitled to confidential treatment and may be released to the public, subject to the provisions regarding disclosure to multinational entities under FIFRA 10(g).

COMPANY: BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

SUBMITTER: _____ 11/14/2016
Jeffrey H. Birk Date

ED_002084_00043253-00002

GOOD LABORATORY PRACTICES STATEMENT

This report does not meet the definition of study under 40 CFR part 160 and is not required to be conducted in compliance with 40 CFR part 160. As such there is no study director or sponsor.

Submitter: _____ 11/14/2016

Jeffrey H. Birk — Date

BASF Corporation

ED_002084_00043253-00003

BASF Review and Analysis of Granted US Patents Relating to Mixtures of Dicamba and Glyphosate and Possible Herbicidal Synergy

BASF is currently seeking regulatory approval for Engenia™ herbicide, a new end-use product containing the low volatility N, N-Bis-(aminopropyl) methylamine (BAPMA) salt of Dicamba. The question was raised as to whether or not there was any evidence of synergistic herbicidal effects of mixtures of Engenia™ herbicide and Glyphosate.

BASF's patent search

BASF has performed a key word patent search aiming at identifying patents that potentially comprise data on synergistic effects of mixtures of Dicamba and Glyphosate. While we believe that our search has identified the relevant granted United States patents which are more closely described below, we cannot and do not guarantee that our search was exhaustive or that all relevant United States patents were captured.

BASF's patent search revealed the following three granted US patents that potentially could comprise data on synergistic effects.

US 6,586,367 (Syngenta)

US 7,407,913 (Syngenta)

US 6,300,323 (Ishihara Sangyo Kaisha)

Search Strategy

The search was performed in the two most comprehensive abstract databases, CAPLUS (Chemical Abstracts, coverage since 1907) and World Patent Index (WPIX, coverage since 1963).
The pesticide ingredients Dicamba and Glyphosate were searched for by their common names, their chemical names, their compound specific codes, and their chemical structures. The search process then filtered for issued US patents disclosing a joint application of both Dicamba and Glyphosate. The three granted US patents resulting from that search procedure are described below.

Search Results

a) US 6,586,367 (Syngenta)

US 6,586,367 claims a "Process for the control of weeds in cultivations of useful plants which are resistant to a phospho-herbicide, characterized in that a herbicidally effective amount of a composition containing, in addition to the usual inert formulation assistants, a phospho-herbicide selected from the group consisting of Glufosinate and Glyphosate, a synergistic amount of at least one further herbicide selected from the group consisting of … dicamba, …."
The patent application and the granted patent themselves do not contain any experimental data. However, based on our review of the prosecution history, during the examination procedure at the USPTO, Declarations/Affidavit(s) under Rule 132 were

provided by the applicant on April 4, 2002.
Declaration No. 4 shows i.a. results of combining glyphosate with Dicamba for use on specific glyphosate-tolerant corn, identified as DK 493RR. There appears to be no indication of any true synergistic weed control effect of the mixture of Dicamba and Glyphosate.

b) US 7,407,913 (Syngenta)

This patent belongs to the same patent family as US 6,586,367 above. In contrast to US 7,407,913, US 6,586,367 claims combinations of Glufosinate, instead of Glyphosate, and other pesticides. Since both patents belong to the same family, the specifications are nearly identical even though the claims are different. US 7,407,913 does not contain additional information with regard to the disclosure of data on mixtures of Dicamba and Glyphosate than US 6,586,367, above.

c) US 6,300,323 (Ishihara Sangyo Kaisha)

US 6,300,323 relates to "the enhancement of the activity of acidic herbicides by the formation of salts using *(poly)ethereal amine* compounds and also to a method of controlling undesirable vegetation by applying a herbicidally effective amount of the (poly)ethereal amine salts to such vegetation when the latter is in a post-emergent state. These (poly)ethereal ammonium salts are thought to aid the penetration and transport of acidic herbicides into and throughout the plant. These salts contain anions derived from parent herbicides and amphiphilic (poly)ethereal ammonium cation(s). These features are proved to enhance the activity of acidic herbicides."

The data supported superior weed control efficacy of these new *(poly)ethereal ammonium salts* of various herbicides compared to Glyphosate Isopropyl Amine Salt or Round-up Ultra. There is no indication that the improvement in weed control was due to Glyphosate or Dicamba or their combination absent these *(poly)ethereal ammonium salts.*

Additional Patent

US 8,629,328 (Monsanto)

This patent has already been brought to the EPA's attention by the Center for Food Safety (Docket No. EPA-HQ-OPP-2016-0187).

Conclusion

Based on the careful and detailed review and analysis of the three identified US granted patents, there appears to be no indication of any true synergistic herbicidal effect of the mixture of the BAPMA salt of Dicamba and Glyphosate. Further, while we believe that the brief analysis above is accurate based on the facts apparent from the patents referenced and their prosecution history, the final disposition is left to the EPA for analysis.

™Trademark of BASF

Appendex

Patent Information

US 6,586,367 (Syngenta)

Declaration Number 4 (Syngenta)

US 7,407,913 (Syngenta)

US 6,300,323 (Ishihara Sangyo Kaisha)

US006586367B2

(12) **United States Patent**
Lee et al.

(10) **Patent No.: US 6,586,367 B2**
(45) **Date of Patent: Jul. 1, 2003**

(54) **PROCESS FOR THE CONTROL OF WEEDS**

(75) Inventors: **Bruce Lee**, Bad Krozingen (DE); **Andreas Zoschke**, Weil am Rhein (DE); **Hans Peter Lutz**, Basel (CH)

(73) Assignee: **Syngenta Crop Protection, Inc.**, Greensboro, NC (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/795,073**

(22) Filed: **Feb. 26, 2001**

(65) **Prior Publication Data**

US 2001/0046945 A1 Nov. 29, 2001

Related U.S. Application Data

(63) Continuation of application No. 09/242,658, filed as application No. PCT/EP97/04795 on Sep. 3, 1997, now abandoned.

(30) **Foreign Application Priority Data**

Sep. 5, 1996 (CH) 2202/96

(51) **Int. Cl.**[7] **A01N 57/02**
(52) **U.S. Cl.** **504/127**; 504/128
(58) **Field of Search** 504/127, 128

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,671,819	A	6/1987	Meyer et al.	
4,769,061	A	9/1988	Comai	71/86
4,816,063	A	3/1989	Yamaguchi et al.	
4,853,026	A	8/1989	Frisch et al.	71/86
5,002,606	A	3/1991	Moser et al.	
5,152,823	A	10/1992	Albrecht et al.	71/79
5,183,492	A	2/1993	Suchy et al.	
5,209,771	A	5/1993	Meyer	
5,457,085	A	10/1995	Seckinger et al.	504/289
5,599,769	A	2/1997	Hacker et al.	

FOREIGN PATENT DOCUMENTS

AU	704539	1/1997
AU	710367	4/1997
CA	1291344	10/1991
CA	1337597	11/1995
DE	3615711	9/1987
EP	0 252 897 A2	1/1988
EP	257542	3/1988
EP	0 354 201 A2	2/1990
EP	0 387 165 A1	9/1990
EP	409815	1/1991
EP	462585	12/1991
EP	475392	3/1992
EP	496701	7/1992
GB	2 233 229	1/1991
WO	WO 89/04607	6/1989
WO	WO 92/08353	5/1992
WO	93/21772	11/1993
WO	WO 96/25043	8/1996
WO	WO 96/34528	11/1996
WO	97/34484	9/1997

OTHER PUBLICATIONS

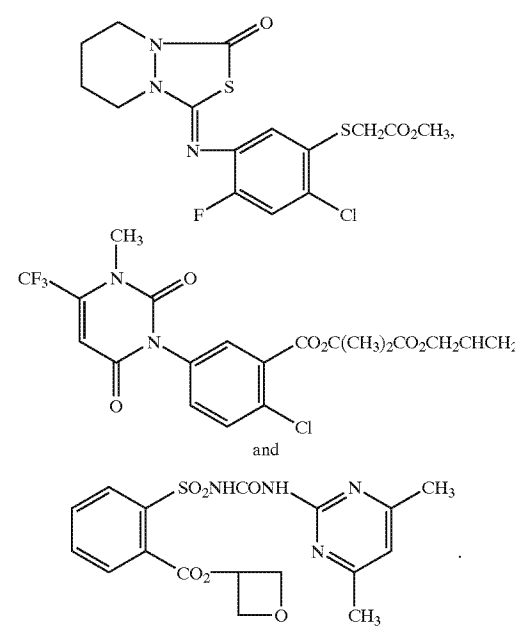
Res. Rep. North Cent. Weed Sci. Soc. (52, 266–267, 1995).
Res. Rep. North Cent. Weed Sci. Soc. (52, 426–427, 1995).
Zeitschrift fur Pflanzenkrankheiten und Pflanzenschuts, Sonderheft X, 335–360 (1984).
Research Report North Central Weed Science Society, 169–171 (1994).
Research Report Expert Committee Weeds Eastern Canada (40 Meet., vol. 1,205–206, 1995).
Research Report Expert Committee Weeds Eastern Canada (40 Meet., vol. 1, 242–243, 1995).
Flint et al., Effects of Glyphosate Combinations with 2,4–D or Dicamba on Field Bindweed (Convolvulus arvensis). Weed Science. 37:12–18.
Waters, S. "Glyphosate–tolerant crops for the future: Development, risks and benefits", Brighton Crop Protection Conference–Weeds (1991), 165–70.

(List continued on next page.)

Primary Examiner—S. Mark Clardy
(74) *Attorney, Agent, or Firm*—Thomas Hamilton

(57) **ABSTRACT**

Undesired plant growth in cultivations of useful plants which are resistant to phopho-herbicides, may be controlled with herbicidal compositions, which contain, in addition to the usual inert formulation assistants, a phospho-herbicide and a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide and its S-enantiomer, metolachlor and its S-enantiomer, fluometuron, propaquizafop, atrazine, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae



13 Claims, No Drawings

OTHER PUBLICATIONS

Moshier, L.J. and Russ, O.G. "Response of Honeyvine Milkweed to Herbicides", North Central Weed Control Conference (1978) 33, 108.
Walker, S.R., Hargreaves, P.A. and Noble, R.M. "Potential for Herbicide Residues to Contaminate Australian Soils and Waters", Herbicide–Resistant Crops and Pastures. Aust. Farming Syst. Proc. Workshop (1995), 191–199.
Yortt, M. L. "Control of Annual and Perennial Weeds in Maize Established by Conventional and Conservation Tillage Practices", Proc. New Zealand Weed and Pest Control Conference (1982) 35th, pp. 215–218.
Research Disclosure No. 37242, published Apr. 1995.
Myers, M.G. and Harvey, R.G., "Triazine–Resistant Common Lambsquarters Control in Field Corn", Weed Technology 7, (1993) pp. 884–889.
Moshier, L.J., "Response of Honeyvine Milkweed to Herbicide Applications", Weed Science (1980) 28(6), 722–724.
Roundup Ultra herbicide booklet –21137T1–2/53. 1996.
Roundup Ultra herbicide booklet –21137U2–2/53. 1996.
Roundup Ultra herbicide booklet –21001S1–28/53. 1994.
Material Safety Data Sheet filed with the United States Occupational Safety and Health Administration for Dual Herbicide. 1998.
Material Safety Data Sheet filed with the United States Occupational Safety and Health Administration for Solicam DF Herbicide. 1999.
"The Pesticide Manual, 10th Edition" (1994). Entries 369, 476, 593, 569, 202,605, 232,332, 582, 36, 148, 22, 664, 627, 577.
Moser, H., Rihs, G., Sauter, H.P., and Bohner, B., "Atropisomerism, Chiral Centre and Activity of Metolachlor" Pesticide Chemistry: human welfare and the environment, vol. 1. Synthesis and structure–activity relationships (1983) pp. 315–320.

Australian Weed Control Handbook, Tenth Edition, Inkata Press, Melbourne, 1995, pp. 380–396, 138–142, 127–133, 180–181, 217–230, 233–234 and 397–398.

"Herbicide Handbook", Weed Science Society of America, Seventh Edition, 1994, pp. 149–152.

Herbicides. Chemistry, Degradation, and Mode of Action, vol. 3 (1988), edited by P.C.Kearney and D.D.Kaufman, published by Marcel Dekker, Inc., New York, pp. 338–345 and 374–377.

Harr, J., Seckinger, K., Ummel, E. and Hargett L.T. "SAN 582 H –A new herbicide for weed control in corn and soybeans", Proceedings of the Brighton Crop Protection Conference –Weeds –1991, pp. 87–92.

Charles, G.W., Constable, G.A. and Kennedy, I.R. "Current and future weed control practices in cotton: the potential use of transgenic herbicide resistance" pp. 89–100 in G.D.McLean and G.Evans, (eds) 1995, Herbicide–resistant Crops and Pastures in Australian Farming Systems.

Rasche, E. "Development of glufosinate ammonium tolerant crops and the selective use of the herbicide glufosinate ammonium", pp. 25–33 in G.D.McLean and G.Evans, (eds) 1995, Herbicide–resistant Crops and Pastures in Australian Farming Systems.

#8 D

PH/5-21028/A/PCT/CPA

OIPE JC181 APR 0 4 2002 PATENT & TRADEMARK OFFICE

RECEIVED APR 0 8 2002 TECH CENTER 1600/2900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF
B. LEE ET AL.
APPLICATION NO. 09/242,658
Filed: February 19, 1999
For: Process for the control of weeds

Group Art Unit: 1616
Examiner: S. Mark Clardy

Commissioner of Patents and Trademarks
Washington, D.C. 20231

DECLARATION UNDER RULE 132 – Declaration #4

I, Rakesh Jain, a citizen of the United States of America, residing at 5023 – 4th Lane, Vero Beach, Florida 32968, hereby declare:

CREDENTIALS

1. That I was awarded the degree of a Ph.D. in Plant Physiology/Weed Science by Virginia Polytechnic Institute and State University in Blacksburg, VA, U.S.A. in 1987;

2. That I have been employed by SANDOZ AGRO, INC., then NOVARTIS CROP PROTECTION, INC. and now SYNGENTA CROP PROTECTION, INC., as a scientist since 1989 and presently hold the position of a weed scientist in the field of plant protection, weed control;

3. That I have been engaged in screening and product support research in the glasshouse in the field of weed control for SANDOZ AGRO, INC., then NOVARTIS CROP PROTECTION, INC. and now SYNGENTA CROP PROTECTION, INC. since 1989;

4. That I am the author and co-author of the following technical articles relating to the same or closely related field of research:

US007407913B2

(12) **United States Patent**
Lee et al.

(10) **Patent No.: US 7,407,913 B2**
(45) **Date of Patent: *Aug. 5, 2008**

(54) **PROCESS FOR THE CONTROL OF WEEDS**

(75) Inventors: **Bruce Lee**, Bad Krozingen (DE); **Andreas Zoschke**, Weil am Rhein (DE); **Hans Peter Lutz**, Basel (CH)

(73) Assignee: **Syngenta Crop Protection, Inc.**, Greensboro, NC (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 340 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **10/609,084**

(22) Filed: **Jun. 27, 2003**

(65) **Prior Publication Data**

US 2004/0097373 A1 May 20, 2004

Related U.S. Application Data

(63) Continuation of application No. 09/795,073, filed on Feb. 26, 2001, now Pat. No. 6,586,367, which is a continuation of application No. 09/242,658, filed as application No. PCT/EP97/04795 on Sep. 3, 1997, now abandoned.

(30) **Foreign Application Priority Data**

Sep. 5, 1996 (CH) 2202/96

(51) **Int. Cl.**
A01N 57/00 (2006.01)

(52) **U.S. Cl.** **504/127**; 504/128

(58) **Field of Classification Search** 504/127, 504/128

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,671,819	A		6/1987	Meyer et al.
4,769,061	A		9/1988	Comai
4,816,063	A		3/1989	Yamaguchi et al.
4,853,026	A		8/1989	Frisch et al.
5,002,606	A		3/1991	Moser et al.
5,071,464	A		12/1991	Bauer et al.
5,094,945	A		3/1992	Comai
5,152,823	A		10/1992	Albrecht et al.
5,183,492	A		2/1993	Suchy et al.
5,209,771	A		5/1993	Meyer
5,221,314	A	*	6/1993	Watson et al. 504/117
5,457,085	A		10/1995	Seckinger et al.
5,599,769	A		2/1997	Hacker et al.
6,046,134	A	*	4/2000	De Gennaro et al. 504/133

FOREIGN PATENT DOCUMENTS

AU	704539	1/1997
AU	710367	4/1997
CA	1291344	10/1991
CA	1337597	11/1995
DE	2839087	3/1980
DE	3615711	9/1987
EP	0076470	9/1982
EP	0218571	4/1987

(Continued)

OTHER PUBLICATIONS

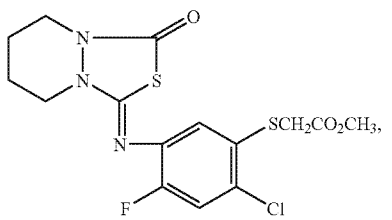
Flint (Weed Science, 1989, vol. 37, 12-18).*

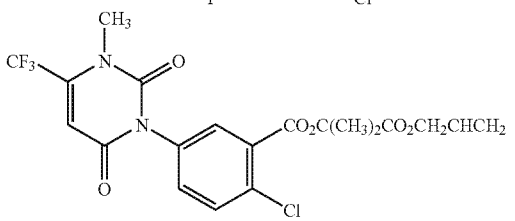
(Continued)

Primary Examiner—Sreeni Padmanabhan
Assistant Examiner—Uma Ramachandran
(74) *Attorney, Agent, or Firm*—Thomas Hamilton

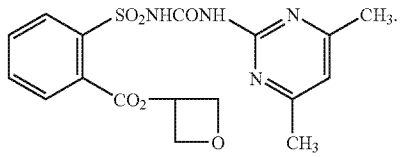
(57) **ABSTRACT**

Undesired plant growth in cultivations of useful plants which are resistant to phopho-herbicides, may be controlled with herbicidal compositions, which contain, in addition to the usual inert formulation assistants, a phospho-herbicide and a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide and its S-enantiomer, metolachlor and its S-enantiomer, fluometuron, propaquizafop, atrazine, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae





and



28 Claims, No Drawings

US006300323B1

(12) **United States Patent**
Haga et al.

(10) **Patent No.: US 6,300,323 B1**
(45) **Date of Patent: Oct. 9, 2001**

(54) **(POLY)ETHEREAL AMMONIUM SALTS OF HERBICIDES BEARING ACIDIC MOIETIES AND THEIR USE AS HERBICIDES**

(75) Inventors: **Takahiro Haga**; **Kevin E. Crosby**, both of Concord; **Jeffrey R. Schussler**, Chardon, all of OH (US)

(73) Assignee: **Ishihara Sangyo Kaisha, Ltd.**, Osaka (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/634,630**

(22) Filed: **Aug. 8, 2000**

(51) **Int. Cl.**[7] **A01N 57/12**; C07C 229/06

(52) **U.S. Cl.** **514/76**; 514/114; 562/553

(58) **Field of Search** 562/553; 514/76, 514/114

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,799,758		3/1974	Franz .
3,853,530		12/1974	Franz .
4,140,513		2/1979	Prill .
4,315,765		2/1982	Large .
4,405,531		9/1983	Franz .
4,481,026		11/1984	Prisbylla .
4,507,250		3/1985	Bakel .
5,750,468	*	5/1998	Wright et al. 504/206

FOREIGN PATENT DOCUMENTS

WO 99/05914 2/1999 (WO) .

* cited by examiner

Primary Examiner—Johann Richter
Assistant Examiner—Brian J. Davis
(74) *Attorney, Agent, or Firm*—Sughrue, Mion, Zinn, Macpeak & Seas, PLLC

(57) **ABSTRACT**

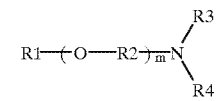
A compound

I

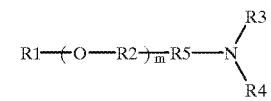
$$\left[\begin{matrix}\text{Acidic}\\ \text{Herbicide-X}\end{matrix}\right]_x \cdot \left[\begin{matrix}\text{Acidic}\\ \text{Herbicide-Y}\end{matrix}\right]_y \cdot \left[\begin{matrix}\text{Acidic}\\ \text{Herbicide-Z}\end{matrix}\right]_z \cdot \left[\begin{matrix}\text{(poly)ethereal}\\ \text{amine}\end{matrix}\right]$$

Wherein x, y, and z are integers from 0 to 3; and the (poly)ethereal amine is at least one selected from compounds of formula II[1] through II[5]:

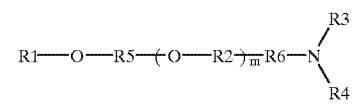
II[1]



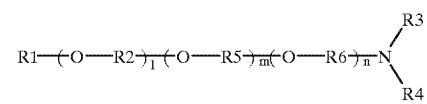
II[2]



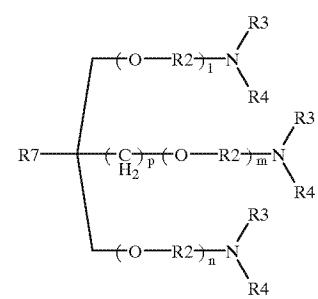
II[3]



II[4]



II[5]



6 Claims, No Drawings

(POLY)ETHEREAL AMMONIUM SALTS OF HERBICIDES BEARING ACIDIC MOIETIES AND THEIR USE AS HERBICIDES

BACKGROUND OF THE INVENTION

Some herbicides bearing acidic moieties are known to be highly effective and commercially important herbicides useful for combating the presence of a wide variety of unwanted vegetation, including agricultural weeds.

Since usually, such acidic herbicides have low solubility in water, they are applied as their derivatives such as metal salts or ammonium salts to enhance the solubility, or esters or amides to enhance movement into plant. For example, N-phosphonomethyl-glycine is formulated in commercial compositions in the form of a water-soluble salt. Herbicidal amine salts of N-phosphonomethylglycine are disclosed, for example, in U.S. Pat. Nos. 3,799,758, 3,853,530, 4,140,513, 4,315,765, 4,405,531, 4,481,026, and 4,507,250. These salts are claimed to have uses as plant regulators, herbicides and defoliants. Many of these salts have the counter-cation to N-phosphonomethylglycine anion bearing relatively low molecular weight. Typical of such salts are alkali metal, for example sodium and potassium salts; ammonium salt; and numerous salts having an ammonium, sulfonium or sulfoxonium cation with 1–3 organic groups containing in total 1–6 carbon atoms, for example 2-propylammonium (isopropylammonium), ethanolammonium, ethylenediammonium, trimethylsulfonium or trimethylsulfoxonium.

Recent Patent WO 99/05914 reveals the herbicidal compositions promoting herbicidal effectiveness of exogeneous chemical substances. The compositions are the amphiphilic salts having anions of the parent exogeneous chemical substances and cations derived by protonation of one or more polyamine(s) or polyamine derivative(s) each having (a) at least two nitrogen-containing groups, of which a number n not less than 1 are amino groups that can be protonated to form cationic primary, secondary, or tertiary ammonium groups, and (b) at least one hydrocarbyl or acyl group having about 6 to 30 carbon atoms.

BRIEF DESCRIPTION OF THE INVENTION

A preferred group of the acidic herbicide consists of those that are normally applied post-emergence to foliage of plants. An especially preferred group of foliar-applied herbicide consists of those that are systemic in plants, that is, translocated to some extent from their point of entry in the foliage to other parts of the plant where they can usefully exert their herbicidal effect.

This invention relates to the enhancement of the activity of acidic herbicides by the formation of salts using (poly) ethereal amine compounds and also to a method of controlling undesirable vegetation by applying a herbicidally effective amount of the (poly)ethereal amine salts to such vegetation when the latter is in a post-emergent state. These (poly)ethereal ammonium salts are thought to aid the penetration and transport of acidic herbicides into and throughout the plant. These salts contain anions derived from parent herbicides and amphiphilic (poly)ethereal ammonium cation (s). These features are proved to enhance the activity of acidic herbicides.

The term "herbicidally effective amount" designates any amount of the compounds disclosed herein, which will kill a plant or any portion thereof. By "plants" is meant germinating seeds, emerging seedlings, and established vegetation, including roots and above ground-portions.

By the term "post-emergent" as used herein, is meant the application of the herbicide compound to weed pests, after these pests have emerged from the ground.

The present invention provides a (poly)ethereal ammonium salt of acidic herbicides of the following formula I:

$$\left[\begin{matrix}\text{Acidic}\\ \text{Herbicide-X}\end{matrix}\right]_x \cdot \left[\begin{matrix}\text{Acidic}\\ \text{Herbicide-Y}\end{matrix}\right]_y \cdot \left[\begin{matrix}\text{Acidic}\\ \text{Herbicide-Z}\end{matrix}\right]_z \cdot \left[\begin{matrix}\text{(poly)ethereal}\\ \text{amine}\end{matrix}\right] \qquad \text{I}$$

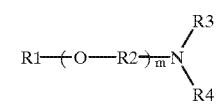
Wherein x, y, and z are integers from 0 to 3 with the proviso that $0<x+y+z\leqq 3$.

Acidic Herbicide-X, Acidic Herbicide-Y, and Acidic Herbicide-Z, same or different that can be used in compositions of the present invention and possess the dissociable proton(s) in their structures include, but are not limited to, the following herbicides.

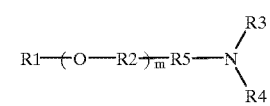
acifluorfen, asulam, benazolin, bentazon, bilanafos, bromacil, bromoxynil, chloramben, clopyralid, cyhalofop, 2,4-D, 2,4-DB, dalapon, dicamba, dichlorprop, diclofop, DNOC, endothall, fenac, fenoxaprop, flamprop, fluazifop, flumiclorac, fluoroglycofen, fomesafen, fosamine, glufosinate, glyphosate, haloxyfop, imazameth, imazamethabenz, imazamox, imazapic, imazapyr, imazaquin, imazethapyr, ioxynil, MCPA, MCPB, MCPP, mecoprop, methylarsonic acid, naptalam, nonanoic acid, picloram, quinclorac, quizalofop, sulfamic acid, 2,3,6-TBA, TCA, and triclopyr.

The (poly)ethereal amine(s) II or derivative(s) thereof are preferably selected from compounds of formula II^1 through II^5:

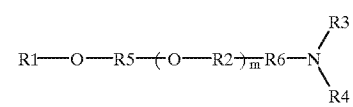
II^1



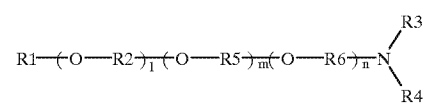
II^2



II^3

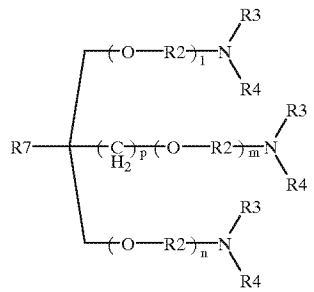


II^4



-continued

II[5]



wherein R_1 is a hydrogen, a C_{1-26} alkyl, a C_{2-6} alkenyl, a C_{2-6} alkynyl branched-chain or straight-chain which may or may not be substituted with one or more halogen, hydroxy, C_{1-6} alkoxy, $(C_{1-6}$ alkyl-$)_q$-amino ($_q$ is an integer of 0, 1, or 2), morpholino, or C_{1-6} alkoxycarbonyl group, an aryl, or a heteroaryl which may or may not be substituted with C_{1-6} alkyl, C_{1-6} haloalkyl, halogen, C_{1-6} alkoxy, $(C_{1-6}$ alkyl-$)_q$-amino ($_q$ is an integer of 0, 1, or 2), nitro, or C_{1-6} alkoxycarbonyl group;

R_2, R_5, and R_6 are independently C_{1-8} alkylene branched-chain or straight-chain, which may contain imine or ether linkage therein and may be substituted by a C_{1-6} alkyl group.

R_3 and R_4 are a hydrogen atom or a C_{1-6} alkyl group, which may be branched or straight and may or may not be substituted with one or more C_{1-6} alkoxy, or a group Of R_1—(—O—R_2—)$_{m'}$—O—.

R_7 is a hydrogen or a C_{1-6} alkyl group.

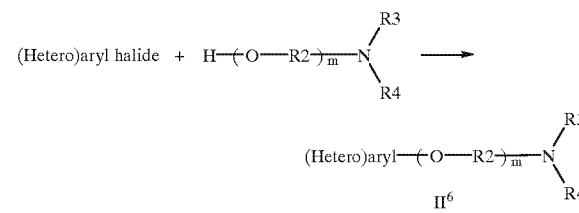
l, m and n is a number from 1 to about 500.

m' is a number from 0 to about 35.

p is an integer of 0 or 1.

When m is 1, none of R_1, R_3, and R_4 is H and furter R_2 is not ethylene.

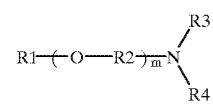
Many of these (poly)ethereal amine exist as steric or enantiomeric isomers and this invention covers all forms and mixtures of the aforementioned compounds. Most of the (poly)ethereal amines and their derivatives are commercially available. New (poly)ethereal amines II[6] bearing (hetero)aryl moiety were synthesized by the following reaction between (hetero)aryl halide and hydroxyl-amine.



The examples of the (poly)ethereal amines II include, but are not limited to, the following (poly)ethereal amines in Tables-1 through -5.

TABLE 1

(poly)ethereal amines II[1]



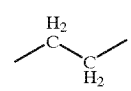
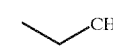
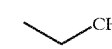
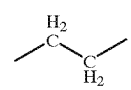
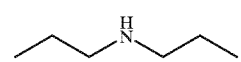
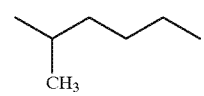
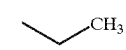
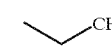
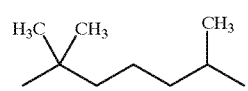
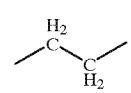
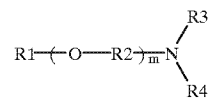
No.	R_1	R_2	m	R_3	R_4
1-1	H		1		
1-2	H		2	H	H
1-3	H		1	H	H
1-4	H		1		
1-5	H		1	H	H
1-6	H		10	H	H

TABLE 1-continued

(poly)ethereal amines II[1]



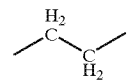
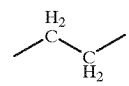
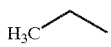
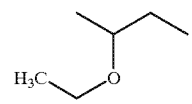
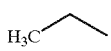
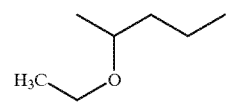
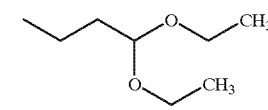
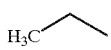
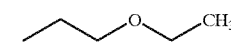
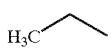
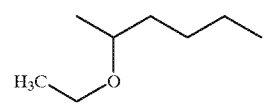
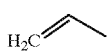
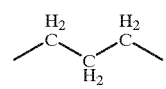
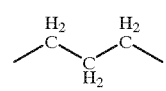
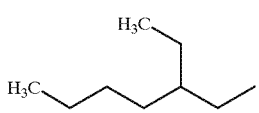
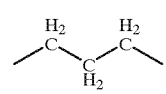
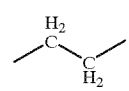
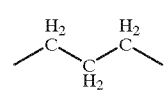
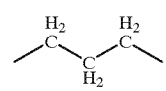
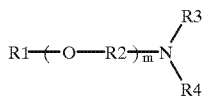
No.	R_1	R_2	m	R_3	R_4
1-7	H_3C—		16.34	H	H
1-8	H_3C—		44.75	H	H
1-9			1	H	H
1-10			1	H	
1-11			3	H	
1-12			1	H	H
1-13			1	H	H
1-14			5	H	H
1-15			1	H	H
1-16	(n)-$C_{12}H_{25}$—		2	H	H
1-17	(n)-$C_{12}H_{25}$—		1	H	H
1-18	(n)-$C_{12}H_{25}$—		35	H	H

TABLE 1-continued

(poly)ethereal amines II[1]



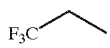
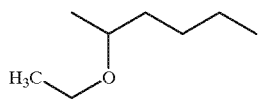
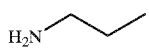
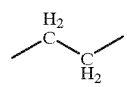
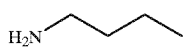
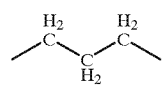
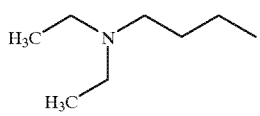
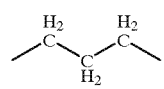
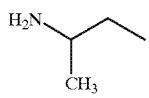
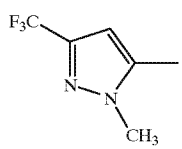
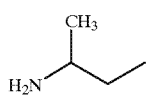
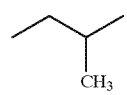
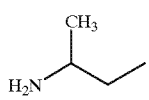
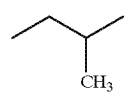
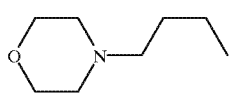
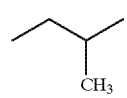
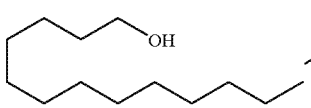
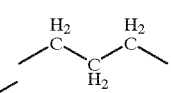
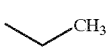
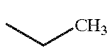
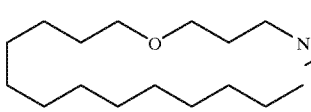
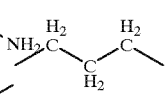
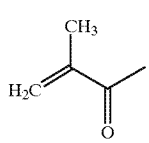
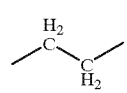
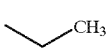
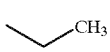
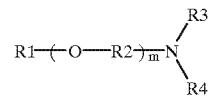
No.	R_1	R_2	m	R_3	R_4
1-19			15	—CH_3	—CH_3
1-20			2	H	H
1-21			1	H	H
1-22			26	H	H
1-23			33.1	H	H
1-24			2.6	H	H
1-25			5.6	H	H
1-26			1	H	H
1-27			2		
1-28			1	H	H
1-29			1		

TABLE 1-continued

(poly)ethereal amines II[1]



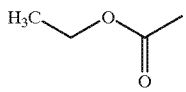
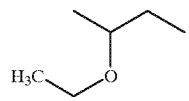
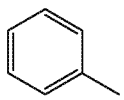
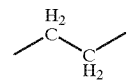
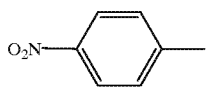
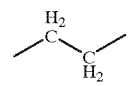
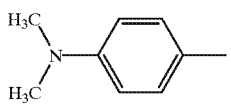
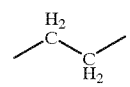
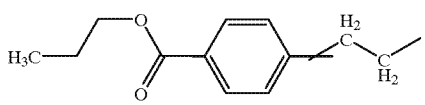
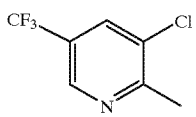
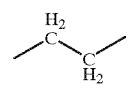
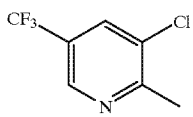
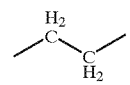
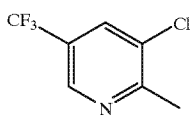
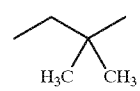
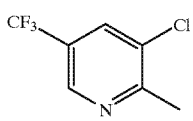
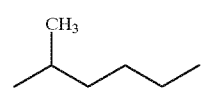
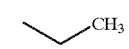
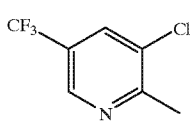
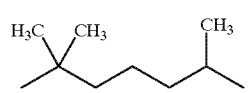
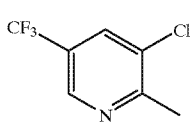
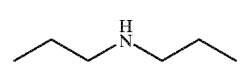
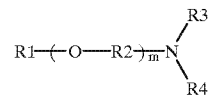
No.	R_1	R_2	m	R_3	R_4
1-30			1	H	H
1-31			1	H	H
1-32			6	H	H
1-33			10	H	H
1-34			6	H	H
1-35			2	H	H
1-36			1		
1-37			1	H	H
1-38			1		
1-39			1	H	H
1-40			1	H	H

TABLE 1-continued

(poly)ethereal amines II[1]



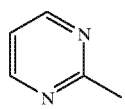
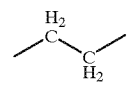
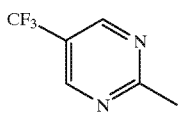
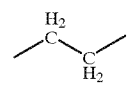
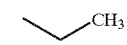
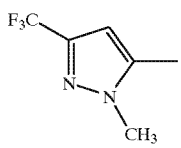
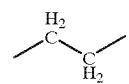
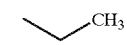
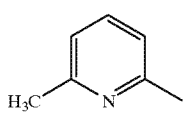
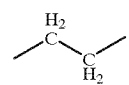
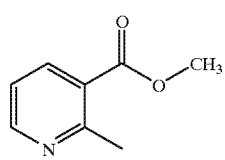
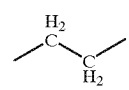
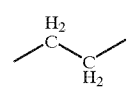
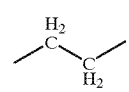
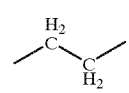
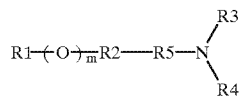
No.	R_1	R_2	m	R_3	R_4
1-41			1		
1-42			2		
1-43			3		
1-44				-(n)-C_6H_{13}	-(n)-C_6H_{13}
1-45				-(n)-C_6H_{13}	-(n)-C_6H_{13}
1-46	H_3C—		112.93	H	H
1-47	H_3C—		226.56	H	H
1-48	H_3C—		453.84	H	H

TABLE 2

(poly)ethereal amines II[2]



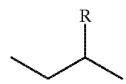
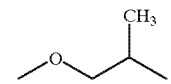
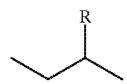
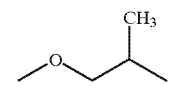
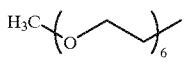
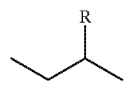
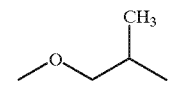
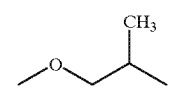
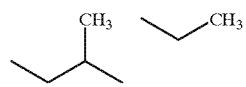
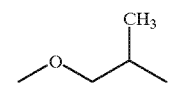
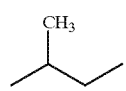
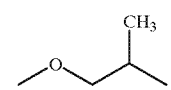
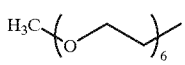
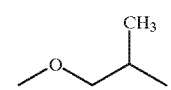
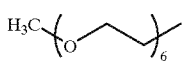
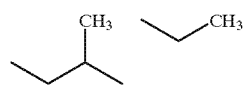
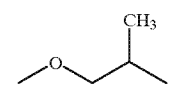
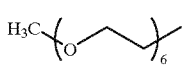
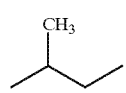
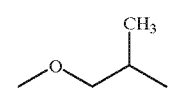
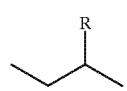
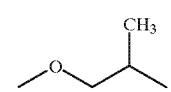
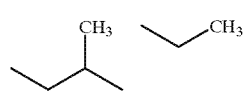
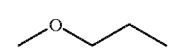
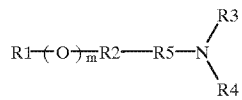
No.	R_1	R_2	R_3	R_4	R_5	m
2-1	H_3C—	 R, H/CH_3 = 1/9	H	H		9
2-2	H_3C—	 R, H/CH_3 = 19/3	H	H		19.85
2-3		 R, H/CH_3 = 7/3	H	H		34.17
2-4	H_3C—		H	H		5
2-5	H_3C—					25
2-6	H_3C—		H	H		45
2-7			H	H		15
2-8						35
2-9			H	H		55
2-10	H_3C—	 R, H/CH_3 = 19/3	H	H		63.3
2-11	(n)-$C_{12}H_{25}$—					35

TABLE 2-continued

(poly)ethereal amines II[2]



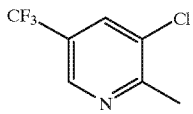
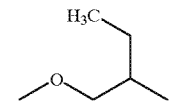
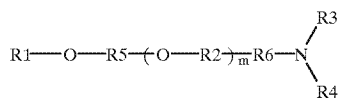
No.	R_1	R_2	R_3	R_4	R_5	m
2-12			—CH_3	—CH_3		5

TABLE 3

(poly)ethereal amines II[3]



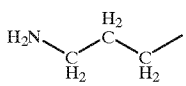
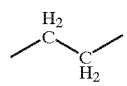
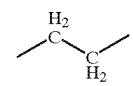
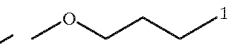
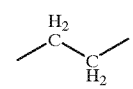
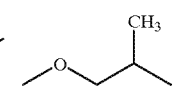
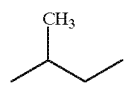
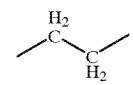
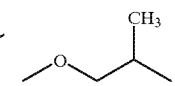
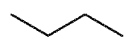
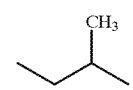
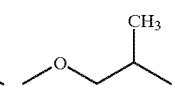
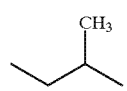
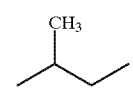
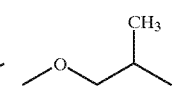
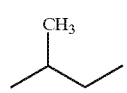
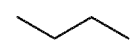
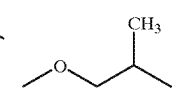
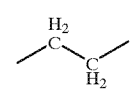
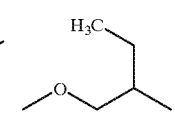
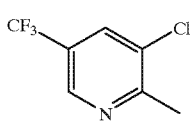
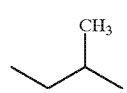
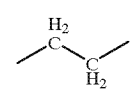
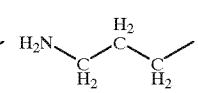
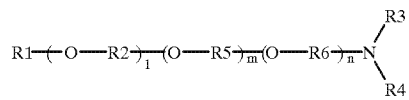
No.	R_1	R_2	R_3	R_4	R_5	R_6	m
3-1			H	H			1
3-2	H_3C—		H	H			8
3-3	H_3C—		H	H			8
3-4	H_3C—		H	H			15
3-5	H_3C—		H	H			35
3-6	H_3C—		—CH_3	—CH_3			55
3-7			H	H			20
3-8			—CH_3	—CH_3			15

TABLE 4

(poly)ethereal amines II^4



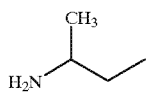
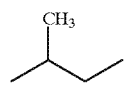
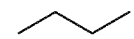
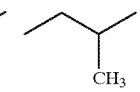
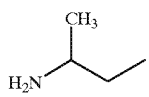
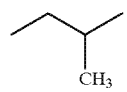
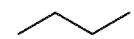
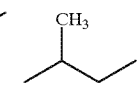
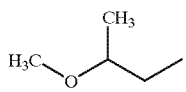
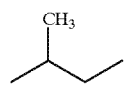
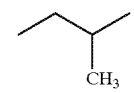
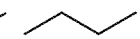
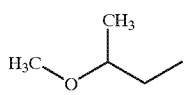
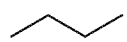
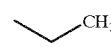
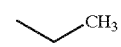
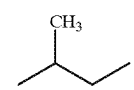
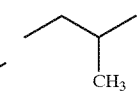
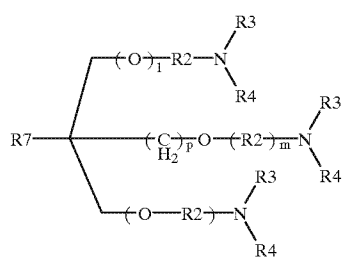
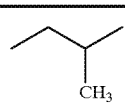
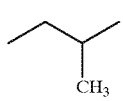
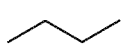
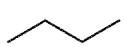
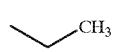
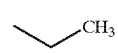
No.	R_1	R_2	R_3	R_4	R_5	R_6	l	n	m
4-1			H	H			l + n = 3.6		9
4-2			—CH_3	—CH_3			5	5	5
4-3			H	H			2	4	6
4-4							3	5	7

TABLE 5

(poly)ethereal amines II^5



No.	R_2	R_3	R_4	R_7	l	m	n	p
5-1		H	H	C_2H_5—	l + m + n = 5.2			1
5-2		H	H	H	l + m + n = 50			0
5-3		—CH_3	—CH_3	(n)-C_6H_{13}—	l + m + n = 10			1
5-4				H_3C—	l + m + n = 80			0

These (poly)ethereal amines will react with one or more molar equivalent of acidic herbicide(s). The generated (poly)ethereal ammonium salts may be isomeric or complex mixtures and all forms of these salts are claimed.

These salts will have the formula I:

I

$$\left[\begin{matrix}\text{Acidic}\\\text{Herbicide-X}\end{matrix}\right]_x \cdot \left[\begin{matrix}\text{Acidic}\\\text{Herbicide-Y}\end{matrix}\right]_y \cdot \left[\begin{matrix}\text{Acidic}\\\text{Herbicide-Z}\end{matrix}\right]_z \cdot \left[\begin{matrix}\text{(poly)ethereal}\\\text{(poly)amine}\end{matrix}\right]$$

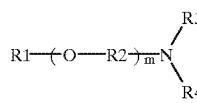
Wherein x, y, and z are integers from 0 to 3 with the proviso that $1 \leqq x+y+z \leqq 3$.

Acidic Herbicide-X, Acidic Herbicide-Y, and Acidic Herbicide-Z, same or different that can be used in compositions of the present invention and possess the dissociable proton(s) in their structures include, but are not limited to, the following herbicides.

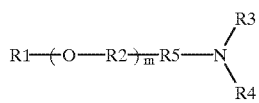
acifluorfen, asulam, benazolin, bentazon, bilanafos, bromacil, bromoxynil, chloramben, clopyralid, cyhalofop, 2,4-D, 2,4-DB, dalapon, dicamba, dichlorprop, diclofop, DNOC, endothall, fenac, fenoxaprop, flamprop, fluazifop, flumiclorac, fluoroglycofen, fomesafen, fosamine, glufosinate, glyphosate, haloxyfop, imazameth, imazamethabenz, imazamox, imazapic, imazapyr, imazaquin, imazethapyr, ioxynil, MCPA, MCPB, MCPP, mecoprop, methylarsonic acid, naptalam, nonanoic acid, picloram, quinclorac, quizalofop, sulfamic acid, 2,3,6-TBA, TCA, and triclopyr.

The (poly)ethereal amine(s) II or derivative(s) thereof are preferably selected from compounds of formula II^1 through II^5:

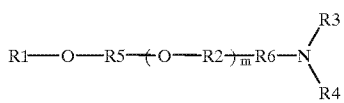
II^1



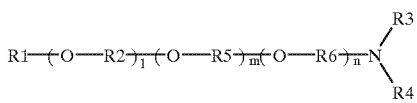
II^2



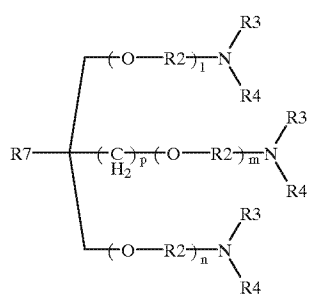
II^3



II^4



II^5



wherein R_1 is a hydrogen, a C_{1-26} alkyl, a C_{2-6} alkenyl, a C_{2-6} alkynyl branched-chain or straight-chain which may or may not be substituted with one or more halogen, hydroxy, C_{1-6} alkoxy, $(C_{1-6}$ alkyl-$)_q$-amino ($_q$ is an integer of 0, 1, or 2), morpholino, or C_{1-6} alkoxycarbonyl group, an aryl, or a heteroaryl which may or may not be substituted with C_{1-6} alkyl, C_{1-6} haloalkyl, halogen, C_{1-6} alkoxy, $(C_{1-6}$ alkyl-$)_q$-amino ($_q$ is an integer of 0, 1, or 2), nitro, or C_{1-6} alkoxycarbonyl group;

R_2, R_5, and R_6 are independently C_{1-8} alkylene branched-chain or straight-chain, which may contain imine or ether linkage therein and may be substituted by a C_{1-6} alkyl group.

R_3 and R_4 are a hydrogen atom or a C_{1-6} alkyl group, which may be branched or straight and may or may not be substituted with one or more C_{1-6} alkoxy, or a group of R_1—(—O—R_2—)$_{m'}$—O—.

R_7 is a hydrogen or a C_{1-6} alkyl group.

l, m and n is a number from 1 to about 500.

m' is a number from 0 to about 35.

p is an integer of 0 or 1.

When m is 1, none of R_1, R_3, and R_4 is H and further R_2 is not ethylene.

The examples of the (poly)ethereal ammonium salts I of this invention include, but are not limited to, the following (poly)ethereal ammonium salts in Table-6.

TABLE 6

(poly)ethereal ammonium salts I

No.	(poly) ethereal amine used	Acidic Herbicide-X	Acidic Herbi-cide-Y	Acidic Herbi-cide-Z	Molar Ratio of Amine/ Herbicide-X/ Herbicide-Y/ Herbicide-Z
6-1	1-1	glyphosate	—	—	1/1/0/0
6-2	1-2	glyphosate	—	—	1/1/0/0
6-3	1-3	glyphosate	—	—	1/1/0/0
6-4	1-4	glyphosate	—	—	1/1/0/0
6-5	1-5	glyphosate	—	—	1/1/0/0
6-6	1-7	glyphosate	—	—	1/1/0/0
6-7	1-8	glyphosate	—	—	1/1/0/0
6-8	1-9	glyphosate	—	—	1/1/0/0
6-9	1-10	glyphosate	—	—	1/1/0/0
6-10	1-12	glyphosate	—	—	1/1/0/0
6-11	1-13	glyphosate	—	—	1/1/0/0
6-12	1-15	glyphosate	—	—	1/1/0/0
6-13	1-16	glyphosate	—	—	1/1/0/0
6-14	1-17	glyphosate	—	—	1/1/0/0
6-15	1-20	glyphosate	—	—	1/1/0/0
6-16	1-21	glyphosate	—	—	1/1/0/0
6-17	1-23	glyphosate	—	—	1/1/0/0
6-18	1-24	glyphosate	—	—	1/1/0/0
6-19	1-25	glyphosate	—	—	1/1/0/0
6-20	1-28	glyphosate	—	—	1/1/0/0
6-21	1-29	glyphosate	—	—	1/1/0/0
6-22	1-31	glyphosate	—	—	1/1/0/0
6-23	1-35	glyphosate	—	—	1/1/0/0
6-24	1-36	glyphosate	—	—	1/1/0/0
6-25	1-37	glyphosate	—	—	1/1/0/0
6-26	1-38	glyphosate	—	—	1/1/0/0
6-27	1-39	glyphosate	—	—	1/1/0/0
6-28	1-40	glyphosate	—	—	1/1/0/0
6-29	1-41	glyphosate	—	—	1/1/0/0
6-30	2-1	glyphosate	—	—	1/1/0/0
6-31	2-2	glyphosate	—	—	1/1/0/0
6-32	3-1	glyphosate	—	—	1/1/0/0
6-33	3-2	glyphosate	—	—	1/1/0/0
6-34	2-3	glyphosate	—	—	1/1/0/0
6-35	4-1	glyphosate	—	—	1/1/0/0
6-36	5-1	glyphosate	—	—	1/1/0/0
6-37	5-2	glyphosate	—	—	1/1/0/0
6-38	3-1	glyphosate	—	—	1/2/0/0
6-39	1-24	glyphosate	—	—	1/2/0/0
6-40	1-25	glyphosate	—	—	1/2/0/0

TABLE 6-continued

	(poly)ethereal ammonium salts I				
No.	(poly) ethereal amine used	Acidic Herbicide-X	Acidic Herbi-cide-Y	Acidic Herbi-cide-Z	Molar Ratio of Amine/ Herbicide-X/ Herbicide-Y/ Herbicide-Z
6-41	1-20	glyphosate	—	—	1/2/0/0
6-42	1-23	glyphosate	—	—	1/2/0/0
6-43	5-1	glyphosate	—	—	1/2/0/0
6-44	5-1	glyphosate	—	—	1/3/0/0
6-45	5-2	glyphosate	—	—	1/2/0/0
6-46	5-2	glyphosate	—	—	1/3/0/0
6-47	1-23	glyphosate	2,4-D	—	1/1/1/0
6-48	5-2	glyphosate	2,4-D	—	1/1/1/0
6-49	5-1	glyphosate	2,4-D	—	1/1/1/0
6-50	5-1	glyphosate	2,4-D	—	1/1.5/1.5/0
6-51	1-23	glyphosate	Phenyl acetic acid	—	1/1/1/0
6-52	1-23	glyphosate	2,4-D	—	3.5/2.5/1/0
6-53	1-23	glyphosate	2,4-D	—	2.5/2.5/1/0
6-54	1-23	glyphosate	dicamba	—	2.5/2.5/0.55/0
6-55	1-23	glyphosate	acifluorfen	—	2.5/2.5/0.4/0
6-56	1-23	glyphosate	quinclorac	—	2.5/2.5/2/0
6-57	3-1	glyphosate	MCPB	—	1/1/1/0
6-58	5-1	2,4-D	MCPB	dicamba	2/2/1/1
6-59	5-1	glyphosate	2,4-D	picloram	1/1/1/1
6-60	5-2	glyphosate	MCP	tribac	1/1/1/1
6-61	5-1	glyphosate	2,4-D	picloram	2.5/2.5/1/0.25
6-62	2-2	glyphosate	2,4-DB	picloram	311/1/1
6-63	2-3	glyphosate	MCPA	picloram	3/1/1/1
6-64	2-2	glyphosate	2,4-D	picloram	3.75/2.5/1/0.25
6-65	2-2	glyphosate	MCPA	Dicamba	3.80/2.5/ 0.75/0.5
6-66	2-2	glyphosate	2,4-DB	glufosinate	3.9/2.5/ 0.5/0.9
6-67	2-2	glyphosate	MCPB	picloram	3.3/2.5/ 0.55/0.25
6-68	3-2	glyphosate	MCPP	picloram	3/1/1/1
6-69	2-2	glufosinate	—	—	1/1/0/0
6-70	3-1	glufosinate	—	—	1/0.9/0/0
6-71	3-2	glufosinate	—	—	1/1/0/0
6-72	2-3	glufosinate	—	—	1/0.9/0/0
6-73	2-2	bilanafos	—	—	1/1/0/0
6-74	3-1	bilanafos	—	—	1/1.5/0/0
6-75	3-2	bilanafos	—	—	1/1/0/0
6-76	2-3	bilanafos	—	—	1/1.5/0/0

SYNTHESIS

Typically these salts are normally formed by spontaneous exothermic salt formation by dissolving or suspending the acids in water at between room temperature −100° C. with or without a water miscible co-solvent such as acetone, dioxane, dimethyl-sulfoxide, tetrahydrofuran, N,N-dimethylformamide, ethylene glycol, an alcohol such as methanol, ethanol or 2-propanol when a quantity of the (poly)ethereal amine is introduced with or without a small amount of the water miscible solvent. After, if necessary, heating for between 0.5 and 2 hours the solution is cooled. Either thus obtained aqueous solution itself or solid salt obtained after evaporation of water to dryness in the presence of an anti foaming agent can be used for the activity tests.

Preparation Examples for the compounds of the present invention will be described. All temperatures are measured in ° C.

SYNTHESIS EXAMPLE

Example 1

Synthesis of N-(Phosphonomethyl)glycine. 2-(3-chloro-5-trifluoromethyl-2-pyridyloxy)-ethyl diethyl amine salt: Compound 6-24

Step-1. Synthesis of the intermediate, 2-(3-chloro-5-trifluoromethyl-2-pyridyloxy)-ethyl diethyl amine: Compound 1-36

To the mixture of sodium hydride(528 mg, 22 mmol) in 25 ml of anhydrous tetrahydrofuran was added N,N-diethyl-ethanol amine(2.344 g, 20 mmol) at the room temperature. After generation of hydrogen ceased, 2,3-dichloro-5-trifluoromethyl-pyridine (4.32 g, 20 mmol) was added at the room temperature. After exothermic reaction ceased, the mixture was further stirred for 2 hours at room temperature. Then the content was poured into water and extracted with ethyl acetate. Ethyl acetate layer was washed with water and dried over anhydrous sodium sulfate. The evaporation of the solvent gave 5.76 g of oil. Yield: 96.8%.

^{1}H NMR ($CDCl_3$, TMSP): 1.07(6H, t), 2.65(4H, q), 2.92(2H, t), 4.52(2H, t), 7.83(1H, s), 8.31(1H, s).

Step-2. Synthesis of N-(Phosphonomethyl)glycine. 2-(3-chloro-5-trifluoromethyl-2-pyridyloxy) -ethyl diethyl amine salt: Compound 6-24

A mixture of N-(phosphonomethyl)glycine (purity:95.5%, 442.4 mg, 2.5 mmol) in water (5 ml) was stirred and 2-(3-chloro-5-trifluoromethyl-2-pyridyloxy)-ethyl diethyl amine (743.8 mg, 2.5 mmol) was added at the room temperature. After warming for 1 hour to afford the clear solution, the content was cooled to room temperature and diluted with extra amount of water to give 5 ml of stock solution, which was directly used for the activity test.

Example 2

Synthesis of N-(Phosphonomethyl)glycine. O-2-aminopropyl-, O'-2-(methoxy)ethyl-, poly(propylene glycol) salt: Compound 6-33

A mixture of N-(phosphonomethyl)glycine (169 mg, 1 mmol) in water (5 ml) was stirred and warmed. Then O-2-aminopropyl-, O'-2-(methoxy)ethyl-, poly(propylene glycol) (600 mg, 1 mmol) in 1 ml of methanol was added and kept reflux for 1 hour. The mixture was evaporated to dryness to afford an oily product. Removing insoluble solid by dacantation gave about 500 mg of sticky oil.

Example 3

Synthesis of N-(Phosphonomethyl)glycine. O, O'-bis-(2-aminoethyl)-di-(ethylene glycol) salt: Compound 6-32

A mixture of N-(phosphonomethyl)glycine (169 mg, 1 mmol) in water (1 ml) was stirred and O, O'-bis-(2-aminoethyl)-di-(ethylene glycol) (220 mg, 1 mmol) was added to afford a clear solution. After stirring at room temperature for 1 hour, the mixture was evaporated and dried under the reduced pressure to afford 380 mg of solid, which showed the melting point 160–164° C.

Example 4

Synthesis of N-(Phosphonomethyl)glycine. Methoxy-poly-(oxyethylene/oxypropylene)-2-propryamine(molecular weight: 1000) salt: Compound 6-31

A mixture of N-(phosphonomethyl)glycine (purity:95.5%, 26.2 g, 148 mmol) in water (100 ml) was stirred and methoxy-poly-(oxyethylene/oxypropylene)-2-propylamine (molecular weight: 1000) was added to after the gentle exothermic reaction afford a clear solution. After stirring for further 10 minutes the extra water was added to make 300 ml volume of stock solution, which was directly used for the activity test.

Example 5

Synthesis of N-(Phosphonomethyl)glycine. Methoxy-poly-(oxyethylene/oxypropylene)-2-propylamine(molecular weight: 2000) salt: Compound 6-34

A mixture of N-(phosphonomethyl)glycine (purity:95.5%, 26.2 g, 148 mmol) in water (100 ml) was

stirred and methoxy-poly-(oxyethylene/oxypropylene)-2-propylamine (molecular weight: 2000) was added to after the gentle exothermic reaction afford a clear solution. After stirring for further 10 minutes the extra water was added to make 500 ml volume of stock solution, which was directly used for the activity test.

HERBICIDAL ACTIVITY

The compounds of the present invention exhibit excellent herbicidal effects when used as an active ingredient of a herbicide. The herbicide can be used for a wide range of applications, for example on crop lands such as paddy fields, upland farms, orchards and mulberry fields, and non-crop lands such as forests, farm roads, playgrounds, and factory sites. The application method may be one suitably selected for foliar application.

The compounds of the present invention are capable of controlling noxious weeds including grass (gramineae) such as barnyardgrass (*Echinochloa crus-galli*), large crabgrass (*Digitaria sanguinalis*), green foxtail (*Setaria viridis*), giant foxtail (*Setaria faberi*), goosegrass (*Eleusine indica* L.), wild oat (*Avena fatua* L.), Johnsongrass (*Sorghum halepense*), quackgrass (*Agropyron repens*), alexandergrass (*Brachiaria plantaginea*), paragrass (*Panicum purpurascen*), sprangletop (*Leptochloa chinensis*) and red sprangletop (*Leptochloa panicea*); sedges (or Cyperaceae) such as rice flatsedge (*Cyperus iria* L.), purple nutsedge (*Cyperus rotundus* L.), Japanese bulrush (*Scirpus Juncoides*), flatsedge (*Cyperus serotinus*), small-flower umbrellaplant (*Cyperus difformis*), slender spikerush (*Eleocharis acicularis*), and water chestnut (*Eleocharis kuroguwai*); alismataceae such as Japanese ribbon wapato (*Sagittaria pygmaea*), arrow-head (*Sagittaria trifolia*) and narrowleaf waterplantain (*Alisma canaliculatum*); pontederiaceae such as monochoria (*Monochoria vaginalis*) and monochoria species (*Monochoria korsakowii*); scrophulariaceae such as false pimpernel (*Lindernia pyxidaria*) and abunome (*Dopatrium Junceum*); lythraceae such as toothcup (*Rotala indica*) and red stem (*Ammannia multiflora*); and broadleaves such as redroot pigweed (*Amaranthus retroflexus*), velvetleaf (*Abutilon theophrasti*), morningglory (*Ipomoea hederacea*), lambsquarters (*Chenopodium album*), prickly sida (*Sida spinosa* L.), common purslane (*Portulaca oleracea* L.), common ragweed (*Ambrosia artemisiifolia* L.), slender amaranth (*Amaranthus viridis* L.), sicklepod (*Cassia obtusifolia*), black nightshade (*Solanum nigrum* L.), pale smartweed (*Polygonum lapathifolium* L.), common chickweed (*Stellaria media* L.), common cocklebur (*Xanthium strumarium* L.), flexuous bittercress (*Cardamine flexuosa* WITH.), henbit (*Lamium amplexicaule* L.) and threeseeded copperleaf (*Acalypha australis* L.). Accordingly, it is useful for controlling noxious weeds non-selectively or selectively in the cultivation of a crop plant such as corn (*Zea mays* L.), soybean (*Glycine max* Merr.), cotton (*Gossypium* spp.), wheat (*Triticum* spp.), rice (*Oryza sativa* L.), barley (*Hordeum vulgare* L.), oat (*Avena sativa* L.), sorgo (*Sorghum bicolor* Moench), rape (*Brassica napus* L.), sunflower (*Helianthus annuus* L.), sugar beet (*Beta vulgaris* L.), sugar cane (*Saccharum officinarum* L.), Japanese lawngrass (*Zoysia Japonica* stend), peanut (*Arachis hypogaea* L.) or flax (*Linum usitatissimum* L.).

For use as herbicides, the active ingredients of this invention are formulated into herbicidal compositions by mixing herbicidally active amounts with inert ingredients known to the art to facilitate either the suspension, dissolution or emulsification of the active ingredient for the desired use. The type of formulation prepared recognizes the facts that formulation, crop and use pattern all can influence the activity and utility of the active ingredient in a particular use. Thus for agricultural use the present herbicidal compounds may be formulated as water dispersible granules, granules for direct application to soils, water soluble concentrates, wettable powders, dusts, solutions, emulsifiable concentrates (EC), microemulsion, suspoemulsion, invert emulsion or other types of formulations, depending on the desired weed targets, crops and application methods.

These herbicidal formulations may be applied to the target area (where suppression of unwanted vegetation is the objective) as water or solvent diluted sprays. These formulation may contain as little as 0.1% to as much as 97% active ingredient by weight.

Wettable powders are composed of finely ground particles which disperse rapidly in water or other spray carriers. Typical carriers include kaolin clays, Fullers earth, silicas and other absorbent, wettable inorganic materials. Wettable powders can be prepared to contain from 1 to 90% active ingredient, depending on the desired use pattern and the absorbability of the carrier. Wettable powders typically contain wetting or dispersing agents to assist dispersion in water or other carriers.

Water dispersible granules are granulated solids that freely disperse when mixed in water. This formulation typically consists of the active ingredient (0.1% to 95% active ingredient), a wetting agent (1–15% by weight), a dispersing agent (1 to 15% by weight) and an inert carrier (1–95% by weight). Water dispersible granules can be formed by mixing the ingredients intimately then adding a small amount of water on a rotating disc (said mechanism is commercially available) and collecting the agglomerated granules. Alternatively, the mixture of ingredients may be mixed with an optimal amount of liquid (water or other liquid) and passed through an extruder (said mechanism is commercially available) equipped with passages which allow for the formation of small extruded granules. Alternatively, the mixture of ingredients can be granulated using a high speed mixer (said mechanism is commercially available) by adding a small amount of liquid and mixing at high speeds to affect agglomeration. Alternatively, the mixture of ingredients can be dispersed in water and dried by spraying the dispersion through a heated nozzle in a process known as spray drying (spray drying equipment is conmercially available). After granulation the moisture content of granules is adjusted to an optimal level (generally less than 5%) and the product is sized to the desired mesh size.

Emulsifiable concentrates (EC) are homogeneous liquids composed of a solvent or mixture of solvents such as xylenes, heavy aromatic naphthas, isophorone or other proprietary commercial compositions derived from petroleum distillates, the active ingredient and an emulsifying agent or agents. For herbicidal use, the EC is added to water (or other spray carrier) and applied as a spray to the target area. The composition of an EC formulation can contain 0.1% to 95% active ingredient, 5 to 95% solvent or solvent mixture and 1 to 20% emulsifying agent or mixture of emulsifying agents.

Solution concentrates are solutions of the active ingredient (1 to 70%) in solvents which have sufficient solvency to dissolve the desired amount of active ingredient. Because they are simple solutions without other inert ingredients such as wetting agents, additional additives are usually added to the spray tank mix before spraying to facilitate proper application.

Microemulsions are solutions consisting of the active ingredient (1 to 30%) dissolved in a surfactant or emulsifier,

without any additional solvents. There are no additional solvents added to this formulation. Microemulsions are particularly useful when a low odor formulation is required such as in residential turfgrass applications.

Suspoemulsions are combinations of two active ingredients. One active ingredient is made as a suspension concentrate (1–50% active ingredient) and the second active is made as a emulsifiable concentrate (0.1–20%). A reason for making this kind of formulation is the inability to make an EC formulation of the first ingredient due to poor solubility in organic solvents. The suspoemulsion formulation allows for the combination of the two active ingredients to be packaged in one container, thereby minimizing packaging waste and giving greater convenience to the product user.

The herbicidal compounds of this invention may be formulated or applied with insecticides, fungicides, acaricides, nematicides, fertilizers, plant growth regulators or other agricultural chemicals. Certain tank mix additives, such as spreader stickers, penetration aids, wetting agents, surfactants, emulsifiers, humectants and UV protectants may be added in amounts of 0.01% to 20% to enhance the biological activity, stability, wetting, spreading on foliage or uptake of the active ingredients on the target area or to improve the suspensibility, dispersion, redispersion, emulsifiability, UV stability or other physical or physicochemical property of the active ingredient in the spray tank, spray system or target area.

The compositions of the present invention may be used in admixture with or in combination with other agricultural chemicals, fertilizers, adjuvants, surfactants, emulsifiers, oils, polymers or phytotoxicity-reducing agents such as herbicide safeners. In such a case, they may exhibit even better effects or activities. As other agricultural chemicals, herbicides, fungicides, antibiotics, plant hormones, plant growth regulators, insecticides, or acaricides may, for example, be mentioned. Especially with herbicidal compositions having the compounds of the present invention used in admixture with or in combination with one or more active ingredients of other herbicides, it is possible to improve the herbicidal activities, the range of application time(s) and the range of applicable weed types. Further, the compounds of the present invention and an active ingredient of another herbicide may be separately formulated so they may be mixed for use at the time of application, or both may be formulated together. The present invention covers such herbicidal compositions.

The blend ratio of the compounds of the present invention with the active ingredient of other herbicides can not generally be defined, since it varies depending on the time and method of application, weather conditions, soil type and type of formulation. However one active ingredient of other herbicide may be incorporated usually in an amount of 0.01 to 100 parts by weight, per one part by weight of the compounds of the present invention. Further, the total dose of all of the active ingredients is usually from 1 to 10000 g/ha, preferably from 5 to 3000 g/ha. The present invention covers such herbicidal compositions.

As the active ingredients of other herbicides, the following (common name) may be mentioned. Herbicidal compositions having the compounds of the present invention used in combination with other herbicides, may occasionally exhibit a synergistic effect.

1. Those that are believed to exhibit herbicidal effects by disturbing auxin activities of plants, including a phenoxy acetic acid type such as 2,4-D, 2,4-DB, 2,4-DP, MCPA, MCPP, MCPB or naproanilide (including the free acids, esters or salts thereof), an aromatic carboxylic type such as 2,3,6 TBA, dicamba, dichlobenil, a pyridine type such as picloram (including free acids and salts thereof), triclopyr or clopyralid and others such as naptalam, benazolin, quinclorac, quinmerac or diflufenzopyr (BAS 654H).
2. Those that are believed to exhibit herbicidal effects by inhibiting photosynthesis of plants including a urea type such as diuron, linuron, isoproturon, chlorotoluron, metobenzuron, tebuthiuron or fluometuron, a triazine type such as simazine, atrazine, cyanazine, terbuthylazine, atraton, hexazinone, metribuzin, simetryn, ametryn, prometryn, dimethametryn or triaziflam, a uracil type such as bromacil, terbacil or lenacil, an anilide type such as propanil or cypromid, a carbamate type such as desmedipham or phenmedipham, a hydroxybenzonitrile type such as bromoxynil or ioxynil, and others such as pyridate, bentazon and methazole.
3. A quaternary ammonium salt type such as paraquat, diquat or difenzoquat, which is believed to be converted to free radicals by itself to form active oxygen in the plant and thus to exhibit quick herbicidal effects.
4. Those which are believed to exhibit herbicidal effects by inhibiting chlorophyll biosynthesis in plants and abnormally accumulating a photosensitizing peroxide substance in the plant body, including a diphenyl ether type such as nitrofen, lactofen, acifluorfen-sodium, oxyfluorfen, fomesafen, bifenox, or chlomethoxyfen, a cyclic imide type such as chlorphthalim, flumioxazin, cinidon-ethyl, or flumiclorac-pentyl, and others such as oxadiazon, sulfentrazone, thidiazimin, azafenidin, carfentrazone, isopropazole (also referred to as JV-485), fluthiacet-methyl, pentoxazone, pyraflufen-ethyl, oxadiargyl and 2-chloro-5-[3,6-dihydro-2,6-dioxo-3-methyl-4-trifluoromethyl-1(2H)-pyrimidinyl]-benzoic acid-1-(allyloxycarbonyl)-1-methylethyl.
5. Those which are believed to exhibit herbicidal effects characterized by whitening activities by inhibiting chromogenesis of plants such as carotenoids including a pyridazinone type such as norflurazon, chloridazon or metflurazon, a pyrazol type such as pyrazolate, pyrazoxyfen or benzofenap, and others such as fluridone, fluramone, diflufencam, methoxyphenone, clomazone, amitrole, sulcotrione, mesotrione, isoxaflutole and isoxachlortole.
6. Those which exhibit herbicidal effects specifically to gramineous plants including an aryloxyphenoxypropionic acid type (either as a mixture of isomers or as a resolved isomer) such as diclofop-methyl, pyrofenop-sodium, fluazifop butyl or fluazifop-p-butyl, haloxyfop-methyl, quizalofop p-ethyl, quizalafop p-tefuryl, fenoxaprop ethyl or fenoxaprop-p-ethyl, flamprop-M-methyl or flamprop-m-isopropyl or cyhalofop-butyl and a cyclohexanedione type such as alloxydim-sodium, sethoxydim, clethodim, tepraloxydim or tralkoxydim.
7. Those which are believed to exhibit herbicidal effects by inhibiting amino acid biosynthesis of plants, including a sulfonylurea type such as chlorimuron-ethyl, nicosulfuron, metsulfuron-methyl, triasulfron, primisulfuron, tribenuron-methyl, chlorosulfuron, bensulfuron-methyl, sulfometuron-methyl, prosulfuron, halosulfuron or halosulfuron-methyl, thifensulfuron-methyl, rimsulfuron, azimsulfuron, flazasulfuron, imazosulfuron, cyclosulfamuron, flupyrsulfuron, iodosulfuron, ethoxysulfuron, flucarbazone, sulfosulfron, oxasulfuron a triazolopyrimidinesulfonamide type such as flumetsulam, metosulam, chloransulam or chloransulam-

methyl, an imidazolinone type such as imazapyr, imazethapyr, imazaquin, imazamox, imazameth, imazamethabenz methyl, a pyrimidinesalicylic acid type such as pyrthiobac-sodium, bispyribac-sodium, pyriminobac-methyl or pyribenzoxim (LGC-40863), and others such as glyphosate, glyphosate-ammonium, glyphosate-isopropylamine, glyphosate-ethylenediamine or sulfosate.

8. Those which are believed to exhibit herbicidal effects by interfering with the normal metabolism of inorganic nitrogen assimilation such as glufosinate, glufosinate-ammonium, phosphinothricin or bialophos.
9. Those which are believed to exhibit herbicidal effects by inhibiting cell division of plant cells, including a dinitroaniline type such as trifluralin, oryzalin, nitralin, pendamethalin, ethafluralin, benefin and prodiamine, an amide type such as bensulide, napronamide, and pronamide, a carbamate type such as propham, chlorpropham, barban, and asulam, an organophosphorous type such as amiprofos-methyl or butamifos and others such as DCPA and dithiopyr.
10. Those which are believed to exhibit herbicidal effects by inhibiting protein synthesis of plant cells, including a chloroacetanilide type such as alachlor, metolachor (including combinations with safeners such as benoxacor, or resolved isomeric mixtures of metolachlor including safeners such as benoxacor) propachlor, acetochlor (including combinations with herbicide safeners such as dichlormid or MON 4660 or resolved isomeric mixtures of acetochlor containing safeners such as dichlormid or MON 4660), propisochlor or dimethenamid or an oxyacetamide type such as flufenacet.
11. Those in which the mode of action causing the herbicidal effects are not well understood including the dithiocarbamates such as thiobencarb, EPTC, diallate, triallate, molinate, pebulate, cycloate, butylate, vernolate or prosulfocarb and miscellaneous herbicides such as MSMA, DSMA, endothall, ethofumesate, sodium chlorate, pelargonic acid fosamine, and amicarbazone.

Test Example

A standard greenhouse herbicide activity screening system was used to evaluate the herbicidal efficacy and crop safety of these test compounds. Four broadleaf weed species, lambsquarters (*Chenopodium album,* CHEAL), velvetleaf (*Abutilon theophrasti,* ABUTH), common ragweed (*Ambrosia artemisiifolia,* AMBEL), and ivyleaf morningglory (*Ipomoea hederacea,* IPOHE), and four grass weed species including green foxtail (*Setaria viridis,* SETVI), barnyardgrass (*Echinochloa crus-galli,* ECHCG), johnsongrass (*Sorghum halepense,* SORHA), and large crabgrass (*Digitaria sanguinalis,* DIGSA) were used as test species.

Because the salts of glyphosate are known to be inactive when applied as a soil treatment, only POST emergent sprays were applied.

For the post-emerge tests, seeds were planted 10–28 days prior to the test to allow emergence and good foliage development prior to application of the test substances. At the time of the post-emerge application, plants of all species were usually at the 2–4 leaf stage of development.

All test compounds were dissolved in water and applied to the test units in a volume of 187 l/ha. A commercial non-ionic surfactant was also included (0.25% v/v) to enhance wetting of the leaf surfaces of target plants. Test materials were applied at rates ranging from 105 g acid equivalent/ha to 1680 g acid equivalent/ha using a track sprayer equipped with a TJ8001E even flow flat fan spray nozzle. Plants were arranged on a shelf so that the top of the canopy was 40–45 cm below the nozzle. Pressurized air was used to force the test solution through the nozzle as it was mechanically advanced over the top of all test plants. This application simulates a typical commercial field herbicide application.

Post-emerge test units were always bottom-watered. At 14 days after application of the test materials, phytotoxicity ratings were recorded. A rating scale of 0–100 was used as previously described in *Research Methods in Weed Science,* 2nd edition, B. Truelove, Ed., Southern Weed Science Society, Auburn University, Auburn, Alabama, 1977. Briefly, "0" corresponds to no damage and "100" corresponds to complete death of all plants in the test unit.

Tables 7–10 show the activity (% Control 0–100) of representative compounds of this invention on grassy weed species, compared to the prior art compound glyphosate-isopropylamine and glyphosate-ethanolamine salts.

TABLE 7

Efficacy of compounds on *Setaria viridis* (green foxtail).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
105	30	15	50	30	10	40	10	10	5	0
210	50	40	70	85	85	90	40	70	30	35
420	99	98	95	99	99	95	90	85	50	70
840	100	99	99	95	99	85	100	90	70	98

TABLE 8

Efficacy of compounds on *Echinochloa crus-galli* (barnyardgrass).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
105	40	15	0	15	20	10	20	20	0	0
210	75	60	60	75	75	65	50	65	10	10

TABLE 8-continued

Efficacy of compounds on *Echinochloa crus-galli* (barnyardgrass).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
420	96	90	80	95	99	75	75	75	40	50
840	99	99	99	100	99	90	99	85	80	95

TABLE 9

Efficacy of compounds on *Sorghum halepense* (johnsongrass, seedling).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
105	80	30	20	50	30	10	40	40	0	0
210	95	50	75	90	90	70	85	65	10	10
420	99	99	85	100	99	85	99	90	30	25
840	100	100	100	100	100	99	99	95	70	99

TABLE 10

Efficacy of compounds on *Digitaria sanguinalis* (large crabgrass).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
105	40	30	30	40	30	30	20	30	0	0
210	65	40	45	50	60	50	30	45	10	50
420	65	65	55	70	80	65	60	60	35	75
840	80	85	99	90	75	85	85	60	75	85

Compounds of this invention show activity against grassy weeds equal too or greater than glyphosate-isopropylamine or glyphosate-ethanolamine. Tables 11–14 show the activity (% Control, 0–100) of representative compounds of this invention on broadleaf weed species, compared to the prior art compound glyphosate-isopropylamine and glyphosate-ethanolamine salts.

TABLE 11

Efficacy of compounds on *Abutilon theophrasti* (velvetleaf).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
105	10	15	15	15	10	10	15	20	5	0
210	40	45	40	65	40	40	45	40	15	5
420	70	70	50	70	80	65	60	60	40	50
840	80	90	80	85	90	70	85	60	60	70

TABLE 12

Efficacy of compounds on *Ipomoea hederacea* (ivyleaf morningglory).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
105	30	15	10	10	10	10	15	20	5	0
210	30	30	30	40	40	40	35	60	15	30
420	60	50	50	50	60	60	50	60	25	50
840	75	80	75	80	75	70	80	85	60	70

TABLE 13

Efficacy of compounds on *Chenopodium alhum* (common lambsquarters).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
105	15	10	20	5	10	10	60	10	0	0
210	40	20	30	60	35	45	50	50	0	0
420	65	50	70	75	75	55	65	60	15	10
840	75	75	75	80	75	65	70	90	55	70

TABLE 14

Efficacy of compounds on *Ambrosia artemisiifolia* (common ragweed).

Acid Equivalents Applied grams/ha	6-13	6-30	6-31	6-34	6-33	6-32	6-35	6-37	Isopropyl Amine Salt	Ethanol Amine Salt
105	5	5	5	5	5	10	20	5	0	0
210	30	15	30	40	35	30	30	40	20	0
420	55	40	50	60	60	50	50	50	15	35
840	65	75	70	80	70	65	70	70	60	80

Compounds of this invention show activity against broadleaf weeds equal too or greater than glyphosate-isopropylamine salt or glyphosate-ethanolamine salt. Tables 15–18 show the activity of representative two- and three-way combinations of actives in diamines or triamines, on grassy weed species, compared to the prior art compound glyphosate-isopropylamine salt (alone, or in the commercial formulation Roundup Ultra™)

TABLE 15

Efficacy of two- and three-way combinations on *Setaria vindis* (green foxtail).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
105	80	65	65	85	75	70	50	65
210	95	95	85	85	90	90	70	75
420	99	98	100	85	99	90	80	99
840	100	100	100	85	100	100	99	100

TABLE 16

Efficacy of two- and three-way combinations on *Echinochloa crus-galli* (barnyardgrass).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
105	65	70	90	60	75	55	0	65
210	95	95	99	95	99	75	55	80
420	98	95	100	95	99	100	65	99
840	100	100	100	100	100	100	100	100

TABLE 17

Efficacy of two- and three-way combinations on *Sorghum halepense* (johnsongrass, seedling).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
105	80	60	50	0	85	55	0	80
210	99	85	90	99	99	90	50	100
420	100	98	99	100	100	99	75	100
840	100	100	99	100	100	100	100	100

TABLE 18

Efficacy of two- and three-way combinations on *Digitaria sanguinalis* (large crabgrass).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
105	80	80	70	65	70	55	40	65
210	85	90	75	70	75	70	60	75
420	95	90	95	90	90	85	75	90
840	98	90	99	99	100	100	90	100

Two- and three-way combinations of this invention show activity against grassy weeds superior to the isopropylamine salt of glyphosate and equal to the commercial Roundup Ultra™ formulation. Tables 19–22 show the activity of representative two- and three-way combinations of actives in diamines or triamines, on broadleaf weed species, compared to the prior art compound glyphosate-isopropylamine salt (alone, or in the commercial formulation Roundup Ultra™).

TABLE 19

Efficacy of two- and three-way combinations on *Abuilon theophrasti* (velvetleaf).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
105	50	65	60	75	50	50	30	65
210	50	75	70	90	65	70	60	75
420	85	80	80	95	75	70	65	80
840	85	95	90	99	70	90	70	95

TABLE 20

Efficacy of two- and three-way combinations on *Ipomoea hederacea* (ivyleaf morningglory).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
105	90	75	99	95	98	100	25	65
210	95	90	99	95	98	100	40	65
420	#OO	95	99	95	99	100	80	85

TABLE 20-continued

Efficacy of two- and three-way combinations on *Ipomoea hederacea* (ivyleaf morningglory).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
840	100	99	100	100	99	100	85	90

TABLE 21

Efficacy of two- and three-way combinations on *Chenopodium album* (common lambsquarters).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
105	90	80	99	100	99	98	50	70
210	95	95	99	1O()	100	98	50	70
420	99	98	99	100	100	100	60	90
840	100	99	100	100	100	98	75	90

TABLE 22

Efficacy of two- and three-way combinations on *Ambrosia artemisiifolia* (common ragweed).

Acid Equivalents Applied Grams/ha	6-53	6-54	6-56	6-59	6-60	6-61	Isopropyl Amine Salt	Roundup Ultra ™
105	0	85	80	90	75	65	50	65
210	90	99	90	99	80	70	60	70
420	90	99	99	100	85	75	65	70
840	100	100	100	100	100	95	75	90

Two- and three-way combinations of this invention show activity against broadleaf weeds superior to the isopropyl amine salt of glyphosate and the commercial Roundup Ultra™ formulation.

What is claimed is:

1. A compound of the following formula I

$$\left[\begin{matrix}\text{Acidic}\\\text{Herbicide-X}\end{matrix}\right]_x \cdot \left[\begin{matrix}\text{Acidic}\\\text{Herbicide-Y}\end{matrix}\right]_y \cdot \left[\begin{matrix}\text{Acidic}\\\text{Herbicide-Z}\end{matrix}\right]_z \cdot \left[\begin{matrix}\text{(poly)ethereal}\\\text{amine}\end{matrix}\right] \quad \text{I}$$

wherein x, y, and z are integers from 0 to 3 with the proviso that $0<x+y+z\leqq 3$;

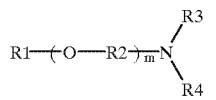
acidic Herbicide-X, Acidic Herbicide-Y, and Acidic Herbicide-Z, same or different that can be used in compositions of the present invention and possess the dissociable proton(s) in their structures are selected from the group consisting of:

acifluorfen, asulam, benazolin, bentazon, bilanafos, bromacil, bromoxynil, chloramben, clopyralid, cyhalofop, 2,4-D, 2,4-DB, dalapon, dicamba, dichlorprop, diclofop, DNOC, endothall, fenac, fenoxaprop, flamnprop, fluazifop, flumiclorac, fluoroglycofen, fomesafen, fosamine, glufosinate, glyphosate, haloxyfop, imazameth,

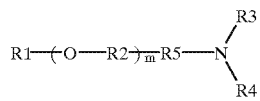
imazamethabenz, imazamox, imazapic, imazapyr, imazaquin, imazethapyr, ioxynil, MCPA, MCPB, MCPP, mecoprop, methylarsonic acid, naptalam, nonanoic acid, picloram, quinclorac, quizalofop, sulfamic acid, 2,3,6-TBA, TCA, and triclopyr;

the (poly)ethereal amine is at least one selected from compounds of formula II^1 through II^5:

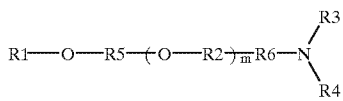
II^1



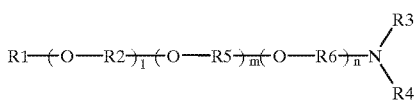
II^2



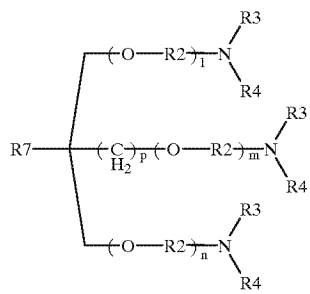
II^3



II^4



II^5



wherein R_1 is a hydrogen, a C_{1-26} alkyl, a C_{2-6} alkenyl, a C_{2-6} alkynyl branched-chain or straight-chain which may or may not be substituted with one or more halogen, hydroxy, C_{1-6} alkoxy, (C_{1-6} alkyl-)q-amino (q is an integer of 0, 1, or 2), morpholino, or C_{1-6} alkoxycarbonyl group, an aryl, or a heteroaryl which may or may not be substituted with C_{1-6} alkyl, C_{1-6} haloalkyl, halogen, C_{1-6} alkoxy, (C_{1-6} alkyl-)$_q$-amino ($_q$ is an integer of 0, 1, or 2), nitro, or C_{1-6} alkoxycarbonyl group;

R_2, R_5, and R_6 are independently C_{1-8} alkylene branched-chain or straight-chain, which may contain imine or ether linkage therein and may be substituted by a C_{1-6} alkyl group;

R_3 and R_4 are a hydrogen atom or a C_{1-6} alkyl group, which may be branched or straight and may or may not be substituted with one or more C_{1-6} alkoxy, or a group of R_1—(—O—R_2—)$_{m'}$—O—;

R_7 is a hydrogen or a C_{1-6} alkyl group;

l, m and n is a number from 1 to about 500;

m' is a number from 0 to about 35;

p is an integer of 0 or 1;

when m is 1, none of R_1, R_3, and R_4 is H and further R_2 is not ethylene.

2. The compound according to claim **1** wherein R_1 is a C_{1-26} alkyl, R_2, R_5, and R_6 are independently a C_{1-8}alkylene branched-chain or straight-chain, R_3 and R_4 are a hydrogen, each of l, m and n is a integer from 5 through 300.

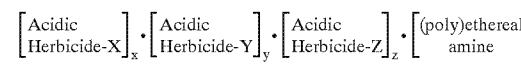
3. The compound according to claim **1** wherein R_1 is a methyl, R_2, R_5, and R_6 are independently a C_{1-38}alkylene branched-chain or straight-chain, R_3 and R_4 are a hydrogen, each of l, m and n is a integer from 5 through 35.

4. A herbicidal composition which comprises a herbicidally effective amount of a compound of claim **1** and carrier.

5. A method for controlling undesired vegetation which comprises applying to a locus to be protected a herbicidally effective amount of a compound of claim **1**.

6. A process for preparing a compound of the following formula

I



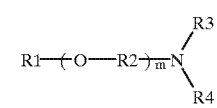
wherein x, y, and z are integers from 0 to 3 with the proviso that $0<x+y+z\leqq 3$;

acidic Herbicide-X, Acidic Herbicide-Y, and Acidic Herbicide-Z, same or different that can be used in compositions of the present invention and possess the dissociable proton(s) in their structures are selected from the group consisting of:

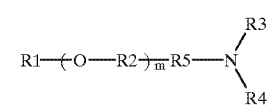
acifluorfen, asulam, benazolin, bentazon, bilanafos, bromacil, bromoxynil, chloramben, clopyralid, cyhalofop, 2,4-D, 2,4-DB, dalapon, dicamba, dichlorprop, diclofop, DNOC, endothall, fenac, fenoxaprop, flamprop, fluazifop, flumiclorac, fluoroglycofen, fomesafen, fosamine, glufosinate, glyphosate, haloxyfop, imazameth, imazamethabenz, imazamox, imazapic, imazapyr, imazaquin, imazethapyr, ioxynil, MCPA, MCPB, MCPP, mecoprop, methylarsonic acid, naptalam, nonanoic acid, picloram, quinclorac, quizalofop, sulfamic acid, 2,3,6-TBA, TCA, and triclopyr;

the (poly)ethereal amine is at least one selected from compounds of formula II^1 through II^5:

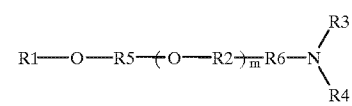
II^1



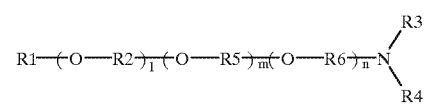
II^2



II^3

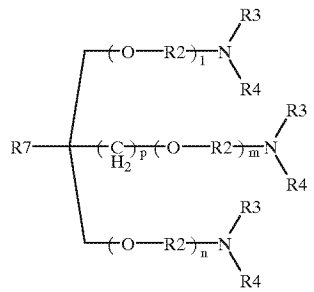


II^4



-continued

II[5]



wherein R_1 is a hydrogen, a C_{1-26} alkyl, a C_{2-6} alkenyl, a C_{2-6} alkynyl branched-chain or straight-chain which may or may not be substituted with one or more halogen, hydroxy, C_{1-6} alkoxy, (C_{1-6} alkyl-)q-amino (q is an integer of 0, 1, or 2), morpholino, or C_{1-6} alkoxycarbonyl group, an aryl, or a heteroaryl which may or may not be substituted with C_{1-6} alkyl, C_{1-6} haloalkyl, halogen, C_{1-6} alkoxy, (C_{1-6} alkyl-)$_q$-amino ($_q$ is an integer of 0, 1, or 2), nitro, or C_{1-6} alkoxycarbonyl group;

R_2, R_5, and R_6 are independently C_{1-8}alkylene branched-chain or straight-chain, which may contain imine or ether linkage therein and may be substituted by a C_{1-6} alkyl group;

R_3 and R_4 are a hydrogen atom or a C_{1-6} alkyl group, which may be branched or straight and may or may not be substituted with one or more C_{1-6} alkoxy, or a group of R_1—(—O—R_2—)$_{m'}$—O—;

R_7 is a hydrogen or a C_{1-6} alkyl group;

l, m and n is a number from 1 to about 500;

m' is a number from 0 to about 35;

p is an integer of 0 or 1;

when m is 1, none of R_1, R_3, and R_4 is H and further R_2 is not ethylene,

which comprises reacting acidic herbicide(s) with an amine of the above formula II[1] through II[5].

* * * * *

FOREIGN PATENT DOCUMENTS

EP	0 252 897	A2	1/1988
EP	257542		3/1988
EP	0268574		5/1988
EP	357553		8/1989
EP	0343142		11/1989
EP	378985		12/1989
EP	0 354 201	A2	2/1990
EP	0 387 165	A1	9/1990
EP	409815		1/1991
EP	441764		1/1991
EP	462585		12/1991
EP	499798		1/1992
EP	475392		3/1992
EP	496701		7/1992
EP	614606		2/1994
GB	2 233 229		1/1991
WO	89/04607		6/1989
WO	92/08353		5/1992
WO	93/21772		11/1993
WO	9419949		9/1994
WO	96/25043		8/1996
WO	96/32013		10/1996
WO	96/34528		11/1996
WO	97/24930		7/1997
WO	97/34484		9/1997

OTHER PUBLICATIONS

Waters, S. "Glyphosate-tolerant crops for the future: Development, risks and benefits", Brighton Crop Protection Conference-Weeds (1991), 165-70.
Moshier, L.J. and Russ, O.G. "Response of Honeyvine Milkweed to Herbicides", North Central Weed Control Conference (1978) 33, 108.
Walker, S.R., Hargreaves, P.A. and Noble, R.M. "Potential for Herbicide Residues to Contaminate Australian Soils and Waters", Herbicide-Resistant Crops and Pastures. Aust. Farming Syst. Proc. Workshop (1995), 191-199.
Yortt, M. L. "Control of Annual and Perennial Weeds in Maize Established by Conventional and Conservation Tillage Practices", Proc. New Zealand Weed and Pest Control Conference (1982) 35th, pp. 215-218.
Research Disclosure No. 37242, published Apr. 1995.
Myers, M.G. and Harvey, R.G., "Triazine-Resistant Common Lambsquarters Control in Field Com", Weed Technology 7, (1993) pp. 884-889.
Moshier, L.J., "Response of Honeyvine Milkweed to Herbicide Applications", Weed Science (1980) 28(6), 722-724.
Roundup Ultra herbicide booklet—21137T1-2/53.
Roundup Ultra herbicide booklet—21137U2-2/53.
Roundup Ultra herbicide booklet—21001S1-28/53.
Material Safety Data Sheet filed with the United States Occupational Safety and Health Administration for Dual Herbicide.
Material Safety Data Sheet filed with the United States Occupational Safety and Health Administration of Solicam DF Herbicide.
"The Pesticide Manual, 10th Edition" (1994). Entries 369, 476, 593, 569, 202, 605, 232, 332, 582, 36, 148, 22, 664, 627, 577.
Moser, H., Rihs, G., Sauter, H.P., and Bohner, B., "Atropisomerism, Chiral Centre and Activity of Metolachlor" Pesticide Chemistry: human welfare and the environment, vol. 1. Synthesis and structure-activity relationships (1983) pp. 315-320.
Australian Weed Control Handbook, Tenth Edition, Inkata Press, Melbourne, 1995, pp. 380-396, 138-142, 127-133, 180-181, 217-230, 233-234 and 397-398.
"Herbicide Handbook", Weed Science Society of America, Seventh Edition, 1994, pp. 149-152.
Herbicides. Chemistry, Degradation, and Mode of Action, vol. 3 (1988), edited by P.C.Kearney and D.D.Kaufman, published by Marcel Dekker, Inc., New York, pp. 338-345 and 374-377.
Harr, J., Seckinger, K., Ummel, E. and Hargett L.T. "SAN 582 H—A new herbicide for weed control in corn and soybeans", Proceedings of the Brighton Crop Protection Conference—Weeds—1991, pp. 87-92.
Charles, G.W., Constable, G.A. and Kennedy, I.R. "Current and future weed control practices in cotton: the potential use of transgenic herbicide resistance" pp. 89-100 in G.D.McLean and G.Evans, (eds) 1995, Herbicide-resistant Crops and Pastures in Australian Farming Systems.
Rasche, E. "Development of glufosinate ammonium tolerant crops and the selective use of the herbicide glufosinate ammonium", pp. 25-33 in G.D.McLean and G.Evans, (eds) 1995, Herbicide-resistant Crops and Pastures in Australian Farming Systems.
Res. Rep. North Cent. Weed Sci. Soc. (52, 266-267, 1995).
Res. Rep. North Cent. Weed Sci. Soc. (52, 426-427, 1995).
Zeitschrift fur Pflanzenkrankheiten und Pflanzenschuts, Sonderheft X, 335-360 (1984).
Research Report North Central Weed Science Society, 169-171 (1994).
Research Report Expert Committee Weeds Eastern Canada (40 Meet., vol. 1, 205-206, 1995).
Research Report Expert Committee Weeds Eastern Canada (40 Meet., vol. 1, 242-243, 1995).
Flint et al., Effects of Gluphosate Combinations with 2,4-D or Dicamba on Field Bindweed (*Convolvulus arvensis*). Weed Science, 37:12-18.
Research Disclosure, Apr. 1995, 271, 37242.
J.M. Lich et al., Interaction of Glyphosate with Postemergence Soybean (Glycine Max) Herbicides, Weed Science 45(1), 12-21 (1997).
Research Disclosure, Mar. 1987, 275, 27546.
P. Hornus, Oleagineux 45 (2), 57-68 (1990).
P. Langeluddeke et al., British Crop Prot. Conf. Weeds, 1985, vol. 3, S. 1047-1052.
P. Westra et al., Field Bindweed (*Convolvulus arvensis*) Control with Various Herbicide Combinations, Weed Technology 6 (4), 949-955 (1992).
S.M. Brown et al., Weed Control Programs for Minimum Tillage Cotton (*Gossypium birsutum*) Weed Science 33(6), 843-847 (1985).
S. Tan et al., Leaching of Bromacil and Norflurazon as Affected by Herbicide Mixture, J. Environ. Qual. 24, 970-972 (1995).
European Opposition No. GVX/P-C6 HESTER OPPO 01 filed Sep. 18, 2004 by Opposer BASF Aktiengesellschaft in opposition to the grant of Patent No. EP-B-930823 / EP Application No. 97 940 156.9 by Proprietor Syngenta Participations AG; Decision issued on Jul. 28, 2006.
Australian Opposition filed by Opponent Monsanto Company on Aug. 21, 2000, in opposition to Australian Patent Application No. 720095, entitled "Process for the Control of Weeds," in the name of Applicant Syngenta Participations AG; Decision issued on Aug. 16, 2005.
Declaratory Judgment Action styled Monsanto Company v. Syngenta Crop Protection, Inc., No. 4-07cv543 (E.D. Mo. filed Mar. 20, 2007).
Chemical Abstracts, vol. 124, abs. No. 79375m.

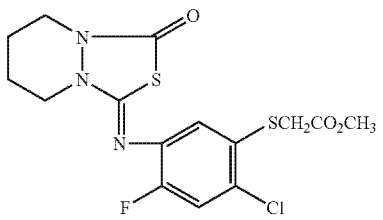
* cited by examiner

PROCESS FOR THE CONTROL OF WEEDS

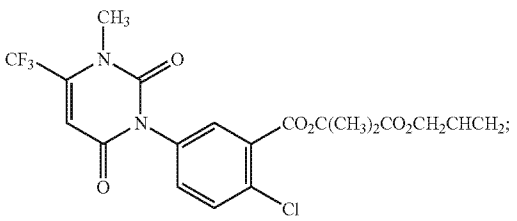
This application is a Continuation of Ser. No. 09/795,073, filed Feb. 26, 2001, now U.S. Pat. No. 6,586,367, which is a Continuation of Ser. No. 09/242,658, filed Feb. 19, 1999 now abandoned, which was filed under 35 USC 371 as a national stage application of PCT/EP97/04795, filed Sep. 3, 1997, the contents of which are herein incorporated by reference.

The present invention relates to a new process for the control of weeds in useful plant cultivations, for example in the cultivation of maize, soya, cotton, rape, beet and sugar cane, which are resistant to phospho-herbicides.

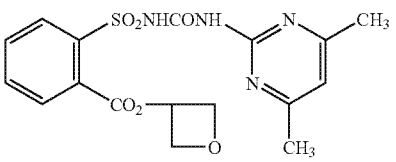
The phospho-herbicides glufosinate and glyphosate are described for example in The Pesticide Manual, Tenth Edition, 1994, Crop Protection Publications, BCPC. In addition, the following herbicides are similarly known: prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide, metolachlor, fluometuron, propaquizafop, atrazine, ametryn, terbutylazine, simazine, clodinafop, norflurazone, as well as prometryn. The S-enantiomer of metolachlor is known from U.S. Pat. No. 5,002,606; the S-enantiomer of dimethenamide from U.S. Pat. No. 5,457,985. The metabolite NOA-402989 is known from the Zeitschrift für Pflanzenkrankheiten und Pflanzenschutz, Sonderheft X, 355-360 (1984) as 3-phenyl-4-hydroxy-6-chloropyridazine. The compound of formula



is described for example in U.S. Pat. No. 4,671,819; U.S. Pat. No. 5,183,492 discloses the compound of formula



and the compound of formula

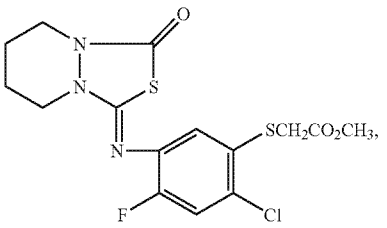


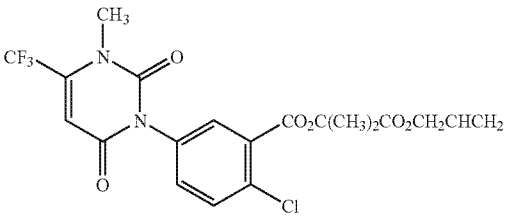
is known from EP-A-496 701.

It has now surprisingly been found that a quantitatively variable combination of phospho-herbicides selected from the group comprising glufosinate and glyphosate with at least one of the above-listed other herbicides exhibits a synergistic

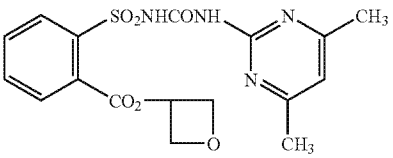
effect which is capable of controlling the majority of weeds occurring preferably in useful plant cultivations that are resistant to glufosinate or glyphosate, both in pre-emergence and in post-emergence, without significantly damaging the useful plants.

Therefore, according to the present invention, a new process is proposed for the control of weeds in the cultivation of useful plants that are resistant to phopho-herbicides, the process being characterised in that a herbicidally effective amount of a composition containing, in addition to the usual inert formulation assistants, a phospho-herbicide selected from the group comprising glufosinate and glyphosate, a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide and its S-enantiomer, metolachlor and its S-enantiomer, fluometuron, propaquizafop, atrazine, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae





and



is allowed to take effect on the cultivated plant or its habitat, with the provision that compositions containing glufosinate and metolachlor, glufosinate and atrazine, glufosinate and metolachlor and atrazine, as well as glutosinate and atrazine and dicamba are not used in glufosinate-resistant maize, and further that compositions containing glyphosate and atrazine are not used in glyphosate-resistant maize, and compositions containing glyphosate and metalochlor or glyphosate and dimethenamide are not used in glyphosate-resistant soya.

It is highly surprising that the combination of a phospho-herbicide such as glufosinate or glyphosate with at least one of the above-mentioned further herbicides surpasses the additional effect to be expected in principle on the weeds to be controlled, and thus extends the limits of activity of both active ingredients in particular in two different respects.

On the one hand, the application amounts of the individual compounds applied are reduced, whilst maintaining a good level of activity. On the other hand, the composition used according to the invention still achieves a high rate of weed control where the individual substances have become no

longer agronomically useful in small application amounts. The consequence of this is a considerable widening of the weed spectrum and an additional increase in selectivity for useful plant cultivations, which is necessary and desired in the case of an unintentional overdose of active ingredient. In addition, the composition according to the invention allows greater flexibility of subsequent cultivations whilst maintaining the outstanding control of weeds in useful plants.

The herbicide mixture used according to the invention may be used on glufosinate- or glyphosate-resistant useful plants, especially maize, cotton, rape, sugar beet, sugar cane and soya, against a large number of agronomically important weeds, such as *Stellaria, Nasturtium, Agrostis, Digitaria, Avena, Setaria, Sinapis, Lolium, Solanum, Phaseolus, Echinochloa, Scirpus, Monochoria, Sagittaria, Bromus, Alopecurus, Sorghum halepense, Rottboellia, Cyperus, Abutilon, Sida, Xanthium, Amaranthus, Chenopodium, Ipomoea, Chrysanthemum, Galium, Viola* and *Veronica*. It may also be used for non-selective weed control and for all application methods that are usual in agriculture, e.g. pre-emergent application, post-emergent application and seed disinfecting.

Useful plant cultivations which are tolerant towards the herbicide glufosinate or glyphosate are preferably produced with the assistance of biotechnological methods. The assistance of biotechnological processes can be restricted to the usage of cell-biological selection processes, which are carried out in such cases preferably on cell or callus cultures that are capable of regeneration, so as to finally develop glutosinate- or glyphosate-tolerant plants. However, since precise knowledge is available about the mechanism of activity of these herbicides, gene technology may also be employed.

Resistance towards glufosinate may be essentially attained by two different experimental setups. On the one hand, the herbicide target which in the case of glufosinate is represented by the enzyme glutamine synthetase may be selected as the point of attack for the development of resistance. On the other hand, the herbicidally active substance itself may serve as the starting point for the development of resistance. For example, glufosinate tolerance may be effected through the transgenic expression of an enzyme which converts glutosinate into a physiologically inactive form.

The first set-up makes use of the knowledge of the site of action or the point of attack of glufosinate, namely the enzyme glutamine synthetase. The desired tolerance may thus be effected by over-expression of the enzyme in plants or preferably by transgenic expression of variants of the enzyme which are tolerant to the effect of glufosinate.

Glufosinate-tolerant plants are thus produced e.g. by amplifying the herbicide target in the plant. Such gene amplification is achieved for example by exposing plant cell cultures to selection pressure, and further cultivating the resistant variants or strains obtainable in this way and regenerating them into whole plants. The said resistant cell strains may also be fused with an appropriate receptor cell line in the manner of a protoplast fusion, and regenerated into whole plants. Alternatively, the desired gene amplification may also be attained with the assistance of genetic engineering, whereby the number of wild type genes in the plant genome of sensitive plants is increased by inserting further wild type gene replications. The source of wild type genes which encode the enzyme glutamine synthetase may be both procaryotes and especially eucaryotes. The eucaryotes are presented in particular by plant sources, e.g. various species of potato (*Solanum tuberosum*), tomato (*Lycopersicon esculentum*), pepper (*Capsicum annumm*), tobacco (*Nicotiana tabacum*), brassica, especially *Brassica napus*, various leguminosae e.g. alfalfa (*Medicago sativa*), clover (Trifolium sp.), soya (*Glycine max*), various species of bean (*Phaseolus* sp., *Vici* sp, *Vigna* sp.), peas (*Pisum sativum*), various root crops, e.g. *Beta vulgaris*, carrots (*Daucus carota*), sweet potatoes (*Ipomoea batatus*) as well as others, for example *Arabidopsis thaliana*.

Glufosinate-tolerant plants may also be produced by inserting genes that encode a mutated glutamine synthetase enzyme which is resistant towards the inhibitory activity of glufosinate. As in the case of the above-mentioned wild type genes, these are cloned into expression cassettes developed especially for plants, and are transformed into the desired host plant. Appropriate expression signals (essentially promoter and termination signals, as well as signal and enhancer sequences), which are recognised by the plant cell and lead to effective expression of the respective gene products in the transformed plant, and which may be employed within the said expression cassettes, are most familiar to the person skilled in the art.

The processes for the production of such glufosinate-tolerant plants are described in detail in international applications having publication nos. WO 86/02097 and WO 87/05627, and reference thereto is incorporated in the present application.

The recombinant DNA molecules thus produced may be inserted into the plant by means of various transformation processes known to the person skilled in the art, and brought to expression there. The person skilled in the art is aware that the choice of an appropriate method is dependent in particular on the species of plant respectively selected. Suitable transformation processes include for example micro-injection (Crossway et al., Bio Techniques 4:320-334 (1986)), electroporation (Riggs et al, Proc. Natl. Acad. Sci. USA 83:5602-5606 (1986), *Agrobacterium*-mediated transformation (Hinchee et al., Biotechnology 6:915-921 (1988)), direct gene transfer processes (Paszkowski et al., EMBO J. 3:2717-2722 (1984)), as well as ballistic processes using micro-projectiles ('ballistic particle acceleration') [see for example Sanford et al., U.S. Pat. No. 4,945,050; and McCabe et al., Biotechnology 6:923-926 (1988)].

One especially preferred process for inserting recombinant DNA molecules into maize plants is described in the international application having publication no. WO 93/07278 and EP-A 0 292 435, and reference thereto is incorporated in the present application.

As has already been mentioned, glufosinate-tolerant plants may also be produced by aiming at the herbicidally active compound as such and inactivating it. Thus, for example, genes may be isolated from the streptomycetes strains *S. hygrocopicus* and *S. viridochromogenes*, which were selected for bialaphos or phosphinotricine (=glufosinate) resistance, and these genes encode an enzyme which acetylates the free NH_2 group of glufosinate and thus transforms it to a non-herbicidally active compound. The transgenic expression of these phosphinothricine acetyl-transferase genes in useful plants is capable of eliminating the locking-up of the nitrogen metabolism in the plant by the glufosinate and leads to glufosinate tolerance of said plants.

The efficiency of expression of recombinant DNA molecules of bacterial origin in plants may be controlled by the production of synthetic genes. For example, genes of streptomycetes normally possess a very high G/C proportion of up to 70%, which may be reduced to the usual amount for plant genes of ca. 50% by resynthesis of the gene, whilst taking into account the usual codon usage of plants.

The efficiency of expression may normally be further increased by optimising the codon usage in such a way that only those codons that are most preferred in the respective target plant, for example maize, are used for gene resynthesis.

Further details relating to the construction of synthetic genes which have been optimised for expression in maize may be found e.g. in the international application having publication no. WO 93/07278.

The glufosinate-tolerant plants obtainable in this way may then be propagated, i.e. produced, by means of conventional cultivation methods, whereby the glufosinate tolerance is passed on to subsequent generations by transmission.

The processes for the production of such glufosinate-tolerant plants are described in detail in the European applications having the publication nos. EP-A 242 236, EP-A 242 246, EP-A 257 542 and EP-A 275 957 and reference thereto is incorporated in the present application.

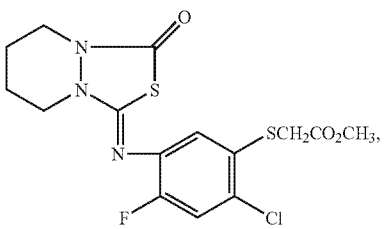
Glyphosate-resistant plants may be produced in a similar manner, whereby a gene is used which codes for a glyphosate-tolerant EPSP synthase, as is described in EP-A-115673 and EP-A-409815.

By the expression plants or useful plant cultivations that are resistant to the herbicide glufosinate or glyphosate, as is employed in the present application, are understood also plants or useful plant cultivations which are resistant to those herbicides that are metabolised in the plant or in the useful plant cultivations to glufosinate, as is the case for example when using bilanafos, or to glyphosate.

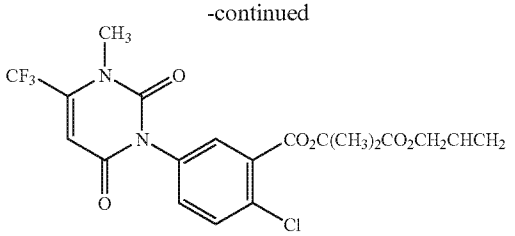
Maize which is resistant to glufosinate was treated with a tank mixture containing glufosinate and atrazine according to Res. Rep. North Cent. Weed Sci. Soc., 51, 169-170, 1994. Further tank mixtures for use in glufosinate-resistant maize are described in Res. Rep. Expert Comm. Weeds East Can., 1,242-243,1995 and Res. Rep. Expert Comm. Weeds East Can., 1, 205-206, 1995. The treatment of glyphosate-resistant maize or glyphosate-resistant soya with mixtures of glyphosate and atrazine, metolachlor or dimethenamide is described in Abstr. Meet. Weed Sci. Soc. Am. 37, 87, 1997, Res. Rep. North Cent. Weed Sci. Soc., 52, 426-427, 1995 and Res. Rep. North Cent. Weed Sci. Soc., 52, 266-267, 1995.

The active ingredient combination used according to the invention contains glufosinate or glyphosate and at least one of the other herbicides in any ratio of the mixture, normally with an excess of one component over the other. Preferred ratios between glufosinate or glyphosate and the components in the mixture lies between 1:100 and 1:0.001.

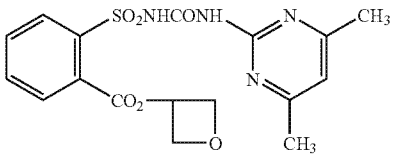
A preferred process according to the present invention is characterised in that a herbicidally effective amount of a composition containing, in addition to the usual inert formulation assistants, glufosinate and a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide, metolachlor and its S-enantiomer, fluometuron, propaquizafop, atrazine, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae



-continued

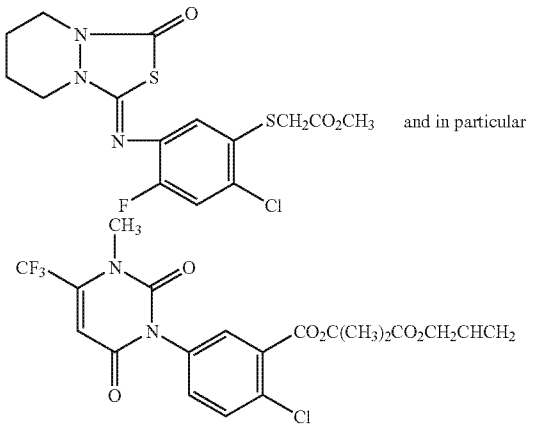


and



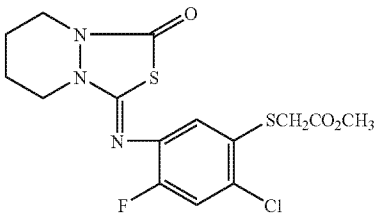
is allowed to take effect on the cultivated plant or its habitat.

Mixtures that have proved to be especially effective when the useful plant cultivation relates to maize, which is resistant to glufosinate and/or glyphosate, are combinations of glufosinate or glyphosate with a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide as well as its S-enantiomer, metolachlor as well as its S-enantiomer, atrazine, NOA-402989, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae



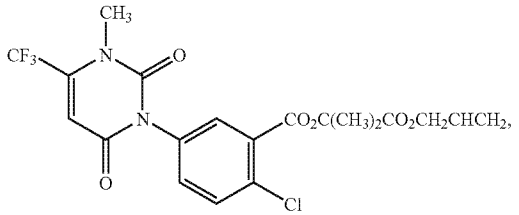
and in particular

or combinations of glufosinate with a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide, metolachlor as well as its S-enantiomer, atrazine, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae

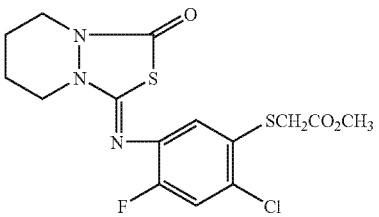


and

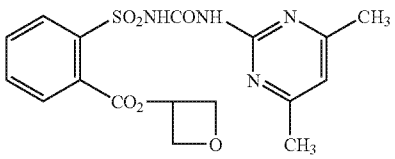
-continued



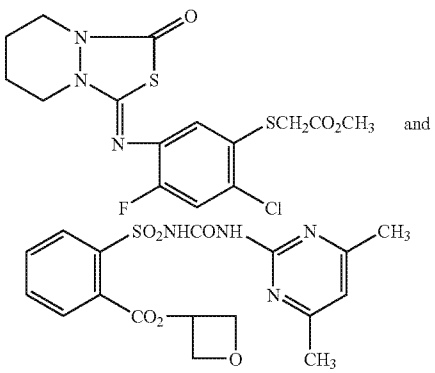
When the useful plant cultivation relates to soya, which is resistant to glufosinate and/or glyphosate, it is preferable to use a composition which contains glufosinate or glyphosate and a synergistic amount of at least one further herbicide selected from the group comprising metolachlor as well as its S-enantiomer and the compounds of formula



and in particular



or a composition which contains glufosinate and at least one further herbicide selected from the group comprising metolachlor as well as its S-enantiomer and the compounds of formulae



and

In cotton cultivations, which are resistant to glufosinate and/or glyphosate, a composition is preferably employed which contains glufosinate or glyphosate and a synergistic amount of fluometuron, or which contains glufosinate and a synergistic amount of fluometuron.

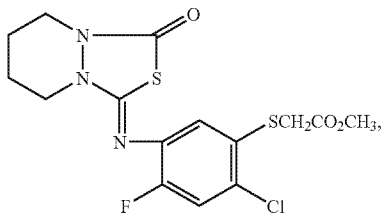
In rape or beet cultivations, which are resistant to glufosinate and/or glyphosate, a composition is preferably selected which contains glufosinate or glyphosate and a synergistic amount of propaquizafop, or which contains glufosinate and a synergistic amount of propaquizafop.

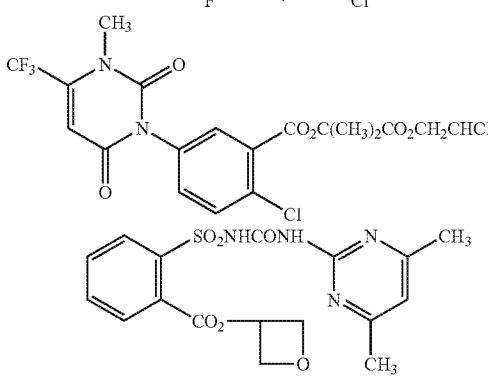
When the useful plant cultivation concerned is sugar cane, which is resistant to glufosinate and/or glyphosate, it is preferable to use a composition which contains glufosinate or glyphosate and a synergistic amount of ametryn, or a composition containing glufosinate and a synergistic amount of ametryn.

The amount applied may vary within a wide range, and depends on the nature of the soil, the type of application (pre- or post-emergent; seed disinfecting; usage in the seed drill; no tillage application etc.), the plant cultivated, the weed to be controlled, the prevalent climatic conditions and other factors determined by the type of application, time of application and target cultivation. In general, the active ingredient mixture used according to the invention may be used at an application rate of 0.3 to 4.0 kg active ingredient mixture per hectare.

In the composition used according to the invention, glufosinate or glyphosate is preferably present in a weight ratio of 1:10 to 1000:1 in relation to the other herbicide(s).

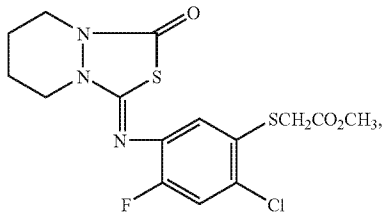
The herbicidal compositions which contain, in addition to the usual inert formulation assistants, glufosinate and a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, pyridate, dimethenamide and its S-enantiomer, the S-enantiomer of metolachlor, fluometuron, propaquizafop, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae

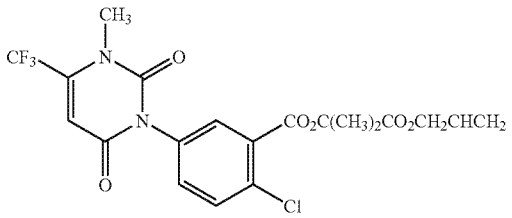




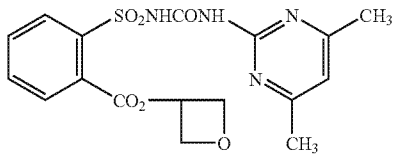
and

as well as the herbicidal compositions which contain, in addition to the usual inert formulation assistants, glyphosate and a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, the S-enantiomer of dimethenamide, the S-enantiomer of metolachlor, fluometuron, propaquizafop, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae





and



are new and form a further object of the present invention.

Both glufosinate and/or glyphosate and the other herbicides may be used in unchanged form, i.e. as they occur during synthesis, but they are preferably processed in conventional manner with the assistants which are customary in formulation technology, such as solvents, solid carriers or surfactants, e.g. into emulsifiable concentrates, directly sprayable or diluable solutions, spray powders, soluble powders, dusting compositions, granulates or micro-capsules. The application processes such as spraying, atomizing, dusting, sprinkling, dispersing or pouring are selected according to the aims strived for and the given conditions, in the same way as for the type of composition.

The formulations, i.e. the compositions, preparations or compositions containing the active ingredient glufosinate or glyphosate and the other herbicides as well as optionally one or several solid or liquid formulating assistants, are produced in a manner known per se, e.g. by intimately mixing and/or grinding the active ingredients with the formulating assistants such as solvents or solid carriers. In addition, surface-active compounds (surfactants) may be used when producing the formulations.

The solvents in question may be: aromatic hydrocarbons, preferably fractions C_8 to C_{12}, such as xylene mixtures or substituted naphthalenes, phthalic acid esters such as dibutyl or dioctyl phthalate, aliphatic hydrocarbons such as cyclohexane or paraffins, alcohols and glycols, as well as the ethers and esters thereof, such as ethanol, ethylene glycol, ethylene glycol monomethyl- or -ethyl-ether, ketones such as cyclohexanone, strongly polar solvents such as N-methyl-2-pyrrolidone, dimethyl sulphoxide or N,N-dimethylformamide, as well as optionally epoxidated vegetable oils such as epoxidated coconut oil or soyabean oil; or water.

The solid carriers employed e.g. for dusting compositions and dispersible powders are normally natural mineral powders, such as calcite, talc, kaolin, montmorillonite or attapulgite. To improve the physical properties of the formulation, highly disperse silicic acid or highly disperse absorbent polymerisates may also be added. The granular, adsorptive granulate carriers employed may be porous types such as pumice, brick fragments, sepiolite or bentonite, and the non-absorbent carrier materials are e.g. calcite or sand. Moreover, a number of pregranulated materials of inorganic or organic nature may also be used, especially dolomite or pulverized plant residue.

Depending on the type of active ingredient to be formulated, the surface-active compounds may be non-ionic, cationic and/or anionic surfactants and surfactant mixtures having good emulsifying, dispersing and wetting properties.

Appropriate anionic surfactants may be both so-called water-soluble soaps and water-soluble synthetic surface-active compounds.

Soaps which may be mentioned are the alkali salts, alkaline earth salts or optionally substituted ammonium salts of higher fatty acids (C_{10}-C_{22}), e.g. the Na or K salts of oleic or stearic acid, or of natural fatty acid mixtures, which may be obtained e.g. from coconut oil or tallow oil. Furthermore, the fatty acid methyl-taurine salts may also be mentioned.

More frequently however, so-called synthetic surfactants are used, especially fat alcohol sulphonates, fat alcohol sulphates, sulphonated benzimidazole derivatives or alkylaryl sulphonates.

The fat alcohol sulphonates or sulphates are normally present as alkali salts, alkaline earth salts or optionally substituted ammonium salts and have an alkyl radical with 8 to 22 C-atoms, whereby alkyl also includes the alkyl moiety of acyl radicals, e.g. the Na or Ca salt of lignin sulphonic acid, of dodecylsulphuric acid ester or of a fat alcohol sulphate mixture produced from natural fatty acids. This also includes the salts of sulphuric acid esters and sulphonic acids of fat alcohol/ethylene oxide adducts. The sulphonated benzimidazole derivatives preferably contain 2 sulphonic acid groups and one fatty acid radical with 8-22 carbon atoms. Alkylaryl sulphonates are e.g. the Na, Ca or triethanolamine salts of dodecylbenzenesulphonic acid, of dibutylnaphthalene-sulphonic acid or of a naphthalene-sulphonic acid/formaldehyde condensation product.

The corresponding phosphates such as the salts of the phosphoric acid ester of a p-nonyl-phenol-(4-14)-ethylene oxide adduct or phospholipids may also be considered.

The non-ionic surfactants may be primarily polyglycol ether derivatives of aliphatic or cycloaliphatic alcohols, saturated or unsaturated fatty acids and alkylphenols, which may contain 3 to 30 glycol ether groups and 8 to 20 carbon atoms in the (aliphatic) hydrocarbon radical and 6 to 18 carbon atoms in the alkyl radical of the alkylphenols.

Further appropriate non-ionic surfactants are the water-soluble polyethylene oxide adducts to polypropylene glycol, ethylenediamino-polypropylene glycol and alkyl-polypropylene glycol, containing 20 to 250 ethylene glycol ether groups and 10 to 100 propylene glycol ether groups, with 1 to 10 carbon atoms in the alkyl chain. The said compounds normally contain 1 to 5 ethylene glycol units per propylene glycol unit.

Examples of non-ionic surfactants which may be mentioned are nonylphenol polyethoxy ethanols, castor oil polyglycol ether, polypropylene-polyethylene oxide adducts, tributylphenoxy-polyethoxy ethanol, polyethylene glycol and octylphenoxy-polyethoxy ethanol.

Fatty acid esters of polyoxyethylene sorbitan, such as polyoxyethylene sorbitan trioleate, may also be considered.

The cationic surfactants in question are in particular quaternary ammonium salts, which contain as the N-substituents at least one alkyl radical with 8 to 22 C-atoms and as further substituents low, optionally halogenated alkyl, benzyl or low hydroxyalkyl radicals. The salts are preferably present as halides, methyl sulphates or ethyl sulphates, e.g. stearyl trimethylammonium chloride or benzyl-di-(2-chloroethyl)-ethylammonium bromide.

The surfactants which are customary in formulation techniques and which may also be used in the compositions according to the invention are described inter alia in "Mc Cutcheon's Detergents and Emulsifiers Annual" MC Publishing Corp., Ridgewood N.J., 1981, Stache, H., "Tensid-Taschenbuch", Carl Hanser Verlag, Munich/Vienna, 1981 and M. and J. Ash, "Encyclopedia of Surfactants", Vol I-III, Chemical Publishing Co., New York, 1980-81.

The herbicide formulations normally contain 0.1 to 99% by weight, especially 0.1 to 95% by weight of active ingredient mixture, 1 to 99.9% by weight of a solid or liquid formulation excipient and 0 to 25% by weight, especially 0.1 to 25% by weight of a surfactant.

While concentrated compositions are usually preferred as a commercial product, the final user normally uses diluted compositions.

The compositions may also contain further additives such as stabilizers, e.g. optionally epoxidated plant oils (epoxidated coconut oil, rapeseed oil or soyabean oil), defoamers, e.g. silicone oil, preservatives, viscosity regulators, binding compositions, adhesives, as well as fertilizers or other active ingredients.

Preferred formulations are made up in particular as follows:

(% =percent by weight)

Emulsifiable concentrates:	
active ingredient mixture:	1 to 90%, preferably 5 to 20%
surface-active composition:	1 to 30%, preferably 10 to 20%
liquid carrier:	5 to 94%, preferably 70 to 85%
Dusts:	
active ingredient mixture:	0.1 to 10%, preferably 0.1 to 5%
solid carrier:	99.9 to 90%, preferably 99.9 to 99c%
Suspension concentrates:	
active ingredient mixture:	5 to 75%, preferably 10 to 50%
water:	94 to 24%, preferably 88 to 30%
surface-active composition:	1 to 40%, preferably 2 to 30%
Wettable powders:	
active ingredient mixture:	0.5 to 90%, preferably 1 to 80%
surface-active composition:	0.5 to 20%, preferably 1 to 15%
solid carrier material:	5 to 95%, preferably 15 to 90%
Granulates:	
active ingredient mixture:	0.1 to 30%, preferably 0.1 to 15%
solid carrier material:	99.5 to 70%, preferably 97 to 85%

The following examples illustrate the invention further without restricting it.

FORMULATION EXAMPLES FOR THE ACTIVE INGREDIENT MIXTURES USED ACCORDING TO THE INVENTION

(% =percent by weight)

F1. Emulsion concentrates	a)	b)	c)	d)
active ingredient mixture	5%	10%	25%	50%
Ca dodecylbenzene sulphonate	6%	8%	6%	8%
castor oil polyglycol ether (36 mols EO)	4%	—	4%	4%
octylphenol polyglycol ether (7-8 mols EO)	—	4%	—	2%

-continued

F1. Emulsion concentrates	a)	b)	c)	d)
cyclohexanone	—	—	10%	20%
arom. hydrocarbon mixture C_9-C_{12}	85%	78%	55%	16%

Emulsions of each desired concentration may be produced from such concentrates by dilution with water.

F2. Solutions	a)	b)	c)	d)
active ingredient mixture	5%	10%	50%	90%
1-methoxy-3-(3-methoxy-propoxy)-propane	—	20%	20%	—
polyethylene glycol MW 400	20%	10%	—	—
N-methyl-2-pyrrolidone	—	—	30%	10%
arom. hydrocarbon mixture C_9-C_{12}	75%	60%		

The solutions are suitable for application in the form of the smallest droplets.

F3. Spray powder	a)	b)	c)	d)
active ingredient mixture	5%	25%	50%	80%
Na lignin sulphonate	4%	—	3%	—
Na lauryl sulphate	2%	3%	—	4%
Na diisobutyl naphthalene sulphonate	—	6%	5%	6%
octylphenyl polyglycol ether (7-8 mols EO)	—	1%	2%	—
highly disperse silicic acid	1%	3%	5%	10%
kaolin	88%	62%	35%	—

The active ingredient is mixed well with the additional materials and ground well in an appropriate mill. Spray powders are obtained, which may be diluted with water to suspensions of any desired concentration.

F4. Coated granules	a)	b)	c)
active ingredient mixture	0.1%	5%	15%
highly disperse silicic acid	0.9%	2%	2%
inorg. carrier material (Ø 0.1-1 mm) such as $CaCO_3$ or SiO_2	99.0%	93%	83%

The active ingredient is dissolved in methylene chloride, sprayed onto the carrier and the solvent subsequently evaporated in a vacuum.

F5. Coated granules	a)	b)	c)
active ingredient mixture	0.1%	5%	15%
polyethylene glycol MW 200	1.0%	2%	3%
highly disperse silicic acid	0.9%	1%	2%
inorg. carrier material (Ø 0.1-1 mm) such as $CaCO_3$ or SiO_2	98.0%	92%	80%

The finely ground active ingredient is evenly applied in a mixer onto the carrier material which has been moistened with polyethylene glycol. In this way, dust-free coated granules are obtained.

F6. Extrusion granules	a)	b)	c)	d)
active ingredient mixture	0.1%	3%	5%	15%
Na lignin sulphonate	1.5%	2%	3%	4%
carboxymethyl cellulose	1.4%	2%	2%	2%
kaolin	97.0%	93%	90%	79%

The active ingredient is mixed with the additives, ground and moistened with water. This mixture is extruded and subsequently dried in a current of air.

F7. Dusting composition	a)	b)	c)
active ingredient mixture	0.1%	1%	5%
talcum	39.9%	49%	35%
kaolin	60.0%	50%	60%

By mixing the active ingredient with the carrier materials and grinding in an appropriate mill, a dusting composition is obtained which is ready for use.

F8. Suspension concentrates	a)	b)	c)	d)
active ingredient mixture	3%	10%	25%	50%
ethylene glycol	5%	5%	5%	5%
nonylphenol polyglycol ether (15 mols EO)	—	1%	2%	—
Na lignin sulphonate	3%	3%	4%	5%
carboxymethyl cellulose	1%	1%	1%	1%
37% aqueous formaldehyde solution	0.2%	0.2%	0.2%	0.2%
silicone oil emulsion	0.8%	0.8%	0.8%	0.8%
water	87%	79%	62%	38%

The finely ground active ingredient is intimately mixed with the additives. In this way, a suspension concentrate is obtained, from which suspensions of any desired concentration may be prepared by dilution with water.

It is often more practical to formulate the active ingredients individually and then, shortly prior to placing in the applicator, to bring them together in water in the desired mixture ratio as a "tank mixture".

BIOLOGICAL EXAMPLES

Test Description (Per-emergent Treatment)

Monocotyledoneous and dicotyledoneous weeds and cultivated plants are sown in small plastic pots in standard soil. Directly after sowing, the test substances are applied in aqueous suspension (500 l water/ha). Subsequently, the test plants are raised under glass under optimum conditions. Evaluation takes place 3 weeks after application using a nine-stage appraisal scale (1=complete damage, 9=no effect). Appraisal marks of 1 to 4 (especially 1 to 3) indicate good to very good herbicide activity. Appraisal marks of 6 to 9 (especially 7 to 9) show good to very good tolerance of cultivated plants.

Test Description (Post-emergent Treatment)

Monocotyledoneous and dicotyledoneous weeds and cultivated plants are raised under glasshouse conditions in small plastic pots in standard soil. Application of the test substances takes place at the 3 to 6 leaf stage of the test plants. The test substances are applied in aqueous suspension (500 l water/ha) at application rates of 5 to 5000 g/ha active substance). Evaluation takes place 3 weeks after application using a nine-stage appraisal scale (1=complete damage, 9=no effect). Appraisal marks of 1 to 4 (especially 1 to 3) indicate good to very good herbicide activity. Appraisal marks of 6 to 9 (especially 7 to 9) show good to very good tolerance of cultivated plants.

In these tests, the herbicide mixtures used according to the invention show good control of the weeds.

The invention claimed is:

1. A process for the control of weeds in cultivations of useful plants which are resistant to glufosinate without significantly damaging the useful plants, comprising applying a herbicidally effective amount of a composition containing glufosinate and at least one further herbicide selected from the group consisting of prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide and its S-enantiomer, metolachlor and its S-enantiomer, propaquizafop, atrazine, and terbuthylazine to the useful plant or its habitat wherein said further herbicide is present in an amount sufficient to provide an increase in selectivity for the useful plants wherein the useful plants would show greater injury if said further herbicide were omitted from said composition, with the provisos that compositions containing glufosinate and metolachlor, glufosinate and atrazine, glufosinate and a mixture of metolachlor and atrazine, or glufosinate and a mixture of atrazine and dicamba are not used in glufosinate-resistant maize.

2. The process according to claim **1**, characterised in that the useful plant being cultivated is maize which is resistant to glufosinate and the composition contains glufosinate and at least one further herbicide selected from the group consisting of prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide and its S-enantiomer, the S-enantiomer of metolachlor and terbuthylazine wherein said further herbicide is present in an amount sufficient to provide an increase in selectivity for the useful plants wherein the useful plants would show greater injury if said further herbicide were omitted from said composition.

3. The process according to claim **1**, characterised in that the useful plant being cultivated is soya which is resistant to glufosinate, and the composition contains glufosinate and at least one further herbicide selected from the group consisting of dimethenamide and its S-enantiomer and metolachlor and its S-enantiomer.

4. The process according to claim **3**, wherein the composition comprises a mixture of glufosinate and dimethenamide.

5. The process according to claim **3**, wherein the composition comprises a mixture of glufosinate and the S-enantiomer of dimethenamide.

6. The process according to claim **3**, wherein the composition comprises a mixture of glufosinate and metolachlor.

7. The process according to claim **3**, wherein the composition comprises a mixture of glufosinate and the S-enantiomer of metolachlor.

8. The process according to claim **1**, characterised in that the useful plant being cultivated is rape or beet which are resistant to glufosinate and the composition contains glufosinate and propaquizafop.

9. The process according to claim **1**, characterised in that the useful plant cultivations are treated with the said composition at application rates corresponding to 0.3 to 4.0 kg total active ingredient per hectare.

10. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and prosulfuron.

11. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and primisulfuron.

12. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and dicamba.

13. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and pyridate.

14. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and dimethenamide.

15. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and the S-enantiomer of dimethenamide.

16. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and metolachlor.

17. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and the S-enantiomer of metolachlor.

18. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and propaquizafop.

19. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and atrazine.

20. The process according to claim **1**, wherein the composition comprises a mixture of glufosinate and terbuthylazine.

21. The process according to claim **2**, wherein the composition comprises a mixture of glufosinate and prosulfuron.

22. The process according to claim **2**, wherein the composition comprises a mixture of glufosinate and primisulfuron.

23. The process according to claim **2**, wherein the composition comprises a mixture of glufosinate and dicamba.

24. The process according to claim **2**, wherein the composition comprises a mixture of glufosinate and pyridate.

25. The process according to claim **2**, wherein the composition comprises a mixture of glufosinate and dimethenamide.

26. The process according to claim **2**, wherein the composition comprises a mixture of glufosinate and the S-enantiomer of dimethenamide.

27. The process according to claim **2**, wherein the composition comprises a mixture of glufosinate and the S-enantiomer of metolachlor.

28. The process according to claim **2**, wherein the composition comprises a mixture of glufosinate and terbuthylazine.

* * * * *

Jain, R. and C. L. Foy. 1997. Translocation and metabolism of glyphosate in Egyptian broomrape (*Orobanche aegyptiaca*) – infested tomato (*Lycopersicon esculentum*) plants. PGRSA Quarterly 25: 1-7.

Lamoreaux, R. J., R. Jain, and F. D. Hess. 1993. Efficacy of dimethenamid, metolachlor and encapsulated alachlor in soil covered with crop residue. Brighton Crop Protection. Conf. – Weeds. 7B7: 1015-1020.

Jain, R., R. J. Lamoreaux, J. Harr, C. Labhart. 1993. Evaluation and selection of herbicides using computer simulation modeling of their fate in soils. Proc. Int. Symp., Indian Weed Sci. Soc., Hisar, India, Vol. 1, pp. 115-120.

Jain, R. and C. L. Foy. 1992. Nutrient effects on parasitism and germination of Egyptian broomrape (*Orobanche aegyptiaca*). Weed Technol. 6: 269-275.

Jain, R. and M. Singh. 1992. Effect of a synthetic polymer on adsorption and leaching of herbicides in soil. In: C. L. Foy (ed.), Adjuvants for Agrichemicals. CRC Press, Boca Raton, FL, pp. 329-348.

Jain, R. and M. Singh. 1989. Factors affecting goatweed (*Scoparia dulcis*) seed germination. Weed Sci. 37: 766-770.

Tefft, J. R., R. Jain, and D. R. Friend. 1992. Microspheres for controlled release herbicide formulations. Proc. Int. Symp. Controlled Release Bioact. Mater. 19: 172-173.

Jain, R. and W. H. Vanden Born. 1989. Morphological and histological effects of three grass selective herbicides on developing wild oat (*Avena fatua*) stems. Weed Sci. 37: 575-584.

Jain, R., M. Singh, and D. Dezman. 1989. Qualitative and quantitative characterization of phenolic compounds from lantana (*Lantana camara*) leaves. Weed Sci. 37: 302-307.

Jain, R. and C. L. Foy. 1989. Broomrape (*Orobanche spp.*): a potential threat to U.S. broadleaf crops. Weed Technol. 3: 608-614.

Foy, C. L., R. Jain, and R. Jacobsohn. 1989. Recent approaches in the chemical control of broomrape (*Orobanche spp.*). Rev. Weed Sci. 4: 123-152.

Foy, C. L., R. Jacobsohn, and R. Jain. 1988. Screening of *Lycopersicon* spp. For glyphosate and/or *Orobanche aegyptiaca* Pers. resistance. Weed Res. 28: 382-392.

Foy, C. L. and R. Jain. 1986. Recent approaches for control of parasitic weeds. Arab. J. Plant Prot. 4: 136-144.

Jain, R. and C. L. Foy. 1987. Influence of various nutrient and growth regulators on germination and parasitism of *Orobanche aegyptiaca* seeds. Proc. Fourth Intern. Symp. Parasitic Flowering Plants. Marburg, W. Germany, pp. 427-436.

Dua, I. S., K. K. Jindal, L. J. Srivastava, C. L. Dinabandhoo, J. R. Thakur, and R. Jain. 1978. Correlation of endogenous cytokinins and apical dominance in response to morphactin in soybean (*Glycine max* L.). Proc. Indian Acad. Sci. 87B: 319-324.

5. That prior to my employment with Sandoz Agro, Inc. now Syngenta Crop Protection, Inc. I was employed by the University of Florida as a postdoctoral Research Associate from 1987 to 1989 at the "Citrus Research and Education Center, Institute of Forestry and Agricultural Sciences" and that I was engaged in research in the field of weed science;

COMPARATIVE PROCEDURES

6. That the following tests were carried out under my supervision in a greenhouse in Vero Beach, Florida to determine the herbicidal action of mixtures of glyphosate with various co-herbicides in crops which are tolerant to glyphosate:

Seeds of glyphosate tolerant corn (*cv.*DK493 RR) and glyphosate sensitive corn (*cv.*Pioneer 3055) were planted in plastic pots containing a greenhouse soil substrate. All plants were grown under growth chamber or greenhouse conditions, the temperature being 18 to 22 °C during the night and 24 to 26 °C during the day. When the plants had reached the 2 to 3 leaf stage, the following treatments were applied:

Glyphosate alone

Co-herbicide alone

Co-herbicide as Application 1 followed in 2 days by Application 2 of glyphosate

Tankmix of co-herbicide and glyphosate as Application 2 with no Application 1

The spray solutions of these herbicides contained 0.2% v/v of the adjuvant X-77. The rate of application of glyphosate was determined from a preliminary experiment. The rate of co-herbicide was lower than the normal use level and applied at the minimum level believed to produce an enhanced effect.

Twenty (20) days after application, the plants were evaluated to determine plant height and fresh weight.

7. That the following results as mean values of 12 corn plants were obtained. The LSD at 95% confidence level for plant height was 9.2 cm and for fresh weight was 16.6 grams:

EFFECT OF GLYPHOSATE ALONE AND IN MIXTURES WITH OTHER HERBICIDES ON RR CORN

Results											
					Glyphosate Tolerant		Glyphosate sensitive		WEEDS		
		Application 1	Application 2		Corn DK493RR		Corn P-3055		ABUTH	AMARE	SETFA
Herb. 1	Herb. 2	Herb.1 - Rate	Herb. 1- Rate	Herb. 2- Rate	% Injury	Pl. Height	Fr. Weight	% Injury	% Control	% Control	% Control
						(cm)	(g)				
					22 DAT	22 DAT	22 DAT	13 DAT	13 DAT	13 DAT	13 DAT
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
Atrazine		125			0	87.7	93.7	0	30	35	3
Atrazine		500			0	85.3	95.3	0	25	80	10
Atrazine	Glyphosate	125		4000	0	82.3	99.3	100	98	100	100
Atrazine	Glyphosate	500		4000	0	83.7	103.7	100	98	97	100
Atrazine	Glyphosate		125	4000	5	92.7	104.3	100	95	90	100
Atrazine	Glyphosate		500	4000	0	88	96	100	95	97	97
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
Dicamba		25			0	89.7	101	0	48	62	0
Dicamba		100			0	93.7	108.3	0	60	67	5
Dicamba	Glyphosate	25		4000	0	93.7	107.3	100	98	100	100
Dicamba	Glyphosate	100		4000	0	89	100	100	88	100	100
Dicamba	Glyphosate		25	4000	0	89.7	97.3	100	100	93	100
Dicamba	Glyphosate		100	4000	0	97	107.3	100	95	92	98
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
Dicamba+Atrazine		25+125			3	84.3	92.3	0	53	75	8
Dicamba+Atrazine		100+500			0	88.7	101.7	0	70	100	20
Dicamba+Atrazine	Glyphosate	25+125		4000	0	88.7	99	100	97	100	100
Dicamba+Atrazine	Glyphosate	100+500		4000	0	94.7	110.3	100	98	100	100
Dicamba+Atrazine	Glyphosate		25+125	4000	0	94.3	113	100	96	98	100
Dicamba+Atrazine	Glyphosate		100+500	4000	0	86	98.3	100	99	97	100
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
Dimethenamid		125			0	91.3	105	0	3	0	0
Dimethenamid		500			0	87.3	102.3	0	10	15	15
Dimethenamid	Glyphosate	125		4000	0	90	100	100	98	99	100
Dimethenamid	Glyphosate	500		4000	0	80.7	92.7	100	99	100	100
Dimethenamid	Glyphosate		125	4000	0	93	102	100	95	92	100
Dimethenamid	Glyphosate		500	4000	0	94	109.7	100	93	93	98

					Glyphosate Tolerant		Glyphosate sensitive		WEEDS		
		Application 1	Application 2		Corn DK493RR		Corn P-3055		ABUTH	AMARE	SETFA
Herb. 1	Herb. 2	Herb.1 - Rate	Herb. 1- Rate	Herb. 2- Rate	% Injury	Pl. Height	Fr. Weight	% Injury	% Control	% Control	% Control
						(cm)	(g)				
					22 DAT	22 DAT	22 DAT	13 DAT	13 DAT	13 DAT	13 DAT
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
Metolachlor		125			0	84.3	94.3	0	0	3	0
Metolachlor		500			0	86.7	100.7	0	5	10	3
Metolachlor	Glyphosate	125		4000	0	85.7	99	100	100	98	98
Metolachlor	Glyphosate	500		4000	0	90	105.3	100	98	97	100
Metolachlor	Glyphosate		125	4000	0	93.3	111.3	100	98	95	100
Metolachlor	Glyphosate		500	4000	0	89.3	104.7	100	88	93	95
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
Metolachlor+Atrazine		125+125			3	91	108.3	0	17	40	0
Metolachlor+Atrazine		500+500			0	88.3	102.3	0	25	85	8
Metolachlor+Atrazine	Glyphosate	125+125		4000	0	94	107.7	100	99	100	98
Metolachlor+Atrazine	Glyphosate	500+500		4000	0	95	109.3	100	99	100	98
Metolachlor+Atrazine	Glyphosate		125+125	4000	0	89	104	100	93	97	98
Metolachlor+Atrazine	Glyphosate		500+500	4000	0	87.3	108	100	98	93	100
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
P-Dimethenamid		125			0	86.7	104	0	12	7	3
P-Dimethenamid		500			0	86	97.3	0	15	5	12
P-Dimethenamid	Glyphosate	125		4000	0	80.7	92.7	100	98	98	100
P-Dimethenamid	Glyphosate	500		4000	5	86.7	103.7	100	100	100	100
P-Dimethenamid	Glyphosate		125	4000	0	83.3	97.3	100	96	93	95
P-Dimethenamid	Glyphosate		500	4000	0	94	106.7	100	100	95	98
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
Primisulfuron		7.5			0	92.3	113.7	0	53	67	40
Primisulfuron		15			0	93.7	106	0	72	87	52
Primisulfuron	Glyphosate	7.5		4000	0	91	104.7	100	100	100	100
Primisulfuron	Glyphosate	15		4000	3	87.3	97.3	100	99	100	100
Primisulfuron	Glyphosate		7.5	4000	0	87	106.3	100	100	97	100
Primisulfuron	Glyphosate		15	4000	0	84.3	99.3	100	100	100	100
	Glyphosate			4000	10	80.3	93.3	100	98	93	100

					Glyphosate Tolerant		Glyphosate sensitive		WEEDS		
		Application 1	Application 2		Corn DK493RR		Corn P-3055		ABUTH	AMARE	SETFA
Herb. 1	Herb. 2	Herb.1 - Rate	Herb. 1- Rate	Herb. 2- Rate	% Injury	Pl. Height	Fr. Weight	% Injury	% Control	% Control	% Control
						(cm)	(g)				
					22 DAT	22 DAT	22 DAT	13 DAT	13 DAT	13 DAT	13 DAT
Prosulfuron		7.5			0	94.7	101.3	0	75	65	0
Prosulfuron		15			0	87	101.3	0	88	78	0
Prosulfuron	Glyphosate	7.5		4000	0	86.7	102	100	100	100	100
Prosulfuron	Glyphosate	15		4000	0	84.3	96	100	100	100	100
Prosulfuron	Glyphosate		7.5	4000	0	85.7	95.3	100	99	97	98
Prosulfuron	Glyphosate		15	4000	0	93.3	108	100	100	100	100
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
Pyridate		125			0	86.3	112	0	10	10	0
Pyridate		500			0	87.7	112.3	0	20	22	12
Pyridate	Glyphosate	125		4000	0	91.7	104	100	98	100	100
Pyridate	Glyphosate	500		4000	0	98.7	116.7	100	98	100	100
Pyridate	Glyphosate		125	4000	0	85.3	101.7	100	98	97	97
Pyridate	Glyphosate		500	4000	0	83.7	97	100	97	97	98
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
s-Metolachlor		125			0	83	97.7	0	10	8	0
s-Metolachlor		500			0	83	92.7	0	8	10	0
s-Metolachlor	Glyphosate	125		4000	10	79.3	94.7	100	98	98	100
s-Metolachlor	Glyphosate	500		4000	0	87	99.3	100	100	100	100
s-Metolachlor	Glyphosate		125	4000	0	92	108.3	100	96	95	95
s-Metolachlor	Glyphosate		500	4000	0	91	103	100	98	88	100
	Glyphosate			4000	10	80.3	93.3	100	98	93	100
s-Metolachlor+Atrazine		125+125			3	90.7	103.3	0	15	47	0
s-Metolachlor+Atrazine		500+500			0	92	106.7	0	28	90	15
s-Metolachlor+Atrazine	Glyphosate	125+125		4000	0	91	107.7	100	96	100	100
s-Metolachlor+Atrazine	Glyphosate	500+500		4000	0	95.7	115.7	100	100	97	100
s-Metolachlor+Atrazine	Glyphosate		125+125	4000	0	83.7	100.7	100	90	92	100
s-Metolachlor+Atrazine	Glyphosate		500+500	4000	0	90.7	110.7	100	95	95	95
	Glyphosate			4000	10	80.3	93.3	100	98	93	100

					Glyphosate Tolerant		Glyphosate sensitive		WEEDS		
		Application 1	Application 2		Corn DK493RR		Corn P-3055		ABUTH	AMARE	SETFA
Herb. 1	Herb. 2	Herb.1 - Rate	Herb. 1- Rate	Herb. 2- Rate	% Injury	Pl. Height	Fr. Weight	% Injury	% Control	% Control	% Control
						(cm)	(g)				
					22 DAT	22 DAT	22 DAT	13 DAT	13 DAT	13 DAT	13 DAT
Terbuthylazine		125			7	82.3	93.7	0	17	50	7
Terbuthylazine		500			5	82.3	95.3	0	22	75	10
Terbuthylazine	Glyphosate	125		4000	0	86.7	101.3	100	98	100	98
Terbuthylazine	Glyphosate	500		4000	0	87.3	104.3	100	100	100	100
Terbuthylazine	Glyphosate		125	4000	10	0	0	100	100	98	100
Terbuthylazine	Glyphosate		500	4000	10	0	0	100	98	100	100
Untreated Check	Untreat. Check				0	80.7	92	0	0	0	0
LSD (95%)					10.7	9.2	16.6	0	8	10	12
Protocol											
Crops:	Corn DK-493RR										
	Corn P-3055										
Weeds:	Velvetleaf (Abutilon theophrastii)										
	Redroot pigweed (Amaranthus retroflexus)										
	Giant foxtail (Setaria faberi)										

The crops and the weeds were planted in plastic pots containing a greenhouse soil substrate
The Roundup-Ready hybrid, DK-493RR, was transferred to a growth chamber set at 25 C day and 20 C night temperatures, 2 days before spraying
All other plants were kept in the greenhouse at temperatures ranging from 22 to 27 C
Treatments were applied postemergence when the plants were in the 2-3 leaf stage (corn plants were about 15 cm tall).
Split and Tankmix
Application 2 was applied 3 days after Application 1
All treatments were applied with X-77 @ 0.2% v/v

ED_002084_00043253-00045

CONCLUSIONS

8. These results are indicative of the improvement in plant height and/or fresh weight for the inventive mixtures of glyphosate and the co-herbicides of the present invention when applied to corn which is glyphosate tolerant. Although plant height and fresh weight measurements indicated that glyphosate alone did not affect the growth of RR corn (compared to the untreated control), the combination of glyphosate and other herbicides enhanced growth compared to untreated control plants.

9. This improved performance is surprising because, the effect exerted by these co-herbicides (increase in plant biomass) is totally unexpected.

10. The co-herbicides, applied either sequentially with glyphosate or in a tankmix with glyphosate, both produced the improvement in plant height.

11. There was no reduction in weed control efficacy of the herbicides when applied in mixtures or in combination. Only mixtures or combinations of co-herbicides and glyphosate offered an agronomically acceptable selective weed control system. Glyphosate alone showed no improvement in growth of crop plants, while co-herbicides alone showed insufficient weed control.

FINAL STATEMENT

I, Rakesh Jain, declare further that all statements made herein of personal knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Rakesh Jain

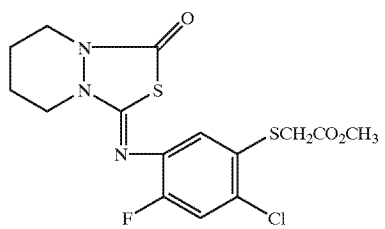
Signed this 19th day of March 2002

PROCESS FOR THE CONTROL OF WEEDS

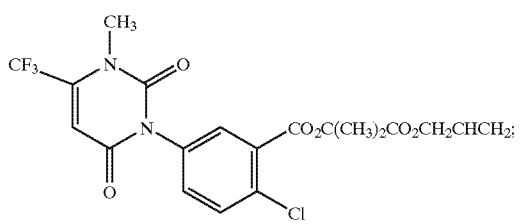
This application is a Continuation of Ser. No. 09/242,658, filed Feb. 19, 1999 now abandoned, which was filed under 35 USC 371 as a national stage application of PCT/EP97/04795, filed Sep. 3, 1997.

The present invention relates to a new process for the control of weeds in useful plant cultivations, for example in the cultivation of maize, soya, cotton, rape, beet and sugar cane, which are resistant to phospho-herbicides.

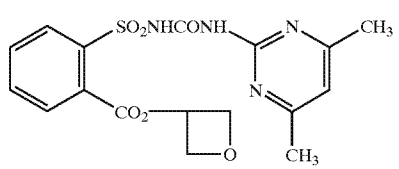
The phospho-herbicides glufosinate and glyphosate are described for example in The Pesticide Manual, Tenth Edition, 1994, Crop Protection Publications, BCPC. In addition, the following herbicides are similarly known: prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide, metolachlor, fluometuron, propaquizafop, atrazine, ametryn, terbutylazine, simazine, clodinafop, norflurazone, as well as prometryn. The S-enantiomer of metolachlor is known from U.S. Pat. No. 5,002,606; the S-enantiomer of dimethenamide from U.S. Pat. No. 5,457,985. The metabolite NOA-402989 is known from the Zeitschrift für Pflanzenkrankheiten und Pflanzenschutz, Sonderheft X, 355–360 (1984) as 3-phenyl-4-hydroxy-6-chloropyridazine. The compound of formula



is described for example in U.S. Pat. Nos. 4,671,819; 5,183,492 discloses the compound of formula



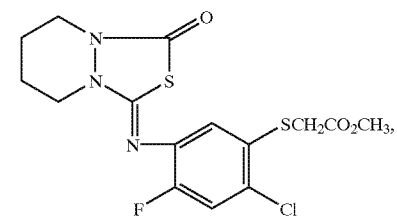
and the compound of formula

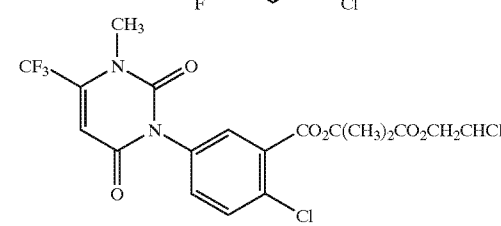


is known from EP-A-496 701.

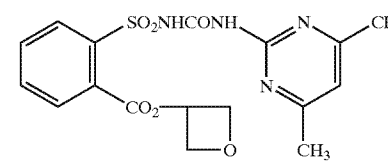
It has now surprisingly been found that a quantitatively variable combination of phospho-herbicides selected from the group comprising glufosinate and glyphosate with at least one of the above-listed other herbicides exhibits a synergistic effect which is capable of controlling the majority of weeds occurring preferably in useful plant cultivations that are resistant to glufosinate or glyphosate, both in pre-emergence and in post-emergence, without significantly damaging the useful plants.

Therefore, according to the present invention, a new process is proposed for the control of weeds in the cultivation of useful plants that are resistant to phopho-herbicides, the process being characterised in that a herbicidally effective amount of a composition containing, in addition to the usual inert formulation assistants, a phospho-herbicide selected from the group comprising glufosinate and glyphosate, a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide and its S-enantiomer, metolachlor and its S-enantiomer, fluometuron, propaquizafop, atrazine, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae





and



is allowed to take effect on the cultivated plant or its habitat, with the provision that compositions containing glufosinate and metolachlor, glufosinate and atrazine, glufosinate and metolachlor and atrazine, as well as glufosinate and atrazine and dicamba are not used in glufosinate-resistant maize, and further that compositions containing glyphosate and atrazine are not used in glyphosate-resistant maize, and compositions containing glyphosate and metalochlor or glyphosate and dimethenamide are not used in glyphosate-resistant soya.

It is highly surprising that the combination of a phospho-herbicide such as glufosinate or glyphosate with at least one of the above-mentioned further herbicides surpasses the additional effect to be expected in principle on the weeds to be controlled, and thus extends the limits of activity of both active ingredients in particular in two different respects.

On the one hand, the application amounts of the individual compounds applied are reduced, whilst maintaining a good level of activity. On the other hand, the composition used according to the invention still achieves a high rate of weed control where the individual substances have become no longer agronomically useful in small application amounts. The consequence of this is a considerable widening of the weed spectrum and an additional increase in selectivity for useful plant cultivations, which is necessary and desired in the case of an unintentional overdose of active ingredient. In addition, the composition according to the invention allows greater flexibility of subsequent cultivations whilst maintaining the outstanding control of weeds in useful plants.

The herbicide mixture used according to the invention may be used on glufosinate- or glyphosate-resistant useful plants, especially maize, cotton, rape, sugar beet, sugar cane and soya, against a large number of agronomically important weeds, such as Stelladia, Nasturtium, Agrostis, Digitaria, Avena, Setaria, Sinapis, Lolium, Solanum, Phaseolus, Echinochloa, Scirpus, Monochoria, Sagittaria, Bromus, Alopecurus, *Sorghum halepense*, Rottboellia, Cyperus, Abutilon, Sida, Xanthium, Amaranthus, Chenopodium, Ipomoea, Chrysanthemum, Galium, Viola and Veronica. It may also be used for non-selective weed control and for all application methods that are usual in agriculture, e.g. pre-emergent application, post-emergent application and seed disinfecting.

Useful plant cultivations which are tolerant towards the herbicide glufosinate or glyphosate are preferably produced with the assistance of biotechnological methods. The assistance of biotechnological processes can be restricted to the usage of cell-biological selection processes, which are carried out in such cases preferably on cell or callus cultures that are capable of regeneration, so as to finally develop glufosinate- or glyphosate-tolerant plants. However, since precise knowledge is available about the mechanism of activity of these herbicides, gene technology may also be employed.

Resistance towards glufosinate may be essentially attained by two different experimental set-ups. On the one hand, the herbicide target which in the case of glufosinate is represented by the enzyme glutamine synthetase may be selected as the point of attack for the development of resistance. On the other hand, the herbicidally active substance itself may serve as the starting point for the development of resistance. For example, glufosinate tolerance may be effected through the transgenic expression of an enzyme which converts glufosinate into a physiologically inactive form.

The first set-up makes use of the knowledge of the site of action or the point of attack of glufosinate, namely the enzyme glutamine synthetase. The desired tolerance may thus be effected by over-expression of the enzyme in plants or preferably by transgenic expression of variants of the enzyme which are tolerant to the effect of glufosinate.

Glufosinate-tolerant plants are thus produced e.g. by amplifying the herbicide target in the plant. Such gene amplification is achieved for example by exposing plant cell cultures to selection pressure, and further cultivating the resistant variants or strains obtainable in this way and regenerating them into whole plants. The said resistant cell strains may also be fused with an appropriate receptor cell line in the manner of a protoplast fusion, and regenerated into whole plants. Alternatively, the desired gene amplification may also be attained with the assistance of genetic engineering, whereby the number of wild type genes in the plant genome of sensitive plants is increased by inserting further wild type gene replications. The source of wild type genes which encode the enzyme glutamine synthetase may be both procaryotes and especially eucaryotes. The eucaryotes are presented in particular by plant sources, e.g. various species of potato (*Solanum tuberosum*), tomato (*Lycopersicon esculentum*), pepper (*Capsicum annumm*), tobacco (*Nicotiana tabacum*), brassica, especially *Brassica napus,* various leguminosae e.g. alfalfa (*Medicago sativa*), clover (Trifolium sp.), soya (*Glycine max*), various species of bean (Phaseolus sp., Vici sp, Vigna sp.), peas (*Pisum sativum*), various root crops, e.g. *Beta vulgaris,* carrots (*Daucus carota*), sweet potatoes (*Ipomoea batatus*) as well as others, for example *Arabidopsis thaliana.*

Glufosinate-tolerant plants may also be produced by inserting genes that encode a mutated glutamine synthetase enzyme which is resistant towards the inhibitory activity of glufosinate. As in the case of the above-mentioned wild type genes, these are cloned into expression cassettes developed especially for plants, and are transformed into the desired host plant. Appropriate expression signals (essentially promoter and termination signals, as well as signal and enhancer sequences), which are recognised by the plant cell and lead to effective expression of the respective gene products in the transformed plant, and which may be employed within the said expression cassettes, are most familiar to the person skilled in the art.

The processes for the production of such glufosinate-tolerant plants are described in detail in international applications having publication nos. WO 86/02097 and WO 87/05627, and reference thereto is incorporated in the present application.

The recombinant DNA molecules thus produced may be inserted into the plant by means of various transformation processes known to the person skilled in the art, and brought to expression there. The person skilled in the art is aware that the choice of an appropriate method is dependent in particular on the species of plant respectively selected. Suitable transformation processes include for example micro-injection (Crossway et al., Bio Techniques 4:320–334 (1986)), electroporation (Riggs et al, Proc. Natl. Acad. Sci. USA 83:5602–5606 (1986), Agrobacterium-mediated transformation (Hinchee et al., Biotechnology 6:915–921 (1988)), direct gene transfer processes (Paszkowski et al., EMBO J. 3:2717–2722 (1984)), as well as ballistic processes using micro-projectiles ('ballistic particle acceleration') [see for example Sanford et al., U.S. Pat. No. 4,945,050; and McCabe et al., Biotechnology 6:923–926 (1988)].

One especially preferred process for inserting recombinant DNA molecules into maize plants is described in the international application having publication no. WO 93/07278 and EP-A 0 292 435, and reference thereto is incorporated in the present application.

As has already been mentioned, glufosinate-tolerant plants may also be produced by aiming at the herbicidally active compound as such and inactivating it. Thus, for example, genes may be isolated from the streptomycetes strains *S. hygrocopicus* and *S. viridochromogenes,* which were selected for bialaphos or phosphinotricine (=glufosinate) resistance, and these genes encode an enzyme which acetylates the free NH_2 group of glufosinate and thus transforms it to a non-herbicidally active compound. The transgenic expression of these phosphinothricine acetyltransferase genes in useful plants is capable of eliminating the locking-up of the nitrogen metabolism in the plant by the glufosinate and leads to glufosinate tolerance of said plants.

The efficiency of expression of recombinant DNA molecules of bacterial origin in plants may be controlled by the production of synthetic genes. For example, genes of streptomycetes normally possess a very high G/C proportion of up to 70%, which may be reduced to the usual amount for plant genes of ca. 50% by resynthesis of the gene, whilst taking into account the usual codon usage of plants.

The efficiency of expression may normally be further increased by optimising the codon usage in such a way that only those codons that are most preferred in the respective target plant, for example maize, are used for gene resynthesis. Further details relating to the construction of synthetic genes which have been optimised for expression in maize may be found e.g. in the international application having publication no. WO 93/07278.

The glufosinate-tolerant plants obtainable in this way may then be propagated, i.e. produced, by means of conventional cultivation methods, whereby the glufosinate tolerance is passed on to subsequent generations by transmission.

The processes for the production of such glufosinate-tolerant plants are described in detail in the European applications having the publication nos. EP-A 242 236, EP-A 242 246, EP-A 257 542 and EP-A 275 957 and reference thereto is incorporated in the present application.

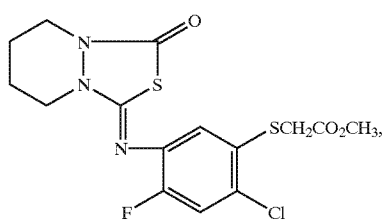
Glyphosate-resistant plants may be produced in a similar manner, whereby a gene is used which codes for a glyphosate-tolerant EPSP synthase, as is described in EP-A-115673 and EP-A-409815.

By the expression plants or useful plant cultivations that are resistant to the herbicide glufosinate or glyphosate, as is employed in the present application, are understood also plants or useful plant cultivations which are resistant to those herbicides that are metabolised in the plant or in the useful plant cultivations to glufosinate, as is the case for example when using bilanafos, or to glyphosate.

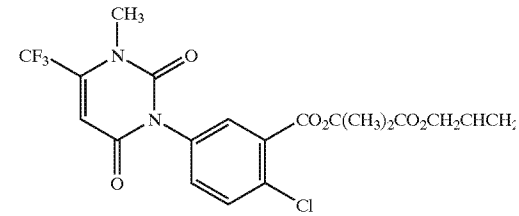
Maize which is resistant to glufosinate was treated with a tank mixture containing glufosinate and atrazine according to Res. Rep. North Cent. Weed Sci. Soc., 51, 169–170, 1994. Further tank mixtures for use in glufosinate-resistant maize are described in Res. Rep. Expert Comm. Weeds East Can., 1, 242–243, 1995 and Res. Rep. Expert Comm. Weeds East Can., 1, 205–206, 1995. The treatment of glyphosate-resistant maize or glyphosate-resistant soya with mixtures of glyphosate and atrazine, metolachlor or dimethenamide is described in Abstr. Meet. Weed Sci. Soc. Am. 37, 87, 1997, Res. Rep. North Cent. Weed Sci. Soc., 52, 426–427, 1995 and Res. Rep. North Cent. Weed Sci. Soc., 52, 266–267, 1995.

The active ingredient combination used according to the invention contains glufosinate or glyphosate and at least one of the other herbicides in any ratio of the mixture, normally with an excess of one component over the other. Preferred ratios between glufosinate or glyphosate and the components in the mixture lies between 1:100 and 1:0.001.

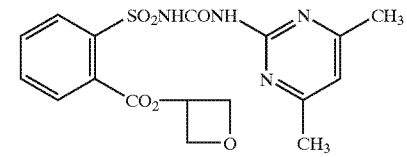
A preferred process according to the present invention is characterised in that a herbicidally effective amount of a composition containing, in addition to the usual inert formulation assistants, glufosinate and a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide, metolachlor and its S-enantiomer, fluometuron, propaquizafop, atrazine, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae



-continued

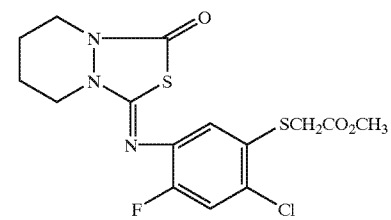


and

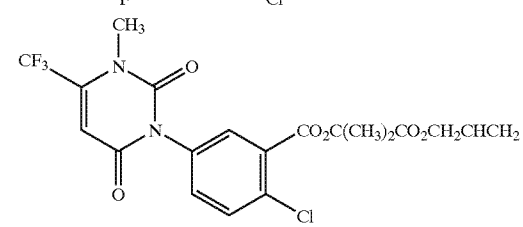


is allowed to take effect on the cultivated plant or its habitat.

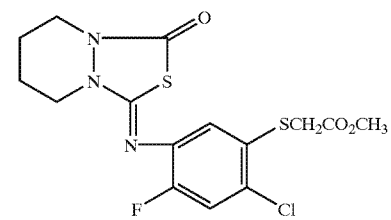
Mixtures that have proved to be especially effective when the useful plant cultivation relates to maize, which is resistant to glufosinate and/or glyphosate, are combinations of glufosinate or glyphosate with a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide as well as its S-enantiomer, metolachlor as well as its S-enantiomer, atrazine, NOA-402989, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae



and in particular

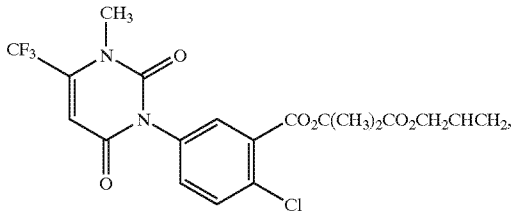


or combinations of glufosinate with a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide, metolachlor as well as its S-enantiomer, atrazine, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae

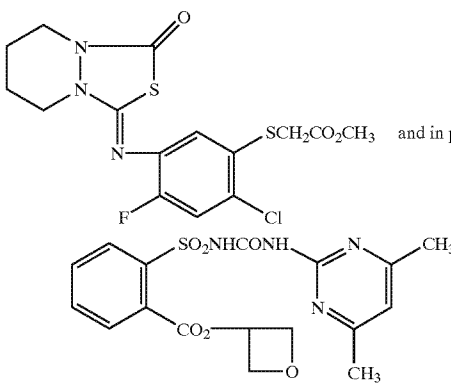


and

-continued

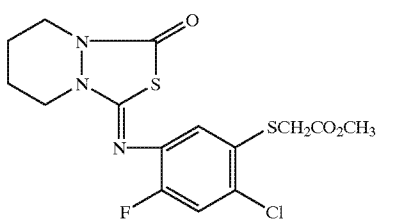


When the useful plant cultivation relates to soya, which is resistant to glufosinate and/or glyphosate, it is preferable to use a composition which contains glufosinate or glyphosate and a synergistic amount of at least one further herbicide selected from the group comprising metolachlor as well as its S-enantiomer and the compounds of formula

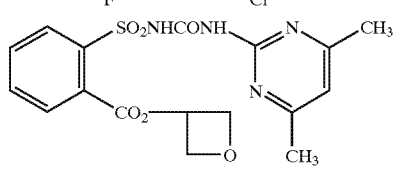


and in particular

or a composition which contains glufosinate and at least one further herbicide selected from the group comprising metolachlor as well as its S-enantiomer and the compounds of formulae



and



In cotton cultivations, which are resistant to glufosinate and/or glyphosate, a composition is preferably employed which contains glufosinate or glyphosate and a synergistic amount of fluometuron, or which contains glufosinate and a synergistic amount of fluometuron.

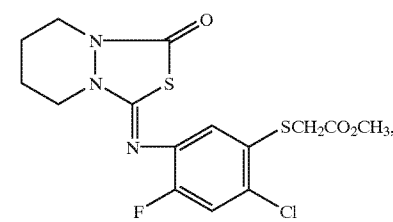
In rape or beet cultivations, which are resistant to glufosinate and/or glyphosate, a composition is preferably selected which contains glufosinate or glyphosate and a synergistic amount of propaquizafop, or which contains glufosinate and a synergistic amount of propaquizafop.

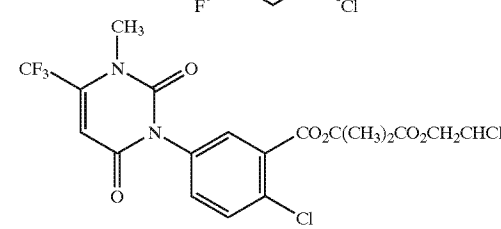
When the useful plant cultivation concerned is sugar cane, which is resistant to glufosinate and/or glyphosate, it is preferable to use a composition which contains glufosinate or glyphosate and a synergistic amount of ametryn, or a composition containing glufosinate and a synergistic amount of ametryn.

The amount applied may vary within a wide range, and depends on the nature of the soil, the type of application (pre- or post-emergent; seed disinfecting; usage in the seed drill; no tillage application etc.), the plant cultivated, the weed to be controlled, the prevalent climatic conditions and other factors determined by the type of application, time of application and target cultivation. In general, the active ingredient mixture used according to the invention may be used at an application rate of 0.3 to 4.0 kg active ingredient mixture per hectare.

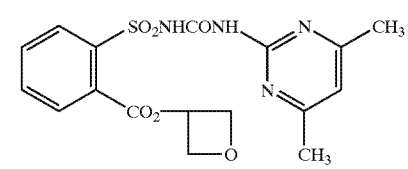
In the composition used according to the invention, glufosinate or glyphosate is preferably present in a weight ratio of 1:10 to 1000:1 in relation to the other herbicide(s).

The herbicidal compositions which contain, in addition to the usual inert formulation assistants, glufosinate and a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, pyridate, dimethenamide and its S-enantiomer, the S-enantiomer of metolachlor, fluometuron, propaquizafop, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae

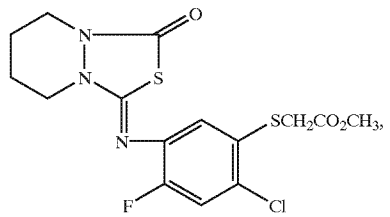


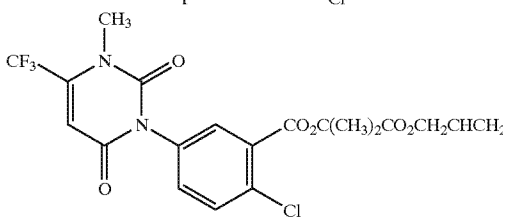


and

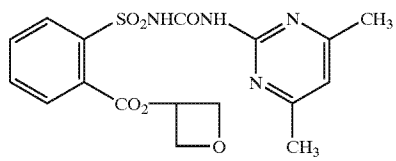


as well as the herbicidal compositions which contain, in addition to the usual inert formulation assistants, glyphosate and a synergistic amount of at least one further herbicide selected from the group comprising prosulfuron, primisulfuron, dicamba, pyridate, the S-enantiomer of dimethenamide, the S-enantiomer of metolachlor, fluometuron, propaquizafop, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae





and



are new and form a further object of the present invention.

Both glufosinate and/or glyphosate and the other herbicides may be used in unchanged form, i.e. as they occur during synthesis, but they are preferably processed in conventional manner with the assistants which are customary in formulation technology, such as solvents, solid carriers or surfactants, e.g. into emulsifiable concentrates, directly sprayable or diluable solutions, spray powders, soluble powders, dusting compositions, granulates or microcapsules. The application processes such as spraying, atomizing, dusting, sprinkling, dispersing or pouring are selected according to the aims strived for and the given conditions, in the same way as for the type of composition.

The formulations, i.e. the compositions, preparations or compositions containing the active ingredient glufosinate or glyphosate and the other herbicides as well as optionally one or several solid or liquid formulating assistants, are produced in a manner known per se, e.g. by intimately mixing and/or grinding the active ingredients with the formulating assistants such as solvents or solid carriers. In addition, surface-active compounds (surfactants) may be used when producing the formulations.

The solvents in question may be: aromatic hydrocarbons, preferably fractions C_8 to C_{12}, such as xylene mixtures or substituted naphthalenes, phthalic acid esters such as dibutyl or dioctyl phthalate, aliphatic hydrocarbons such as cyclohexane or paraffins, alcohols and glycols, as well as the ethers and esters thereof, such as ethanol, ethylene glycol, ethylene glycol monomethyl- or -ethyl-ether, ketones such as cyclohexanone, strongly polar solvents such as N-methyl-2-pyrrolidone, dimethyl sulphoxide or N,N-dimethylformamide, as well as optionally epoxidated vegetable oils such as epoxidated coconut oil or soyabean oil; or water.

The solid carriers employed e.g. for dusting compositions and dispersible powders are normally natural mineral powders, such as calcite, talc, kaolin, montmorillonite or attapulgite. To improve the physical properties of the formulation, highly disperse silicic acid or highly disperse absorbent polymerisates may also be added. The granular, adsorptive granulate carriers employed may be porous types such as pumice, brick fragments, sepiolite or bentonite, and the non-absorbent carrier materials are e.g. calcite or sand. Moreover, a number of pregranulated materials of inorganic or organic nature may also be used, especially dolomite or pulverized plant residue.

Depending on the type of active ingredient to be formulated, the surface-active compounds may be non-ionic, cationic and/or anionic surfactants and surfactant mixtures having good emulsifying, dispersing and wetting properties.

Appropriate anionic surfactants may be both so-called water-soluble soaps and water-soluble synthetic surface-active compounds.

Soaps which may be mentioned are the alkali salts, alkaline earth salts or optionally substituted ammonium salts of higher fatty acids (C_{10}–C_{22}), e.g. the Na or K salts of oleic or stearic acid, or of natural fatty acid mixtures, which may be obtained e.g. from coconut oil or tallow oil. Furthermore, the fatty acid methyl-taurine salts may also be mentioned.

More frequently however, so-called synthetic surfactants are used, especially fat alcohol sulphonates, fat alcohol sulphates, sulphonated benzimidazole derivatives or alkylaryl sulphonates.

The fat alcohol sulphonates or sulphates are normally present as alkali salts, alkaline earth salts or optionally substituted ammonium salts and have an alkyl radical with 8 to 22 C-atoms, whereby alkyl also includes the alkyl moiety of acyl radicals, e.g. the Na or Ca salt of lignin sulphonic acid, of dodecylsulphuric acid ester or of a fat alcohol sulphate mixture produced from natural fatty acids. This also includes the salts of sulphuric acid esters and sulphonic acids of fat alcohol/ethylene oxide adducts. The sulphonated benzimidazole derivatives preferably contain 2 sulphonic acid groups and one fatty acid radical with 8–22 carbon atoms. Alkylaryl sulphonates are e.g. the Na, Ca or triethanolamine salts of dodecylbenzenesulphonic acid, of dibutylnaphthalene-sulphonic acid or of a naphthalene-sulphonic acid/formaldehyde condensation product.

The corresponding phosphates such as the salts of the phosphoric acid ester of a p-nonylphenol-(04-14)-ethylene oxide adduct or phospholipids may also be considered.

The non-ionic surfactants may be primarily polyglycol ether derivatives of aliphatic or cyclo-aliphatic alcohols, saturated or unsaturated fatty acids and alkylphenols, which may contain 3 to 30 glycol ether groups and 8 to 20 carbon atoms in the (aliphatic) hydrocarbon radical and 6 to 18 carbon atoms in the alkyl radical of the alkylphenols.

Further appropriate non-ionic surfactants are the water-soluble polyethylene oxide adducts to polypropylene glycol, ethylenediamino-polypropylene glycol and alkyl-polypropylene glycol, containing 20 to 250 ethylene glycol ether groups and 10 to 100 propylene glycol ether groups, with 1 to 10 carbon atoms in the alkyl chain. The said compounds normally contain 1 to 5 ethylene glycol units per propylene glycol unit.

Examples of non-ionic surfactants which may be mentioned are nonylphenol polyethoxy ethanols, castor oil polyglycol ether, polypropylene-polyethylene oxide adducts, tributylphenoxy-polyethoxy ethanol, polyethylene glycol and octylphenoxy-polyethoxy ethanol.

Fatty acid esters of polyoxyethylene sorbitan, such as polyoxyethylene sorbitan trioleate, may also be considered.

The cationic surfactants in question are in particular quaternary ammonium salts, which contain as the N-substituents at least one alkyl radical with 8 to 22 C-atoms and as further substituents low, optionally halogenated alkyl, benzyl or low hydroxyalkyl radicals. The salts are preferably present as halides, methyl sulphates or ethyl sulphates, e.g.

stearyl trimethylammonium chloride or benzyl-di-(2-chloroethyl)-ethylammonium bromide.

The surfactants which are customary in formulation techniques and which may also be used in the compositions according to the invention are described inter alia in "Mc Cutcheon's Detergents and Emulsifiers Annual" MC Publishing Corp., Ridgewood N.J., 1981, Stache, H., "Tensid-Taschenbuch", Carl Hanser Verlag, Munich/Vienna, 1981 and M. and J. Ash, "Encyclopedia of Surfactants", Vol I–III, Chemical Publishing Co., New York, 1980–81.

The herbicide formulations normally contain 0.1 to 99% by weight, especially 0.1 to 95% by weight of active ingredient mixture, 1 to 99.9% by weight of a solid or liquid formulation excipient and 0 to 25% by weight, especially 0.1 to 25% by weight of a surfactant.

While concentrated compositions are usually preferred as a commercial product, the final user normally uses diluted compositions.

The compositions may also contain further additives such as stabilizers, e.g. optionally epoxidated plant oils (epoxidated coconut oil, rapeseed oil or soyabean oil), defoamers, e.g. silicone oil, preservatives, viscosity regulators, binding compositions, adhesives, as well as fertilizers or other active ingredients.

Preferred formulations are made up in particular as follows:

(%=percent by weight)

Emulsifiable concentrates:	
active ingredient mixture:	1 to 90%, preferably 5 to 20%
surface-active composition:	1 to 30%, preferably 10 to 20%
liquid carrier:	5 to 94%, preferably 70 to 85%
Dusts:	
active ingredient mixture:	0.1 to 10%, preferably 0.1 to 5%
solid carrier:	99.9 to 90%, preferably 99.9 to 99%
Suspension concentrates:	
active ingredient mixture:	5 to 75%, preferably 10 to 50%
water:	94 to 24%, preferably 88 to 30%
surface-active composition:	1 to 40%, preferably 2 to 30%
Wettable powders:	
active ingredient mixture:	0.5 to 90%, preferably 1 to 80%
surface-active composition:	0.5 to 20%, preferably 1 to 15%
solid carrier material:	5 to 95%, preferably 15 to 90%
Granulates:	
active ingredient mixture:	0.1 to 30%, preferably 0.1 to 15%
solid carrier material:	99.5 to 70%, preferably 97 to 85%

The following examples illustrate the invention further without restricting it.

FORMULATION EXAMPLES FOR THE ACTIVE INGREDIENT MIXTURES USED ACCORDING TO THE INVENTION

(%=percent by weight)

F1. Emulsion concentrates	a)	b)	c)	d)
active ingredient mixture	5%	10%	25%	50%
Ca dodecylbenzene sulphonate	6%	8%	6%	8%
castor oil polyglycol ether (36 mols EO)	4%	—	4%	4%

-continued

F1. Emulsion concentrates	a)	b)	c)	d)
octylphenol polyglycol ether (7–8 mols EO)	—	4%	—	2%
cyclohexanone	—	—	10%	20%
arom. hydrocarbon mixture C_9–C_{12}	85%	78%	55%	16%

Emulsions of each desired concentration may be produced from such concentrates by dilution with water.

F2. Solutions	a)	b)	c)	d)
active ingredient mixture	5%	10%	50%	90%
1-methoxy-3-(3-methoxy-propoxy)-propane	—	20%	20%	—
polyethylene glycol MW 400	20%	10%	—	—
N-methyl-2-pyrrolidone	—	—	30%	10%
arom. hydrocarbon mixture C_9–C_{12}	75%	60%		

The solutions are suitable for application in the form of the smallest droplets.

F3. Spray powder	a)	b)	c)	d)
active ingredient mixture	5%	25%	50%	80%
Na lignin sulphonate	4%	—	3%	—
Na lauryl sulphate	2%	3%	—	4%
Na diisobutyl naphthalene sulphonate	—	6%	5%	6%
octylphenyl polyglycol ether (7–8 mols EO)	—	1%	2%	—
highly disperse silicic acid	1%	3%	5%	10%
kaolin	88%	62%	35%	—

The active ingredient is mixed well with the additional materials and ground well in an appropriate mill. Spray powders are obtained, which may be diluted with water to suspensions of any desired concentration.

F4. Coated granules	a)	b)	c)
active ingredient mixture	0.1%	5%	15%
highly disperse silicic acid	0.9%	2%	2%
inorg. carrier material (Ø 0.1–1 mm) such as $CaCO_3$ or SiO_2	99.0%	93%	83%

The active ingredient is dissolved in methylene chloride, sprayed onto the carrier and the solvent subsequently evaporated in a vacuum.

F5. Coated granules	a)	b)	c)
active ingredient mixture	0.1%	5%	15%
polyethylene glycol MW 200	1.0%	2%	3%
highly disperse silicic acid	0.9%	1%	2%
inorg. carrier material (Ø 0.1–1 mm) such as $CaCO_3$ or SiO_2	98.0%	92%	80%

The finely ground active ingredient is evenly applied in a mixer onto the carrier material which has been moistened

with polyethylene glycol. In this way, dust-free coated granules are obtained.

F6. Extrusion granules	a)	b)	c)	d)
active ingredient mixture	0.1%	3%	5%	15%
Na lignin sulphonate	1.5%	2%	3%	4%
carboxymethyl cellulose	1.4%	2%	2%	2%
kaolin	97.0%	93%	90%	79%

The active ingredient is mixed with the additives, ground and moistened with water. This mixture is extruded and subsequently dried in a current of air.

F7. Dusting composition	a)	b)	c)
active ingredient mixture	0.1%	1%	5%
talcum	39.9%	49%	35%
kaolin	60.0%	50%	60%

By mixing the active ingredient with the carrier materials and grinding in an appropriate mill, a dusting composition is obtained which is ready for use.

F8. Suspension concentrates	a)	b)	c)	a)
active ingredient mixture	3%	10%	25%	50%
ethylene glycol	5%	5%	5%	5%
nonylphenol polyglycol ether (15 mols EO)	—	1%	2%	—
Na lignin sulphonate	3%	3%	4%	5%
carboxymethyl cellulose	1%	1%	1%	1%
37% aqueous formaldehyde solution	0.2%	0.2%	0.2%	0.2%
silicone oil emulsion	0.8%	0.8%	0.8%	0.8%
water	87%	79%	62%	38%

The finely ground active ingredient is intimately mixed with the additives. In this way, a suspension concentrate is obtained, from which suspensions of any desired concentration may be prepared by dilution with water.

It is often more practical to formulate the active ingredients individually and then, shortly prior to placing in the applicator, to bring them together in water in the desired mixture ratio as a "tank mixture".

BIOLOGICAL EXAMPLES

Test Description (Per-emergent Treatment)

Monocotyledoneous and dicotyledoneous weeds and cultivated plants are sown in small plastic pots in standard soil. Directly after sowing, the test substances are applied in aqueous suspension (500 l water/ha). Subsequently, the test plants are raised under glass under optimum conditions. Evaluation takes place 3 weeks after application using a nine-stage appraisal scale (1=complete damage, 9=no effect). Appraisal marks of 1 to 4 (especially 1 to 3) indicate good to very good herbicide activity. Appraisal marks of 6 to 9 (especially 7 to 9) show good to very good tolerance of cultivated plants.

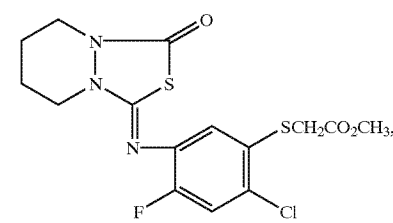
Test Description (Post-emergent Treatment)

Monocotyledoneous and dicotyledoneous weeds and cultivated plants are raised under glasshouse conditions in small plastic pots in standard soil. Application of the test substances takes place at the 3 to 6 leaf stage of the test plants. The test substances are applied in aqueous suspension (500 l water/ha) at application rates of 5 to 5000 g/ha active substance). Evaluation takes place 3 weeks after application using a nine-stage appraisal scale (1=complete damage, 9=no effect). Appraisal marks of 1 to 4 (especially 1 to 3) indicate good to very good herbicide activity. Appraisal marks of 6 to 9 (especially 7 to 9) show good to very good tolerance of cultivated plants.

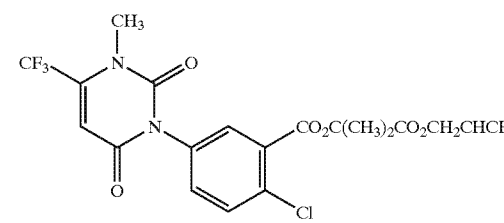
In these tests, the herbicide mixtures used according to the invention show good control of the weeds.

What is claimed is:

1. Process for the control of weeds in cultivations of useful plants which are resistant to a phospho-herbicide, characterised in that a herbicidally effective amount of a composition containing, in addition to the usual inert formulation assistants, a phospho-herbicide selected from the group consisting of glufosinate and glyphosate, a synergistic amount of at least one further herbicide selected from the group consisting of prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide and its S-enantiomer, metolachlor and its S-enantiomer, fluometuron, propaquizafop, atrazine, clodinafop, norflurazone, ametryn, terbutylazine, simazine, prometryn, NOA-402989, as well as the compounds of formulae

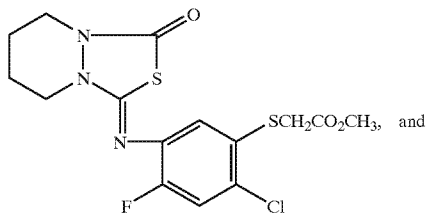


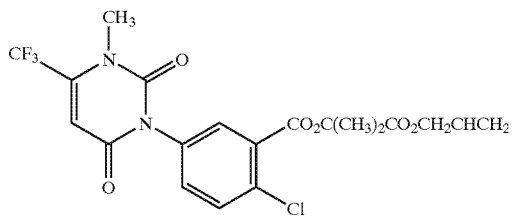
and



is allowed to take effect on the cultivated plant or its habitat, with the provision that compositions containing glufosinate and metolachlor, glufosinate and atrazine, glufosinate and metolachlor and atrazine, as well as glufosinate and atrazine and dicamba are not used in glufosinate-resistant maize, and further that compositions containing glyphosate and atrazine are not used in glyphosate-resistant maize, and compositions containing glyphosate and metalochlor or glyphosate and dimethenamide are not used in glyphosate-resistant soya.

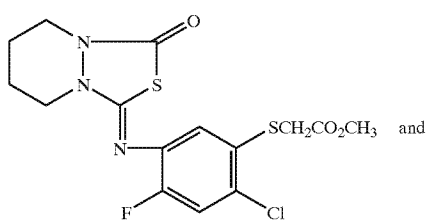
2. Process according to claim **1** for the control of weeds in cultivations of useful plants which are resistant to the herbicide glufosinate, characterised in that a herbicidally effective amount of a composition containing, in addition to the usual inert formulation assistants, glufosinate and a synergistic amount of at least one further herbicide selected from the group consisting of prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide, metolachlor and its S-enantiomer, fluometuron, propaquizafop, atrazine, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae

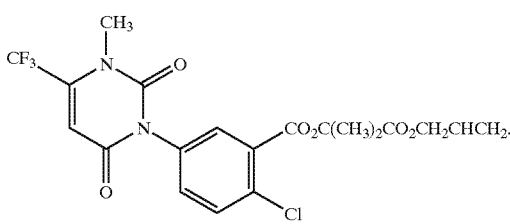




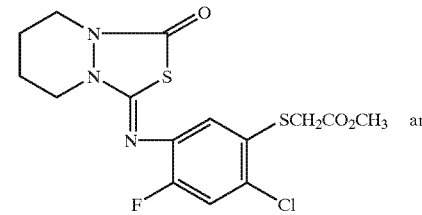
is allowed to take effect on the cultivated plant or its habitat.

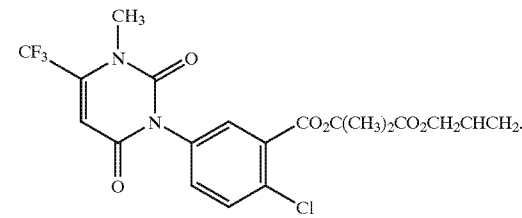
3. Process according to claim **1**, characterised in that the useful plant being cultivated is maize which is resistant to glufosinate and/or glyphosate, and the composition contains glufosinate or glyphosate and a synergistic amount of at least one further herbicide selected from the group consisting of prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide as well as its S-enantiomer, metolachlor as well as its S-enantiomer, atrazine, NOA-402989, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae



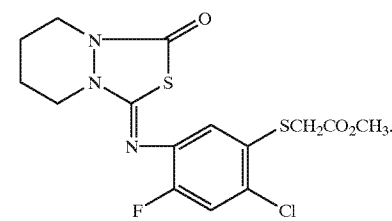


4. Process according to claim **3**, characterised in that the useful plant being cultivated is maize which is resistant to glufosinate, and the composition contains glufosinate and a synergistic amount of at least one further herbicide selected from the group consisting of prosulfuron, primisulfuron, dicamba, pyridate, dimethenamide, metolachlor as well as its S-enantiomer, atrazine, ametryn, terbutylazine, simazine, prometryn, as well as the compounds of formulae

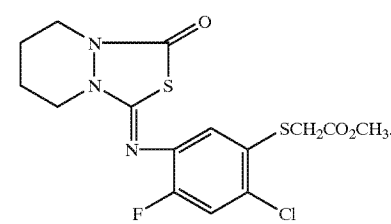




5. Process according to claim **1**, characterised in that the useful plant being cultivated is soya which is resistant to glufosinate and/or glyphosate, and the composition contains glufosinate or glyphosate and a synergistic amount of at least one further herbicide selected from the group consisting of metolachlor as well as its S-enantiomer and the compound of formula



6. Process according to claim **5**, characterised in that the useful plant being cultivated is soya which is resistant to glufosinate, and the composition contains glufosinate and a synergistic amount of at least one further herbicide selected from the group consisting of metolachlor as well as its S-enantiomer and the compound of formula



7. Process according to claim **1**, characterised in that the useful plant being cultivated is cotton which is resistant to glufosinate and/or glyphosate, and the composition contains glufosinate or glyphosate and a synergistic amount of fluometuron.

8. Process according to claim **7**, characterised in that the useful plant being cultivated is cotton which is resistant to glufosinate, and the composition contains glufosinate and a synergistic amount of fluometuron.

9. Process according to claim **1**, characterised in that the useful plant being cultivated is rape or beet which are resistant to glufosinate and/or glyphosate, and the compo-

sition contains glufosinate or glyphosate and a synergistic amount of propaquizafop.

10. Process according to claim **9**, characterised in that the useful plant being cultivated is rape or beet which are resistant to glufosinate, and the composition contains glufosinate and a synergistic amount of propaquizafop.

11. Process according to claim **1**, characterised in that the useful plant being cultivated is sugar cane which is resistant to glufosinate and/or glyphosate, and the composition contains glufosinate or glyphosate and a synergistic amount of ametryn.

12. Process according to claim **1**, characterised in that the useful plant being cultivated is sugar cane which is resistant to glufosinate, and the composition contains glufosinate and a synergistic amount of ametryn.

13. Process according to claim **1**, characterised in that the useful plant cultivations are treated with the said composition at application rates corresponding to 0.3 to 4.0 kg total active ingredient per hectare.

* * * * *

STUDY TITLE:

Atomization Droplet Size Spectra for
Engenia with Adjuvants

AUTHOR:

Andrew J. Hewitt, Ph.D.

STUDY COMPLETED:

October 22, 2016

PERFORMING LABORATORY:

The University of Queensland
Gatton, Queensland 4343
Australia

STUDY NUMBER:

BASF 819164

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants

Statement of No Data Confidentiality

No claim of confidentiality, on any basis whatsoever, is made for any information contained in this document. I acknowledge that information not designated as within the scope of FIFRA section 10 (d) (1) (A), (B) or (C), and which pertains to a registered or previously registered pesticide is not entitled to confidential treatment and may be released to the public, subject to the provision regarding disclosure to multinational entities under FIFRA 10(g).

Company:	BASF
Company Agent:	Andrew Goetz
Title:	Manager, Regulatory Technical: Stewardship and Sustainability
Signature:	Andrew Goetz
Date:	10-28-16

GOOD LABORATORY PRACTICES STATEMENT

This report does not meet the definition of study under 40 CFR part 160 and is not required to be conducted in compliance with 40 CFR part 160. As such there is no study director or sponsor.

Submitter: _____ 10/20/16

Jeffrey H. Birk
BASF Corporation

Date

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants

Table of Contents

Page

Title Page 1

Statement of No Data Confidentiality 2

Statement of Compliance With Good Laboratory Practice Standards 3

Table of Contents 4

Abbreviations/Nomenclature 6

1.0 Summary 7

2.0 Introduction 7

3.0 Objective 8

4.0 Methods 8

4.1 Test System Description 8

4.2 Test Substances 8

4.3 Liquid Delivery System 9

4.4 Set Up and Use of Particle Size Analyzer 9

4.5 Sampling To Obtain a Representative Cross-Sectional Average 9

4.6 Droplet Size Spectrum Parameters 9

4.7 Treatments 10

5.0 Results and Discussion 10

6.0 References 11

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants

Table of Contents (Continued)

Page

List of Tables:

Table 1: Tank Mix Compositions 12

List of Figures:

Figure 1. Droplet Size Spectra for Applications of Engenia Tank Mixes with Different Adjuvants Through TTI 11004 Nozzle 13

Figure 2. Droplet Size Spectra for Applications of Engenia Tank Mixes with Different Adjuvants Through TTI 11005 Nozzle 14

Figure 3. $D_{v0.1}$, $D_{v0.5}$, $D_{v0.9}$ for Different Adjuvants with Engenia Sprayed Through TTI 11004 15

List of Appendices:

Appendix 1: Volumetric Droplet Size Data for Atomization Measurements 17

Appendix 2: Protocol 108

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants

Abbreviations/ Nomenclature

C.O.C.	Crop oil concentrate
D	droplet diameter (µm)
$D_{v0.X}$	droplet diameter (µm) at which 0.X fraction of the total spray volume is contained in droplets with smaller diameter.
$D_{v0.5}$	volume median diameter (vmd): the droplet diameter at which half of the total spray volume is contained in droplets with smaller diameter (µm)
min	minute
mL	milliliter
mph	miles per hour
psi	pounds per square inch
Q	flow rate (mL/min)
Relative Span	indicator of the spread of droplet sizes relative to the $D_{v0.5}$. Calculated by: relative span = $(D_{v0.9} - D_{v0.1}) / D_{v0.5}$
sec.	second
spray angle	angle of spray sheet discharging from nozzle
V<Y	Cumulative spray volume fraction (%) contained in droplet diameter size classes under diameter Y (µm)
µm	micrometer

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants

1.0 Summary

An atomization study was conducted to measure the droplet size spectra produced by spraying simulated spray tank mixtures containing Engenia® (Dicamba) with various adjuvants through Turbo Teejet Induction (TTI) nozzles to simulate ground boom applications. The emission droplet size spectra were measured using a laser diffraction particle size analyzer. Data were expressed as the entire droplet size spectra, and compared using the following specific parameters: $D_{v0.5}$ (volume median diameter) and the spray volume contained in relatively small droplets with diameter between 0.5 and 150 µm.

There was good agreement in atomization data between replicates of each treatment.

The spray droplet size spectra fell within the expected parameters with no noted abnormalities.

Even though the adjuvants had a wide range of effects on the $D_{v0.5}$ values of the sprays, the proportion of the sprays contained in droplets with diameter below 150 µm was consistently below 2% by volume, indicating that the drift potential of these sprays would be very low, corresponding to Extremely Coarse to Ultra Coarse sprays.

2.0 Introduction

The droplet size spectrum formed during a pesticide application operation is one of the most important factors affecting the on- and off-target deposition of the spray (Hewitt, 1997). One of the major variables affecting droplet size is the application procedure (sprayer speed; nozzle type, size, angle and set-up; liquid pressure and flow rate). Also of importance are the physical properties of the spray tank mix, particularly the surface tension and viscosity (Hewitt and Hermansky, 1997).

The present report discusses the atomization droplet size spectra that were measured for tank mixes containing Engenia® with various tank mix adjuvants in a wind tunnel for different application conditions, using application conditions (nozzle and spray pressure) and application volume rates representative of spraying in the U.S. using ground boom spraying equipment.

The droplet size information can be used to relate to spray application models, and to assess the proportion of the spray contained within droplets with diameter below 150 µm, which might represent more of a spray drift risk than larger droplets if exposed to conditions conducive to drift.

3.0 Objective

The objective of this study is to determine the droplet size spectrum with respect to the volume median diameter ($D_{v0.5}$), and the spray volume contained in relatively small droplets with diameter < 150 µm, for various tank mixes of Engenia® and adjuvants when sprayed through specific application conditions with TTI size 04 and 05 orifice nozzles simulating ground spraying in the U.S.

4.0 Methods

4.1 Test System Description

The test system was comprised of the following components:

1. Laser diffraction particle size analyzer for measuring the droplet size spectra.
2. 5 gallon mixing containers for test substances.
3. 5 gallon pressurized containers for delivery of test substances to nozzles. Containers were connected to pressurized air for liquid displacement to nozzle tip at required pressure.
4. Liquid delivery system: Spraying Systems nozzle body and following nozzles: TTI (Turbo Teejet Induction) size 11004 and 11005 flat fan air induction nozzles, at 60 psi pressure, traversed across a 1 m height to sample all droplets across the laser located 30 cm downwind of the nozzles. The nomenclature of the nozzles indicates their rating for spray angle (i.e. 110°) and flow rate (i.e. 0.4 and 0.5 US gallons per minute) when applying water at the nozzle reference pressure which is 40 psi.
5. Calibrated pressure gauges.
6. Axial fan straight-through blower wind tunnel.
7. Air temperature in wind tunnel during all tests was 24-26°C. Relative humidity was 60-65%. The liquid temperature for all tests was within 2°C of the air temperature. The wind tunnel speed was set to 18 mph which is the speed recommended in the Spray Drift Task Force protocols for wind tunnel sampling of ground sprays in order to evacuate the droplets from the working section and avoid them hanging in the air and being over-sampled.

4.2 Test Substances

Test substances were prepared by mixing the following components.

Engenia in water at a rate of 25.6 oz per 10 gallons of tank mix.
Adjuvant rates in the Engenia tank mixes varied according to the adjuvant (between 1.6 and 19.2 oz/ 10 gallons of tank mix). These are listed in the study treatment list.

All tank mix components were measured on a % v/v basis.

After mixing and thorough stirring, the test substances were transferred to pressurized stainless steel containers for the spray characterization. Before each spray run the container was inverted several times to thoroughly mix the contents. All samples were labeled, and the containers were washed thoroughly prior to changing test substance.

4.3 Liquid Delivery System

Spray solutions were displaced from spray tanks using compressed air. Liquid pressure was measured at the nozzle tip using a pressure gauge connected by a capillary tube to the nozzle tip. Liquid pressure was controlled by adjusting the air pressure, to maintain the 60 psi pressure required for each treatment.

4.4 Set Up and Use of Particle Size Analyzer

A Sympatec HELOS Vario laser diffraction particle size analyzer was used to characterize the drop size spectra. All measurements were made using an R7 lens which measured droplets in the size range 0.5 to 3500µm. Data and results were obtained using model independent analysis and Sympatec Windox 7 software.

Model Independent Analysis is the usual analysis method used by other liquid spray researchers (e.g. the Spray Drift Task Force, Hewitt, 1994).

4.5 Sampling To Obtain a Representative Cross-Sectional Average

Droplets contained in the spray clouds produced by the nozzles in the present study were not spatially uniform. Droplet size varied across the spray plume (larger droplets tended to occur at the edge of the plume, and smaller droplets in the center). It was therefore important to ensure that a cross-sectional average spray sample was obtained at a given axial location that was representative of the spray plume under evaluation (Dodge, 1988; Snyder et al, 1989). Cross-section averages were obtained in this study by traversing the nozzle vertically down across the laser beam while spraying.

4.6 Droplet Size Spectrum Parameters

In addition to entire volumetric and cumulative volumetric droplet size spectra, the $D_{v0.5}$ value was calculated. The $D_{v0.5}$, or volume median diameter, is the droplet

diameter (µm) at which 50 % of the total spray volume is contained in droplets with larger and smaller diameter. These values were calculated by the particle size analyzer in compliance with ASTM Standard E799-87 (ASTM, 1987).

In this study, there was interest in the spray volume contained in relatively small droplets, i.e. those with diameter between 0.5 and 150 µm. This represents the smallest droplets in the spray, which might present more of an exposure risk for spray drift than larger droplets would tend to pose.

Additional droplet size statistics were also provided by the Sympatec instrument software such as the $D_{v0.1}$ and $D_{v0.9}$ which represent the droplet diameters at which 0.1 and 0.9 of the spray volume is contained in smaller droplets. The $D_{v0.1}$ is often considered as good indicator of the driftable fraction of the spray while the $D_{v0.9}$ represents larger droplets which are few in number but large in diameter.

4.7 Treatments

There were 16 adjuvant tank mixes in this study, listed in Table 1. These involved application of each test substance at 60 psi pressure through the TTI 11004 and TTI 11005 nozzles.

All applications were replicated with three measurements per treatment.

5.0 Results and Discussion

Examples of the adjuvant effects on droplet size are shown on Figures 1 and 2 for the TTI 11004 and TTI 11005 nozzles respectively. Figure 3 shows the $D_{v0.1}$, $D_{v0.5}$ and $D_{v0.9}$ values for the different tank mixes sprayed through the TTI 11004 nozzle. The trends among tank mixes were similar for the TTI 11005 nozzle. Data for each replicate measurement and individual size classes are included in Appendix 1.

The spray droplet size spectra fell within the expected parameters with no noted abnormalities.

Although there was a wide range of droplet size spectra among application types, with $D_{v0.5}$ values between approximately 490 and 815 µm, all of the sprays had <2.3 % of the spray volume in droplets with diameter below 150 µm. This indicates that the sprays were Extremely Coarse to Ultra Coarse in size.

The data trend of finer sprays occurring for the smaller orifice TTI 11004 is in agreement with most previous studies, and is due to the higher liquid shear as the spray fan is emitted through a smaller nozzle outlet.

6.0 References

ASTM (1987) E799 Standard Practice for Determining Data Criteria and Processing for Liquid Drop Size Analysis. American Society for Testing and Materials, Race St., Philadelphia, PA.

Bilanin, A.J., Teske, M.E., Barry, J.W. and Ekblad, R.B. (1989) AGDISP: The Aircraft Spray Dispersion Model, Code Development and Experimental Validation. Trans ASAE 32:327-334.

Bird, S.L., Perry, S.G., Ray, S. and Teske, M.E. (2000). An evaluation of AgDRIFT 1.0 for use in aerial applications, *In review,* Journal of Environmental Toxicology and Chemistry.

Dodge, L.G. (1988) Representation of Average Drop Sizes in Sprays, J. Pr. & Power **4,** 490-6.

Hewitt, A.J. (1994) Measurement Techniques for Atomization Droplet Size Spectra Using Particle Size Analyzers in Wind Tunnels. SDTF Report No. T94-001, EPA MRID No. 43485603.

Hewitt, A. J. (1997) The Importance of Droplet Size in Agricultural Spraying. Atomization & Sprays vol. 7 (3), 235-244.

Hewitt, A.J. (1998) The Effects of Tank Mix and Adjuvants on Spray Drift. Fifth International Symposium on Adjuvants for Agrochemicals, August 17-21, Memphis, TN.

Hewitt, A.J. (2000) Spray Drift Modelling, Labelling and Management in the U.S. Aspects of Applied Biology, Vol. 57.

Hewitt, A.J. and Hermansky, C. (1997) Effect of Liquid Properties on Spray Performance. Proc. Chem Show, New York, NY

Hewitt, A.J., Johnson, D.R., Fish, J.D., Hermansky, C.G. and Valcore, D.L. (2001) The Development of the Spray Drift Task Force Database on Pesticide Movements for Aerial Agricultural Spray Applications. *In review,* Journal of Environmental Toxicol. & Chemistry.

Snyder, H. E., Senser, D. W. and Lefebvre, A.H. (1989) Experimental Techniques For Drop-Size Measurements in Fan Sprays. Proceedings ILASS-Americas Symp., Worcester, MA, 56-61.

Teske, M. E., J. F. Bowers, J. E. Rafferty, and J. W. Barry (1993) FSCBG: An Aerial Spray Dispersion Model for Predicting the Fate of Released Material Behind Aircraft, Environmental Toxicology and Chemistry, vol. 12, pp. 453-464.

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants

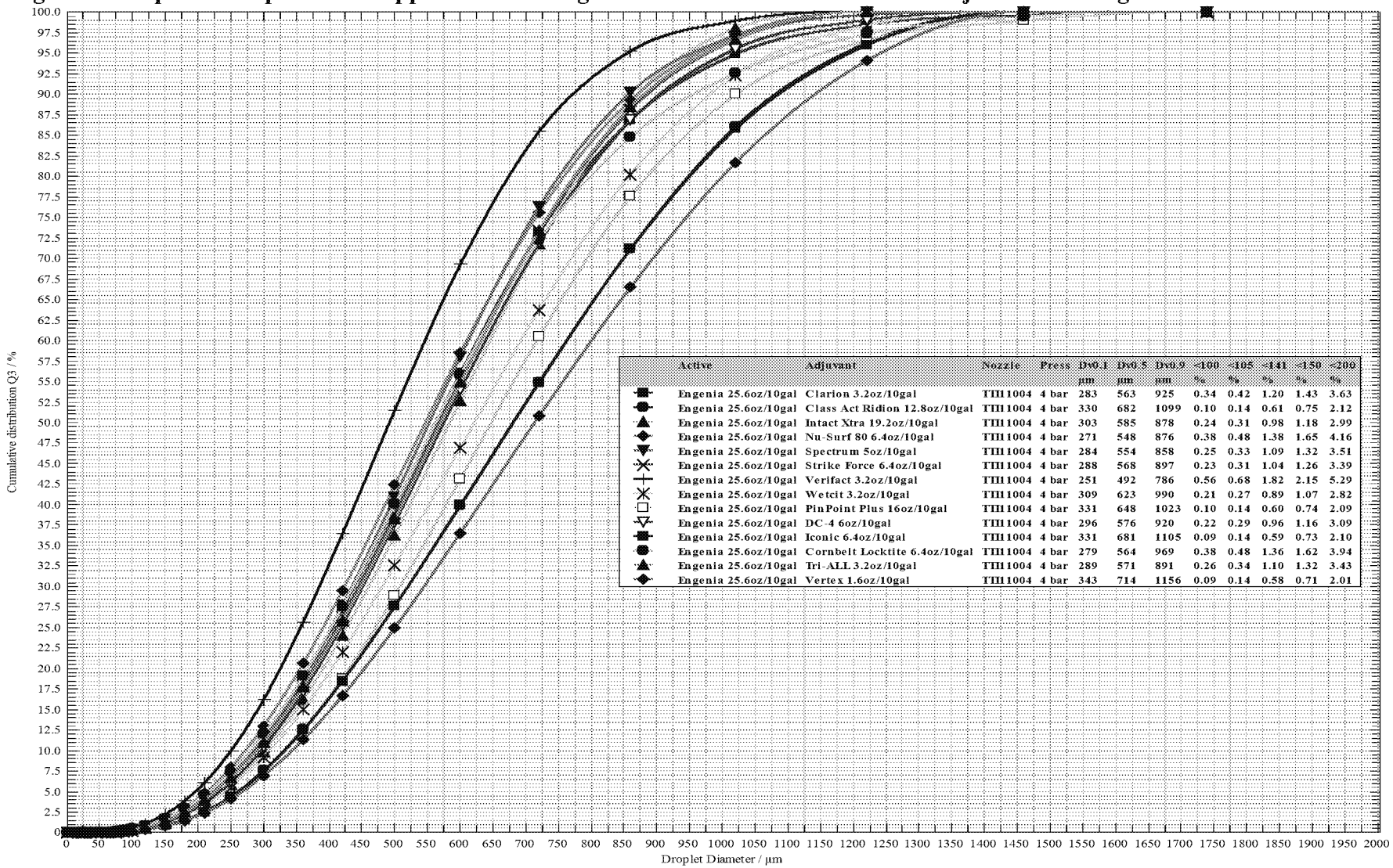
Table 1. Tank Mix Compositions

Distributor	Dicamba Formulation	Adjuvant Name	GPA	Engenia Rate (fl oz/A)	Adjuvant Rate (fl oz/A)
Meherrin	Engenia	Pinpoint Plus (725A-T)	10	25.6	16
Dune	Engenia	Clarion	10	25.6	3.2
WinField	Engenia	Class Act Ridion	10	25.6	12.8
CNI	Engenia	DC-4	10	25.6	6
US	Engenia	Iconic	10	25.6	6.4
Simplot	Engenia	Intact Xtra	10	25.6	19.2
Kova	Engenia	Kabak Plus	10	25.6	6.4
Van Diest	Engenia	Cornbelt Locktite	10	25.6	6.4
Carolina Eastern	Engenia	Nu-Surf 80	10	25.6	6.4
Coastal	Engenia	Spectrum	10	25.6	5
Diamond R	Engenia	Spread-R	10	25.6	6.4
CPS	Engenia	Strike Force	10	25.6	6.4
Heartland	Engenia	Tri-ALL	10	25.6	3.2
Pinnacle	Engenia	Verifact	10	25.6	3.2
Precision Labs	Engenia	Vertex	10	25.6	1.6
Fertizona	Engenia	Wetcit	10	25.6	3.2

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants

Figure 1. Droplet Size Spectra for Applications of Engenia Tank Mixes with Different Adjuvants Through TTI 11004 Nozzle

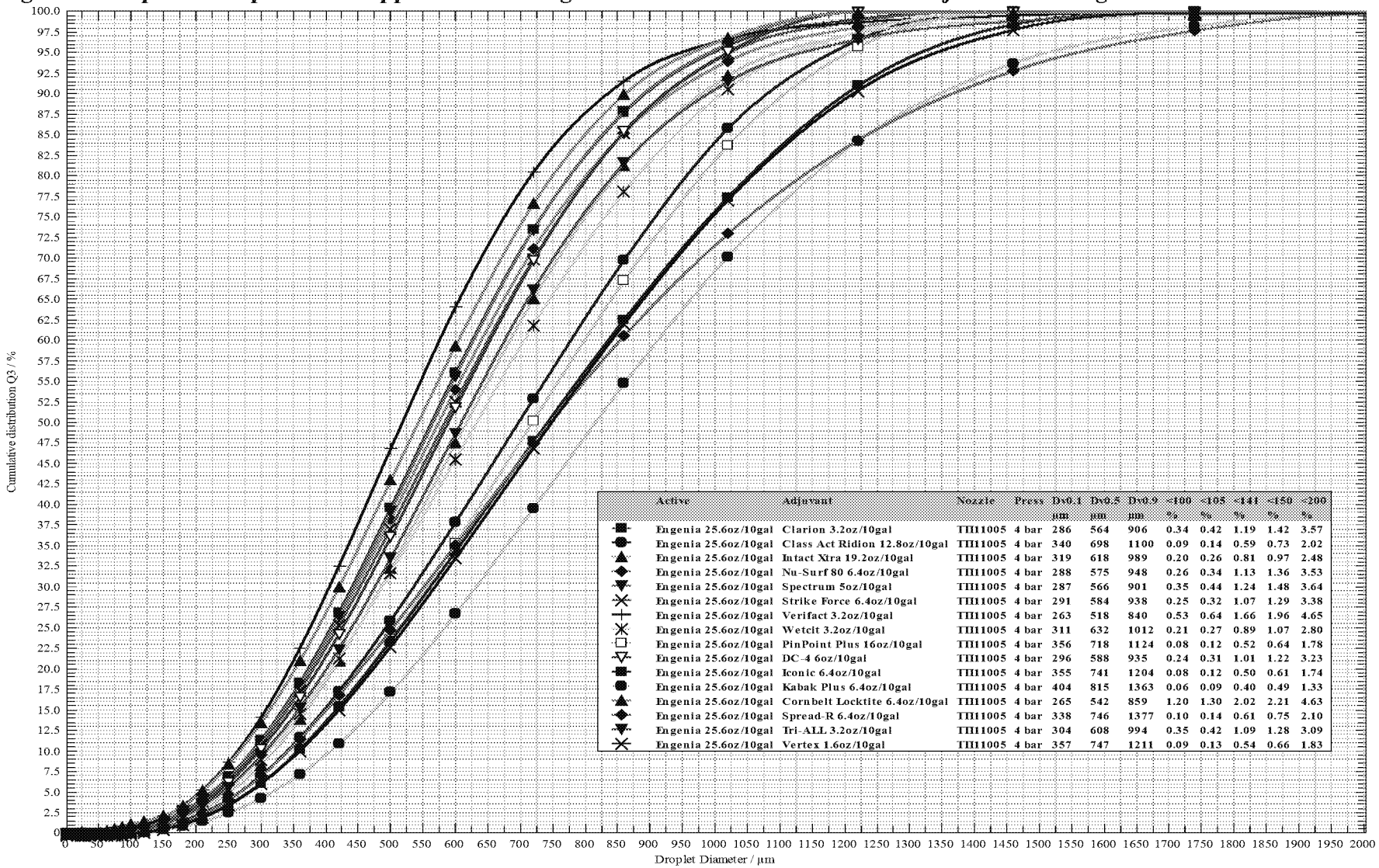


Active	Adjuvant	Nozzle	Press	Dv0.1 µm	Dv0.5 µm	Dv0.9 µm	<100 %	<105 %	<141 %	<150 %	<200 %
Engenia 25.6oz/10gal	Clarion 3.2oz/10gal	TTI11004	4 bar	283	563	925	0.34	0.42	1.20	1.43	3.63
Engenia 25.6oz/10gal	Class Act Ridion 12.8oz/10gal	TTI11004	4 bar	330	682	1099	0.10	0.14	0.61	0.75	2.12
Engenia 25.6oz/10gal	Intact Xtra 19.2oz/10gal	TTI11004	4 bar	303	585	878	0.24	0.31	0.98	1.18	2.99
Engenia 25.6oz/10gal	Nu-Surf 80 6.4oz/10gal	TTI11004	4 bar	271	548	876	0.38	0.48	1.38	1.65	4.16
Engenia 25.6oz/10gal	Spectrum 5oz/10gal	TTI11004	4 bar	284	554	858	0.25	0.33	1.09	1.32	3.51
Engenia 25.6oz/10gal	Strike Force 6.4oz/10gal	TTI11004	4 bar	288	568	897	0.23	0.31	1.04	1.26	3.39
Engenia 25.6oz/10gal	Verifact 3.2oz/10gal	TTI11004	4 bar	251	492	786	0.56	0.68	1.82	2.15	5.29
Engenia 25.6oz/10gal	Wetcit 3.2oz/10gal	TTI11004	4 bar	309	623	990	0.21	0.27	0.89	1.07	2.82
Engenia 25.6oz/10gal	PinPoint Plus 16oz/10gal	TTI11004	4 bar	331	648	1023	0.10	0.14	0.60	0.74	2.09
Engenia 25.6oz/10gal	DC-4 6oz/10gal	TTI11004	4 bar	296	576	920	0.22	0.29	0.96	1.16	3.09
Engenia 25.6oz/10gal	Iconic 6.4oz/10gal	TTI11004	4 bar	331	681	1105	0.09	0.14	0.59	0.73	2.10
Engenia 25.6oz/10gal	Cornbelt Locktite 6.4oz/10gal	TTI11004	4 bar	279	564	969	0.38	0.48	1.36	1.62	3.94
Engenia 25.6oz/10gal	Tri-ALL 3.2oz/10gal	TTI11004	4 bar	289	571	891	0.26	0.34	1.10	1.32	3.43
Engenia 25.6oz/10gal	Vertex 1.6oz/10gal	TTI11004	4 bar	343	714	1156	0.09	0.14	0.58	0.71	2.01

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants

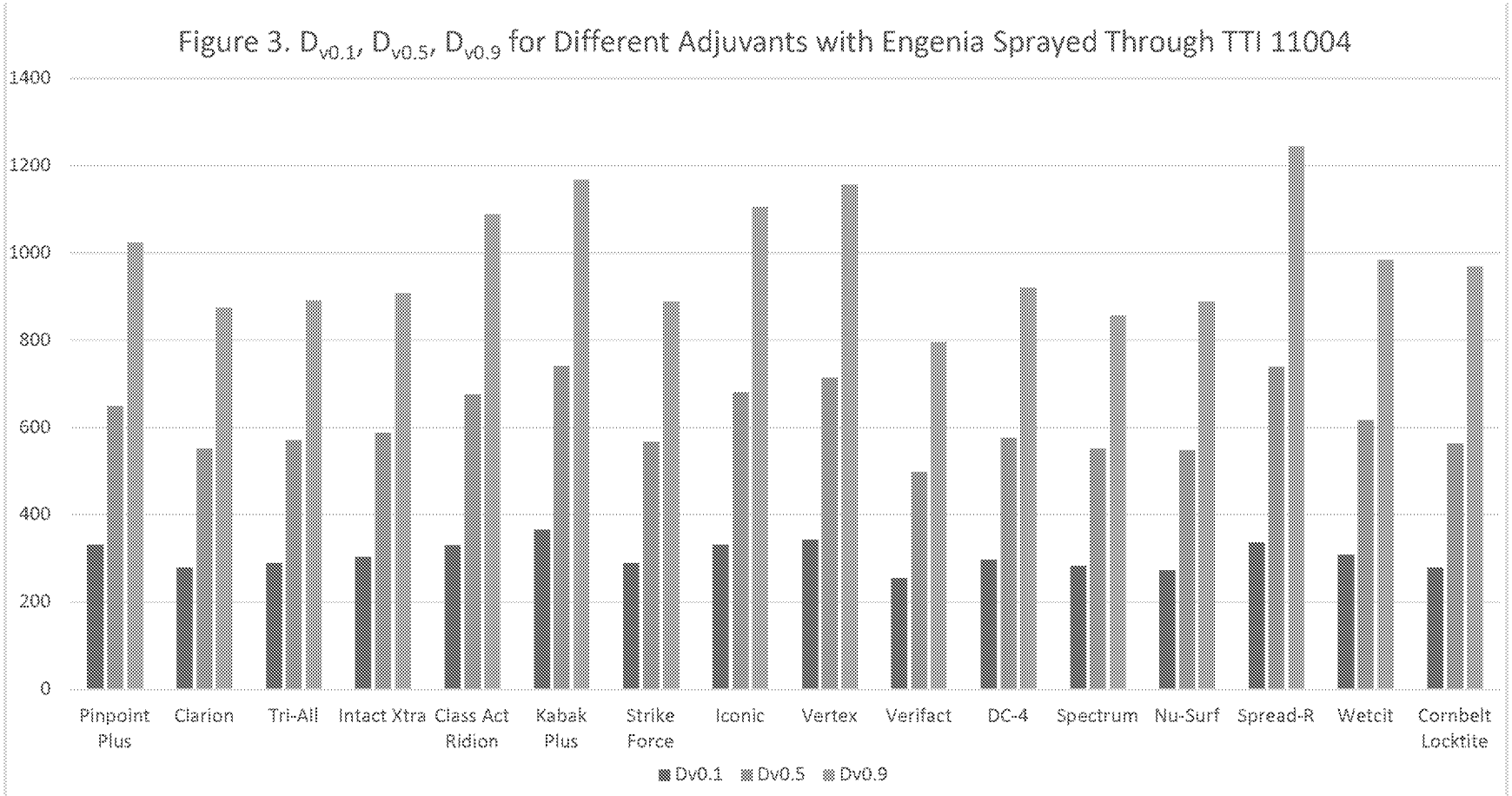
Figure 2. Droplet Size Spectra for Applications of Engenia Tank Mixes with Different Adjuvants Through TTI 11005 Nozzle



Active	Adjuvant	Nozzle	Press	Dv0.1 µm	Dv0.5 µm	Dv0.9 µm	<100 %	<105 %	<141 %	<150 %	<200 %
Engenia 25.6oz/10gal	Clarion 3.2oz/10gal	TII11005	4 bar	286	564	906	0.34	0.42	1.19	1.42	3.57
Engenia 25.6oz/10gal	Class Act Ridion 12.8oz/10gal	TII11005	4 bar	340	698	1100	0.09	0.14	0.59	0.73	2.02
Engenia 25.6oz/10gal	Intact Xtra 19.2oz/10gal	TII11005	4 bar	319	618	989	0.20	0.26	0.81	0.97	2.48
Engenia 25.6oz/10gal	Nu-Surf 80 6.4oz/10gal	TII11005	4 bar	288	575	948	0.26	0.34	1.13	1.36	3.53
Engenia 25.6oz/10gal	Spectrum 5oz/10gal	TII11005	4 bar	287	566	901	0.35	0.44	1.24	1.48	3.64
Engenia 25.6oz/10gal	Strike Force 6.4oz/10gal	TII11005	4 bar	291	584	938	0.25	0.32	1.07	1.29	3.38
Engenia 25.6oz/10gal	Verifact 3.2oz/10gal	TII11005	4 bar	263	518	840	0.53	0.64	1.66	1.96	4.65
Engenia 25.6oz/10gal	Wetcit 3.2oz/10gal	TII11005	4 bar	311	632	1012	0.21	0.27	0.89	1.07	2.80
Engenia 25.6oz/10gal	PinPoint Plus 16oz/10gal	TII11005	4 bar	356	718	1124	0.08	0.12	0.52	0.64	1.78
Engenia 25.6oz/10gal	DC-4 6oz/10gal	TII11005	4 bar	296	588	935	0.24	0.31	1.01	1.22	3.23
Engenia 25.6oz/10gal	Iconic 6.4oz/10gal	TII11005	4 bar	355	741	1204	0.08	0.12	0.50	0.61	1.74
Engenia 25.6oz/10gal	Kabak Plus 6.4oz/10gal	TII11005	4 bar	404	815	1363	0.06	0.09	0.40	0.49	1.33
Engenia 25.6oz/10gal	Cornbelt Locktite 6.4oz/10gal	TII11005	4 bar	265	542	859	1.20	1.30	2.02	2.21	4.63
Engenia 25.6oz/10gal	Spread-R 6.4oz/10gal	TII11005	4 bar	338	746	1377	0.10	0.14	0.61	0.75	2.10
Engenia 25.6oz/10gal	Tri-ALL 3.2oz/10gal	TII11005	4 bar	304	608	994	0.35	0.42	1.09	1.28	3.09
Engenia 25.6oz/10gal	Vertex 1.6oz/10gal	TII11005	4 bar	357	747	1211	0.09	0.13	0.54	0.66	1.83

819164

Atomization Droplet Size Spectra for Engenia with Adjuvants



Atomization Droplet Size Spectra for Engenia with Adjuvants

The previous figures showed the cumulative volumetric droplet size spectra for different tank mixes with a plot of the second replicate measurement of each treatment. Individual replicate data and statistical assessments across replicates of a given treatment for volumetric distributions are included in Appendix 1.

Appendix 1

Volumetric Droplet Size Spectra for Atomization Measurements

This appendix contains the droplet size data for each replicate measurement of each treatment including summary droplet size statistics and the cumulative percentage of the spray volume below each size class from 0.5 to 3500 µm.

```
Dv0.1 = 283.09 µm
Dv0.5 = 552.78 µm
Dv0.9 = 904.52 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Clarion 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.10
100.00      0.25
120.00      0.56
150.00      1.31
180.00      2.45
210.00      4.01
250.00      6.83
300.00      11.62
360.00      19.17
420.00      28.19
500.00      41.34
600.00      57.75
720.00      74.63
860.00      87.87
1020.00     95.54
1220.00     98.91
1460.00     99.86
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 279.69 µm
Dv0.5 = 553.66 µm
Dv0.9 = 878.82 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Clarion 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
```

```
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.09
74.00 0.21
86.00 0.33
100.00      0.50
120.00      0.83
150.00      1.58
180.00      2.72
210.00      4.31
250.00      7.19
300.00      11.92
360.00      19.17
420.00      27.89
500.00      41.04
600.00      57.74
720.00      75.21
860.00      89.11
1020.00     96.65
1220.00     99.24
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 280.79 µm
Dv0.5 = 540.08 µm
Dv0.9 = 841.25 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Clarion 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.10
100.00      0.26
120.00      0.58
150.00      1.33
180.00      2.47
210.00      4.06
250.00      6.95
```

300.00	11.91
360.00	19.77
420.00	29.22
500.00	43.05
600.00	60.38
720.00	78.37
860.00	91.80
1020.00	98.04
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 286.10 µm
Dv0.5 = 565.99 µm
Dv0.9 = 907.32 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Clarion 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.03
26.00	0.03
30.00	0.03
36.00	0.03
44.00	0.03
52.00	0.03
62.00	0.03
74.00	0.13
86.00	0.24
100.00	0.42
120.00	0.75
150.00	1.51
180.00	2.61
210.00	4.10
250.00	6.76
300.00	11.25
360.00	18.29
420.00	26.80
500.00	39.41
600.00	55.46
720.00	72.69
860.00	87.30
1020.00	96.43
1220.00	99.62
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00

2940.00 100.00
3500.00 100.00

Dv0.1 = 286.92 µm
Dv0.5 = 552.29 µm
Dv0.9 = 841.45 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Clarion 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.03
26.00 0.03
30.00 0.03
36.00 0.03
44.00 0.03
52.00 0.03
62.00 0.03
74.00 0.12
86.00 0.24
100.00 0.40
120.00 0.73
150.00 1.44
180.00 2.49
210.00 3.96
250.00 6.65
300.00 11.19
360.00 18.34
420.00 27.20
500.00 40.81
600.00 58.39
720.00 77.12
860.00 91.97
1020.00 100.00
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 277.50 µm
Dv0.5 = 536.21 µm
Dv0.9 = 821.00 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Clarion 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00

18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.08
74.00 0.18
86.00 0.31
100.00 0.49
120.00 0.83
150.00 1.62
180.00 2.77
210.00 4.35
250.00 7.26
300.00 12.24
360.00 19.99
420.00 29.35
500.00 43.44
600.00 61.56
720.00 80.28
860.00 93.75
1020.00 100.00
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 345.44 µm
Dv0.5 = 716.72 µm
Dv0.9 = 1157.95 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00 0.18
120.00 0.37
150.00 0.79

180.00	1.46
210.00	2.38
250.00	4.02
300.00	6.75
360.00	11.04
420.00	16.41
500.00	24.82
600.00	36.33
720.00	50.38
860.00	65.89
1020.00	80.92
1220.00	94.09
1460.00	99.69
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 351.47 µm
Dv0.5 = 733.82 µm
Dv0.9 = 1242.54 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.00
100.00	0.09
120.00	0.25
150.00	0.63
180.00	1.24
210.00	2.10
250.00	3.68
300.00	6.37
360.00	10.60
420.00	15.76
500.00	23.84
600.00	34.99
720.00	48.56
860.00	63.19
1020.00	77.07
1220.00	89.28
1460.00	96.94

1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 344.29 µm
Dv0.5 = 732.95 µm
Dv0.9 = 1274.71 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.07
100.00	0.18
120.00	0.38
150.00	0.82
180.00	1.46
210.00	2.36
250.00	3.98
300.00	6.74
360.00	11.16
420.00	16.55
500.00	24.69
600.00	35.48
720.00	48.65
860.00	63.23
1020.00	76.77
1220.00	88.24
1460.00	95.97
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 331.48 µm
Dv0.5 = 678.53 µm
Dv0.9 = 1098.19 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
Nozzle: TTI11004

```
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.09
120.00      0.28
150.00      0.74
180.00      1.45
210.00      2.45
250.00      4.29
300.00      7.42
360.00      12.34
420.00      18.28
500.00      27.41
600.00      39.94
720.00      55.31
860.00      71.84
1020.00     86.25
1220.00     95.84
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 332.67 µm
Dv0.5 = 677.04 µm
Dv0.9 = 1105.53 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
```

```
100.00      0.09
120.00      0.27
150.00      0.71
180.00      1.40
210.00      2.37
250.00      4.18
300.00      7.30
360.00      12.26
420.00      18.31
500.00      27.59
600.00      40.19
720.00      55.47
860.00      71.73
1020.00     85.85
1220.00     95.55
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 324.85 µm
Dv0.5 = 662.61 µm
Dv0.9 = 1036.81 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00      0.20
120.00      0.42
150.00      0.87
180.00      1.57
210.00      2.57
250.00      4.48
300.00      7.81
360.00      13.10
420.00      19.53
500.00      29.17
600.00      41.92
720.00      57.40
860.00      74.32
```

1020.00 89.26
1220.00 98.03
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 317.02 µm
Dv0.5 = 617.48 µm
Dv0.9 = 987.28 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00 0.19
120.00 0.41
150.00 0.93
180.00 1.73
210.00 2.84
250.00 4.86
300.00 8.38
360.00 14.09
420.00 21.25
500.00 32.42
600.00 47.47
720.00 64.84
860.00 81.02
1020.00 92.31
1220.00 97.84
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 303.52 µm
Dv0.5 = 587.59 µm
Dv0.9 = 909.13 µm
Study: BASF

A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.08
62.00	0.18
74.00	0.32
86.00	0.46
100.00	0.65
120.00	0.96
150.00	1.57
180.00	2.43
210.00	3.63
250.00	5.83
300.00	9.65
360.00	15.64
420.00	23.09
500.00	35.27
600.00	52.09
720.00	71.23
860.00	87.28
1020.00	96.14
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 309.87 µm
Dv0.5 = 595.49 µm
Dv0.9 = 933.51 µm

Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00

62.00 0.00
74.00 0.00
86.00 0.09
100.00 0.21
120.00 0.46
150.00 1.01
180.00 1.86
210.00 3.05
250.00 5.23
300.00 9.00
360.00 15.08
420.00 22.67
500.00 34.54
600.00 50.73
720.00 69.40
860.00 85.59
1020.00 95.19
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 322.57 µm
Dv0.5 = 611.46 µm
Dv0.9 = 995.37 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.07
100.00 0.18
120.00 0.40
150.00 0.90
180.00 1.65
210.00 2.68
250.00 4.57
300.00 7.89
360.00 13.49
420.00 20.83
500.00 32.54

```
600.00      48.32
720.00      65.90
860.00      81.25
1020.00     91.59
1220.00     97.19
1460.00     99.32
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 316.00 µm
Dv0.5 = 596.36 µm
Dv0.9 = 939.91 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.07
100.00      0.19
120.00      0.41
150.00      0.92
180.00      1.70
210.00      2.78
250.00      4.79
300.00      8.38
360.00      14.45
420.00      22.28
500.00      34.47
600.00      50.59
720.00      68.84
860.00      85.03
1020.00     94.99
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 317.84 µm
```

Dv0.5 = 597.99 µm
Dv0.9 = 933.19 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.07
100.00	0.18
120.00	0.40
150.00	0.91
180.00	1.69
210.00	2.76
250.00	4.73
300.00	8.23
360.00	14.17
420.00	21.90
500.00	34.11
600.00	50.33
720.00	68.75
860.00	85.31
1020.00	95.56
1220.00	99.33
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 279.80 µm
Dv0.5 = 540.71 µm
Dv0.9 = 874.26 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00

```
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.09
86.00 0.19
100.00      0.34
120.00      0.67
150.00      1.45
180.00      2.64
210.00      4.25
250.00      7.12
300.00      11.95
360.00      19.61
420.00      28.95
500.00      42.90
600.00      60.33
720.00      77.32
860.00      89.43
1020.00     95.84
1220.00     98.86
1460.00     99.94
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 276.62 µm
Dv0.5 = 541.94 µm
Dv0.9 = 901.46 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.18
100.00      0.34
120.00      0.68
150.00      1.47
180.00      2.67
210.00      4.33
250.00      7.31
300.00      12.36
```

360.00	20.26
420.00	29.63
500.00	43.10
600.00	59.55
720.00	75.90
860.00	88.23
1020.00	95.06
1220.00	98.12
1460.00	99.36
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 272.17 µm
Dv0.5 = 532.73 µm
Dv0.9 = 845.46 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.08
86.00	0.20
100.00	0.38
120.00	0.74
150.00	1.59
180.00	2.86
210.00	4.59
250.00	7.68
300.00	12.91
360.00	21.04
420.00	30.65
500.00	44.44
600.00	61.43
720.00	78.66
860.00	91.31
1020.00	97.49
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00

3500.00 100.00

Dv0.1 = 270.08 µm
Dv0.5 = 532.76 µm
Dv0.9 = 859.13 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.09
86.00	0.21
100.00	0.40
120.00	0.79
150.00	1.70
180.00	3.02
210.00	4.80
250.00	7.93
300.00	13.09
360.00	21.08
420.00	30.61
500.00	44.43
600.00	61.43
720.00	78.13
860.00	90.07
1020.00	96.05
1220.00	98.39
1460.00	99.38
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 267.06 µm
Dv0.5 = 525.50 µm
Dv0.9 = 824.96 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00

22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.09
86.00 0.21
100.00 0.41
120.00 0.80
150.00 1.71
180.00 3.07
210.00 4.90
250.00 8.16
300.00 13.56
360.00 21.83
420.00 31.54
500.00 45.55
600.00 62.99
720.00 80.71
860.00 93.10
1020.00 98.34
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 266.57 µm
Dv0.5 = 527.45 µm
Dv0.9 = 832.70 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.09
86.00 0.21
100.00 0.40
120.00 0.79
150.00 1.71
180.00 3.08

210.00	4.94
250.00	8.22
300.00	13.60
360.00	21.78
420.00	31.38
500.00	45.26
600.00	62.53
720.00	80.07
860.00	92.41
1020.00	97.89
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 274.60 µm
Dv0.5 = 552.91 µm
Dv0.9 = 926.75 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Nu-Surf 80 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.08
86.00	0.19
100.00	0.36
120.00	0.73
150.00	1.58
180.00	2.85
210.00	4.56
250.00	7.57
300.00	12.51
360.00	20.02
420.00	28.84
500.00	41.60
600.00	57.48
720.00	73.84
860.00	86.80
1020.00	94.47
1220.00	98.11
1460.00	99.49
1740.00	100.00

```
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 271.18 µm
Dv0.5 = 547.79 µm
Dv0.9 = 875.98 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Nu-Surf 80 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.20
100.00      0.38
120.00      0.76
150.00      1.65
180.00      2.97
210.00      4.76
250.00      7.86
300.00      12.91
360.00      20.52
420.00      29.41
500.00      42.28
600.00      58.44
720.00      75.51
860.00      89.23
1020.00     96.94
1220.00     99.56
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 272.88 µm
Dv0.5 = 544.14 µm
Dv0.9 = 860.81 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Nu-Surf 80 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
```

Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.08
86.00	0.19
100.00	0.37
120.00	0.74
150.00	1.60
180.00	2.88
210.00	4.62
250.00	7.69
300.00	12.74
360.00	20.43
420.00	29.48
500.00	42.67
600.00	59.27
720.00	76.65
860.00	89.96
1020.00	96.90
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 283.77 µm
Dv0.5 = 570.78 µm
Dv0.9 = 926.60 µm

Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Nu-Surf 80 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.08
86.00	0.19
100.00	0.36

```
120.00      0.71
150.00      1.53
180.00      2.72
210.00      4.30
250.00      7.02
300.00      11.43
360.00      18.19
420.00      26.37
500.00      38.71
600.00      54.66
720.00      72.00
860.00      86.44
1020.00     94.99
1220.00     98.51
1460.00     99.52
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 287.97 µm
Dv0.5 = 574.63 µm
Dv0.9 = 947.83 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Nu-Surf 80 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.10
100.00      0.26
120.00      0.59
150.00      1.36
180.00      2.50
210.00      4.04
250.00      6.70
300.00      11.05
360.00      17.77
420.00      25.93
500.00      38.21
600.00      54.01
720.00      71.04
860.00      85.22
1020.00     93.93
```

1220.00 98.03
1460.00 99.44
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 285.87 µm
Dv0.5 = 564.95 µm
Dv0.9 = 891.41 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Nu-Surf 80 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.18
100.00 0.35
120.00 0.69
150.00 1.48
180.00 2.63
210.00 4.16
250.00 6.83
300.00 11.25
360.00 18.14
420.00 26.55
500.00 39.28
600.00 55.79
720.00 73.80
860.00 88.43
1020.00 96.44
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 285.92 µm
Dv0.5 = 567.76 µm
Dv0.9 = 905.55 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal

```
 Adjuvant/ 10gals: Spectrum 5oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.18
100.00      0.34
120.00      0.68
150.00      1.45
180.00      2.59
210.00      4.13
250.00      6.82
300.00      11.25
360.00      18.13
420.00      26.49
500.00      39.04
600.00      55.22
720.00      72.83
860.00      87.53
1020.00     96.19
1220.00     99.41
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 286.68 µm
Dv0.5 = 565.81 µm
Dv0.9 = 901.29 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Spectrum 5oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
```

74.00 0.08
86.00 0.18
100.00 0.35
120.00 0.69
150.00 1.48
180.00 2.63
210.00 4.15
250.00 6.80
300.00 11.16
360.00 18.00
420.00 26.42
500.00 39.17
600.00 55.63
720.00 73.45
860.00 87.89
1020.00 96.07
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 285.43 µm
Dv0.5 = 563.62 µm
Dv0.9 = 880.91 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Spectrum 5oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.18
100.00 0.34
120.00 0.68
150.00 1.45
180.00 2.59
210.00 4.13
250.00 6.83
300.00 11.30
360.00 18.24
420.00 26.66
500.00 39.43
600.00 56.05

720.00 74.22
860.00 88.98
1020.00 96.79
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 277.20 µm
Dv0.5 = 545.30 µm
Dv0.9 = 856.56 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Spectrum 5oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.18
100.00 0.34
120.00 0.68
150.00 1.47
180.00 2.68
210.00 4.34
250.00 7.30
300.00 12.26
360.00 19.94
420.00 29.05
500.00 42.37
600.00 59.21
720.00 76.93
860.00 90.33
1020.00 97.03
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 283.78 µm
Dv0.5 = 553.65 µm

Dv0.9 = 858.45 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Spectrum 5oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.10
100.00	0.25
120.00	0.56
150.00	1.32
180.00	2.46
210.00	4.03
250.00	6.84
300.00	11.52
360.00	18.80
420.00	27.60
500.00	40.84
600.00	57.92
720.00	76.19
860.00	90.16
1020.00	97.07
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 287.56 µm
Dv0.5 = 552.77 µm
Dv0.9 = 856.04 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Spectrum 5oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00

```
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00      0.24
120.00      0.55
150.00      1.26
180.00      2.35
210.00      3.86
250.00      6.57
300.00      11.14
360.00      18.36
420.00      27.25
500.00      40.79
600.00      58.25
720.00      76.64
860.00      90.39
1020.00     97.15
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 292.75 µm
Dv0.5 = 568.54 µm
Dv0.9 = 901.25 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Strike Force 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00      0.23
120.00      0.51
150.00      1.19
180.00      2.23
210.00      3.67
250.00      6.27
300.00      10.63
360.00      17.48
```

```
420.00      25.86
500.00      38.61
600.00      55.23
720.00      73.34
860.00      87.91
1020.00     96.01
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 288.20 µm
Dv0.5 = 567.88 µm
Dv0.9 = 896.63 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Strike Force 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00      0.23
120.00      0.53
150.00      1.26
180.00      2.37
210.00      3.90
250.00      6.60
300.00      11.05
360.00      17.91
420.00      26.22
500.00      38.84
600.00      55.28
720.00      73.23
860.00      88.05
1020.00     96.58
1220.00     99.60
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00
```

Dv0.1 = 287.29 µm
Dv0.5 = 561.20 µm
Dv0.9 = 864.82 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Strike Force 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.09
100.00	0.23
120.00	0.53
150.00	1.24
180.00	2.32
210.00	3.84
250.00	6.57
300.00	11.17
360.00	18.30
420.00	26.88
500.00	39.76
600.00	56.49
720.00	74.88
860.00	89.77
1020.00	97.33
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 290.54 µm
Dv0.5 = 580.92 µm
Dv0.9 = 928.49 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Strike Force 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00

```
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.10
100.00      0.25
120.00      0.57
150.00      1.30
180.00      2.39
210.00      3.87
250.00      6.49
300.00      10.82
360.00      17.51
420.00      25.50
500.00      37.43
600.00      52.96
720.00      70.51
860.00      85.96
1020.00     95.40
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 290.66 µm
Dv0.5 = 583.52 µm
Dv0.9 = 938.36 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Strike Force 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00      0.25
120.00      0.56
150.00      1.29
180.00      2.39
210.00      3.88
```

```
250.00      6.50
300.00      10.80
360.00      17.40
420.00      25.30
500.00      37.13
600.00      52.54
720.00      69.88
860.00      85.29
1020.00     94.90
1220.00     98.85
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 298.97 µm
Dv0.5 = 591.48 µm
Dv0.9 = 945.11 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Strike Force 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00      0.21
120.00      0.48
150.00      1.13
180.00      2.13
210.00      3.52
250.00      5.99
300.00      10.08
360.00      16.43
420.00      24.11
500.00      35.83
600.00      51.32
720.00      68.95
860.00      84.66
1020.00     94.70
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
```

2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 265.14 µm
Dv0.5 = 523.36 µm
Dv0.9 = 841.44 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Verifact 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.10
86.00	0.23
100.00	0.44
120.00	0.87
150.00	1.83
180.00	3.24
210.00	5.11
250.00	8.37
300.00	13.74
360.00	22.01
420.00	31.81
500.00	45.97
600.00	63.24
720.00	79.93
860.00	91.54
1020.00	97.05
1220.00	98.99
1460.00	99.66
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 263.45 µm
Dv0.5 = 522.06 µm
Dv0.9 = 832.22 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Verifact 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

```
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.10
86.00 0.23
100.00      0.45
120.00      0.89
150.00      1.88
180.00      3.31
210.00      5.21
250.00      8.53
300.00      13.98
360.00      22.30
420.00      32.09
500.00      46.19
600.00      63.47
720.00      80.45
860.00      92.36
1020.00     97.82
1220.00     99.38
1460.00     99.73
1740.00     99.93
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 262.60 µm
Dv0.5 = 518.30 µm
Dv0.9 = 840.24 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Verifact 3.2oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.07
74.00 0.17
86.00 0.31
100.00      0.53
120.00      0.97
```

```
150.00      1.96
180.00      3.38
210.00      5.29
250.00      8.62
300.00      14.10
360.00      22.56
420.00      32.54
500.00      46.84
600.00      64.10
720.00      80.48
860.00      91.56
1020.00     96.70
1220.00     98.69
1460.00     99.51
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 258.17 µm
Dv0.5 = 502.39 µm
Dv0.9 = 809.63 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Verifact 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.06
74.00 0.17
86.00 0.30
100.00      0.52
120.00      0.96
150.00      1.96
180.00      3.46
210.00      5.48
250.00      9.04
300.00      14.93
360.00      24.00
420.00      34.60
500.00      49.58
600.00      67.26
720.00      83.42
860.00      93.70
1020.00     98.15
1220.00     100.00
```

```
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 250.97 µm
Dv0.5 = 492.48 µm
Dv0.9 = 786.35 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Verifact 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.07
74.00 0.17
86.00 0.32
100.00      0.56
120.00      1.04
150.00      2.15
180.00      3.81
210.00      6.02
250.00      9.88
300.00      16.15
360.00      25.57
420.00      36.34
500.00      51.42
600.00      69.19
720.00      85.35
860.00      95.17
1020.00     98.85
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 255.60 µm
Dv0.5 = 498.56 µm
Dv0.9 = 791.16 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Verifact 3.2oz/10gal
```

Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.06
74.00	0.16
86.00	0.30
100.00	0.52
120.00	0.97
150.00	2.00
180.00	3.54
210.00	5.63
250.00	9.32
300.00	15.39
360.00	24.60
420.00	35.25
500.00	50.27
600.00	68.18
720.00	84.77
860.00	95.06
1020.00	98.93
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 302.20 µm
Dv0.5 = 601.45 µm
Dv0.9 = 984.69 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Wetcit 3.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00

86.00 0.09
100.00 0.22
120.00 0.49
150.00 1.13
180.00 2.11
210.00 3.44
250.00 5.82
300.00 9.77
360.00 15.95
420.00 23.49
500.00 34.90
600.00 49.80
720.00 66.55
860.00 81.78
1020.00 92.33
1220.00 97.90
1460.00 99.59
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 308.83 µm
Dv0.5 = 622.74 µm
Dv0.9 = 990.16 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Wetcit 3.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00 0.21
120.00 0.47
150.00 1.07
180.00 1.99
210.00 3.24
250.00 5.46
300.00 9.15
360.00 14.91
420.00 21.89
500.00 32.55
600.00 46.81
720.00 63.62

```
860.00      80.16
1020.00     92.26
1220.00     98.29
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 315.82 µm
Dv0.5 = 626.95 µm
Dv0.9 = 973.37 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Wetcit 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.07
100.00      0.19
120.00      0.42
150.00      0.96
180.00      1.78
210.00      2.93
250.00      5.00
300.00      8.53
360.00      14.11
420.00      20.97
500.00      31.60
600.00      46.09
720.00      63.50
860.00      81.05
1020.00     93.68
1220.00     99.03
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 315.30 µm
Dv0.5 = 635.55 µm
Dv0.9 = 988.20 µm
```

```
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Wetcit 3.2oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00      0.19
120.00      0.44
150.00      1.01
180.00      1.86
210.00      3.03
250.00      5.11
300.00      8.60
360.00      14.09
420.00      20.82
500.00      31.16
600.00      45.06
720.00      61.74
860.00      79.07
1020.00     92.71
1220.00     99.10
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 310.82 µm
Dv0.5 = 632.34 µm
Dv0.9 = 1012.25 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Wetcit 3.2oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
```

```
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00      0.21
120.00      0.47
150.00      1.07
180.00      1.98
210.00      3.21
250.00      5.38
300.00      8.99
360.00      14.58
420.00      21.37
500.00      31.75
600.00      45.61
720.00      61.91
860.00      78.13
1020.00     90.60
1220.00     97.55
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 312.01 µm
Dv0.5 = 627.33 µm
Dv0.9 = 980.01 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Wetcit 3.2oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00      0.20
120.00      0.44
150.00      1.01
180.00      1.88
210.00      3.08
250.00      5.24
300.00      8.87
360.00      14.53
420.00      21.42
```

500.00	31.98
600.00	46.16
720.00	63.04
860.00	80.24
1020.00	93.25
1220.00	99.10
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 288.01 µm
Dv0.5 = 573.44 µm
Dv0.9 = 955.01 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Clarion 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.10
100.00	0.25
120.00	0.57
150.00	1.31
180.00	2.44
210.00	3.96
250.00	6.63
300.00	11.06
360.00	17.93
420.00	26.22
500.00	38.51
600.00	54.16
720.00	70.90
860.00	84.83
1020.00	93.54
1220.00	97.87
1460.00	99.44
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 286.04 µm
Dv0.5 = 563.70 µm
Dv0.9 = 906.41 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Clarion 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.08
86.00	0.18
100.00	0.34
120.00	0.66
150.00	1.42
180.00	2.55
210.00	4.08
250.00	6.77
300.00	11.25
360.00	18.25
420.00	26.77
500.00	39.57
600.00	55.95
720.00	73.43
860.00	87.63
1020.00	95.79
1220.00	98.99
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 274.77 µm
Dv0.5 = 553.56 µm
Dv0.9 = 900.04 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Clarion 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00

```
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.20
100.00      0.37
120.00      0.73
150.00      1.57
180.00      2.83
210.00      4.54
250.00      7.55
300.00      12.50
360.00      20.02
420.00      28.81
500.00      41.49
600.00      57.38
720.00      74.26
860.00      88.00
1020.00     96.00
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 275.43 µm
Dv0.5 = 543.40 µm
Dv0.9 = 847.13 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Clarion 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.19
100.00      0.37
120.00      0.72
150.00      1.55
180.00      2.79
210.00      4.48
250.00      7.47
```

```
300.00      12.45
360.00      20.12
420.00      29.24
500.00      42.63
600.00      59.61
720.00      77.60
860.00      91.26
1020.00     97.72
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 283.20 µm
Dv0.5 = 563.19 µm
Dv0.9 = 924.51 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Clarion 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.18
100.00      0.34
120.00      0.67
150.00      1.43
180.00      2.58
210.00      4.15
250.00      6.94
300.00      11.55
360.00      18.66
420.00      27.19
500.00      39.83
600.00      55.93
720.00      73.01
860.00      86.76
1020.00     94.79
1220.00     98.37
1460.00     99.57
1740.00     100.00
2060.00     100.00
2460.00     100.00
```

2940.00 100.00
3500.00 100.00

Dv0.1 = 279.31 µm
Dv0.5 = 547.46 µm
Dv0.9 = 853.08 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Clarion 3.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.08
86.00	0.18
100.00	0.35
120.00	0.69
150.00	1.48
180.00	2.67
210.00	4.29
250.00	7.17
300.00	12.00
360.00	19.55
420.00	28.62
500.00	41.98
600.00	58.88
720.00	76.83
860.00	90.69
1020.00	97.45
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 330.66 µm
Dv0.5 = 670.11 µm
Dv0.9 = 1083.89 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00

```
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.10
120.00      0.29
150.00      0.76
180.00      1.47
210.00      2.47
250.00      4.31
300.00      7.46
360.00      12.43
420.00      18.51
500.00      27.90
600.00      40.79
720.00      56.55
860.00      73.19
1020.00     87.14
1220.00     96.10
1460.00     99.19
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 330.33 µm
Dv0.5 = 682.11 µm
Dv0.9 = 1099.44 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.10
120.00      0.29
150.00      0.75
```

```
180.00      1.45
210.00      2.45
250.00      4.30
300.00      7.47
360.00      12.47
420.00      18.47
500.00      27.52
600.00      39.76
720.00      54.73
860.00      71.10
1020.00     85.96
1220.00     96.14
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 330.03 µm
Dv0.5 = 675.11 µm
Dv0.9 = 1079.46 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.10
120.00      0.29
150.00      0.75
180.00      1.47
210.00      2.47
250.00      4.31
300.00      7.48
360.00      12.51
420.00      18.61
500.00      27.88
600.00      40.42
720.00      55.73
860.00      72.38
1020.00     87.15
1220.00     96.73
1460.00     100.00
```

1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 344.18 µm
Dv0.5 = 706.19 µm
Dv0.9 = 1132.81 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00 0.09
120.00 0.28
150.00 0.71
180.00 1.35
210.00 2.24
250.00 3.88
300.00 6.69
360.00 11.19
420.00 16.73
500.00 25.32
600.00 37.12
720.00 51.68
860.00 67.91
1020.00 83.45
1220.00 95.06
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 339.92 µm
Dv0.5 = 697.77 µm
Dv0.9 = 1099.85 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
Nozzle: TTI11005

```
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.09
120.00      0.28
150.00      0.73
180.00      1.40
210.00      2.34
250.00      4.03
300.00      6.94
360.00      11.54
420.00      17.16
500.00      25.82
600.00      37.79
720.00      52.78
860.00      69.71
1020.00     85.71
1220.00     96.45
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 339.23 µm
Dv0.5 = 694.50 µm
Dv0.9 = 1097.29 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Class Act Ridion 12.8oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
```

```
100.00      0.09
120.00      0.28
150.00      0.72
180.00      1.38
210.00      2.31
250.00      4.01
300.00      6.95
360.00      11.61
420.00      17.31
500.00      26.09
600.00      38.18
720.00      53.19
860.00      70.05
1020.00     85.91
1220.00     96.49
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 307.77 µm
Dv0.5 = 610.40 µm
Dv0.9 = 988.50 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00      0.24
120.00      0.52
150.00      1.15
180.00      2.07
210.00      3.30
250.00      5.50
300.00      9.23
360.00      15.14
420.00      22.42
500.00      33.62
600.00      48.52
720.00      65.61
860.00      81.32
```

1020.00 92.13
1220.00 97.77
1460.00 99.57
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 319.02 µm
Dv0.5 = 617.78 µm
Dv0.9 = 988.67 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00 0.20
120.00 0.43
150.00 0.97
180.00 1.76
210.00 2.84
250.00 4.82
300.00 8.23
360.00 13.81
420.00 20.92
500.00 32.17
600.00 47.39
720.00 65.01
860.00 81.23
1020.00 92.13
1220.00 97.29
1460.00 98.81
1740.00 99.51
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 308.85 µm
Dv0.5 = 605.87 µm
Dv0.9 = 961.45 µm
Study: BASF

A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.09
100.00	0.22
120.00	0.49
150.00	1.10
180.00	1.99
210.00	3.21
250.00	5.40
300.00	9.12
360.00	15.08
420.00	22.48
500.00	33.90
600.00	49.14
720.00	66.77
860.00	83.17
1020.00	93.94
1220.00	98.64
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 302.48 µm
Dv0.5 = 588.57 µm
Dv0.9 = 931.80 µm

Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00

62.00 0.00
74.00 0.00
86.00 0.09
100.00 0.23
120.00 0.50
150.00 1.13
180.00 2.07
210.00 3.37
250.00 5.72
300.00 9.74
360.00 16.10
420.00 23.93
500.00 35.92
600.00 51.82
720.00 69.89
860.00 85.69
1020.00 95.29
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 302.60 µm
Dv0.5 = 584.66 µm
Dv0.9 = 878.46 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00 0.24
120.00 0.53
150.00 1.18
180.00 2.13
210.00 3.42
250.00 5.75
300.00 9.72
360.00 16.09
420.00 23.98
500.00 36.17

```
600.00      52.50
720.00      71.61
860.00      88.97
1020.00     97.94
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 303.37 µm
Dv0.5 = 586.92 µm
Dv0.9 = 912.35 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Intact Xtra 19.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00      0.23
120.00      0.51
150.00      1.14
180.00      2.08
210.00      3.36
250.00      5.68
300.00      9.64
360.00      15.98
420.00      23.83
500.00      35.95
600.00      52.11
720.00      70.66
860.00      86.98
1020.00     96.20
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 291.01 µm
```

```
Dv0.5 = 573.63 µm
Dv0.9 = 916.64 µm
 Study: BASF
 A.I. Product: Water
 Adjuvant/ 10gals:
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00      0.24
120.00      0.53
150.00      1.21
180.00      2.25
210.00      3.70
250.00      6.34
300.00      10.80
360.00      17.74
420.00      26.01
500.00      38.30
600.00      54.19
720.00      71.83
860.00      86.86
1020.00     95.74
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 297.91 µm
Dv0.5 = 599.34 µm
Dv0.9 = 946.50 µm
 Study: BASF
 A.I. Product: Water
 Adjuvant/ 10gals:
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
```

36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00 0.23
120.00 0.52
150.00 1.18
180.00 2.19
210.00 3.58
250.00 6.06
300.00 10.17
360.00 16.48
420.00 24.01
500.00 35.26
600.00 50.10
720.00 67.49
860.00 84.09
1020.00 95.02
1220.00 99.27
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 291.38 µm
Dv0.5 = 583.22 µm
Dv0.9 = 908.52 µm
Study: BASF
A.I. Product: Water
Adjuvant/ 10gals:
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.10
100.00 0.25
120.00 0.55
150.00 1.25
180.00 2.31
210.00 3.78
250.00 6.41
300.00 10.75

360.00 17.28
420.00 24.98
500.00 36.71
600.00 52.68
720.00 71.14
860.00 87.24
1020.00 96.34
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 326.28 µm
Dv0.5 = 641.91 µm
Dv0.9 = 1001.31 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: PinPoint Plus 16oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: 8m/s
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00 0.21
120.00 0.44
150.00 0.95
180.00 1.68
210.00 2.67
250.00 4.50
300.00 7.71
360.00 12.94
420.00 19.51
500.00 29.86
600.00 44.06
720.00 61.06
860.00 78.32
1020.00 91.55
1220.00 98.11
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00

3500.00 100.00

Dv0.1 = 331.26 µm
Dv0.5 = 648.27 µm
Dv0.9 = 1023.45 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: PinPoint Plus 16oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: 8m/s

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.00
100.00	0.10
120.00	0.29
150.00	0.74
180.00	1.43
210.00	2.42
250.00	4.24
300.00	7.38
360.00	12.41
420.00	18.73
500.00	28.83
600.00	43.04
720.00	60.35
860.00	77.49
1020.00	89.89
1220.00	96.47
1460.00	98.86
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 335.47 µm
Dv0.5 = 652.49 µm
Dv0.9 = 1029.30 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: PinPoint Plus 16oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: 8m/s

0.50	0.00
18.00	0.00

```
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.10
120.00      0.29
150.00      0.71
180.00      1.36
210.00      2.28
250.00      3.99
300.00      7.02
360.00      12.06
420.00      18.56
500.00      28.79
600.00      42.70
720.00      59.39
860.00      76.36
1020.00     89.64
1220.00     97.28
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 355.89 µm
Dv0.5 = 737.66 µm
Dv0.9 = 1236.43 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: PinPoint Plus 16oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: 8m/s
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.09
120.00      0.26
150.00      0.65
180.00      1.24
```

```
210.00      2.08
250.00      3.60
300.00      6.19
360.00      10.28
420.00      15.30
500.00      23.15
600.00      34.17
720.00      48.05
860.00      63.52
1020.00     77.86
1220.00     89.51
1460.00     96.63
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 355.81 µm
Dv0.5 = 717.67 µm
Dv0.9 = 1124.42 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: PinPoint Plus 16oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: 8m/s
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.08
120.00      0.25
150.00      0.64
180.00      1.23
210.00      2.06
250.00      3.58
300.00      6.16
360.00      10.29
420.00      15.44
500.00      23.64
600.00      35.35
720.00      50.29
860.00      67.34
1020.00     83.77
1220.00     95.70
1460.00     100.00
1740.00     100.00
```

```
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 360.81 µm
Dv0.5 = 733.80 µm
Dv0.9 = 1187.29 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: PinPoint Plus 16oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: 8m/s
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.08
120.00      0.24
150.00      0.60
180.00      1.16
210.00      1.95
250.00      3.41
300.00      5.93
360.00      9.93
420.00      14.91
500.00      22.82
600.00      34.10
720.00      48.41
860.00      64.53
1020.00     79.81
1220.00     91.99
1460.00     98.34
1740.00     99.96
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 311.35 µm
Dv0.5 = 605.99 µm
Dv0.9 = 971.42 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: DC-4 6oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
```

Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.07
100.00 0.19
120.00 0.43
150.00 1.01
180.00 1.89
210.00 3.11
250.00 5.28
300.00 8.91
360.00 14.66
420.00 21.91
500.00 33.43
600.00 49.10
720.00 67.07
860.00 82.93
1020.00 93.08
1220.00 98.02
1460.00 99.61
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 296.00 µm
Dv0.5 = 588.29 µm
Dv0.9 = 935.01 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: DC-4 6oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00 0.24

```
120.00      0.53
150.00      1.22
180.00      2.27
210.00      3.71
250.00      6.23
300.00      10.33
360.00      16.63
420.00      24.30
500.00      36.11
600.00      51.84
720.00      69.76
860.00      85.49
1020.00     95.11
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 307.20 µm
Dv0.5 = 606.28 µm
Dv0.9 = 972.16 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: DC-4 6oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00      0.21
120.00      0.47
150.00      1.09
180.00      2.02
210.00      3.28
250.00      5.52
300.00      9.29
360.00      15.21
420.00      22.52
500.00      33.85
600.00      49.08
720.00      66.68
860.00      82.68
1020.00     93.12
```

1220.00 97.90
1460.00 99.34
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 300.50 µm
Dv0.5 = 587.11 µm
Dv0.9 = 932.83 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: DC-4 6oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.08
100.00 0.21
120.00 0.48
150.00 1.10
180.00 2.06
210.00 3.40
250.00 5.82
300.00 9.95
360.00 16.43
420.00 24.30
500.00 36.26
600.00 52.03
720.00 69.93
860.00 85.63
1020.00 95.23
1220.00 100.00
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 296.22 µm
Dv0.5 = 576.00 µm
Dv0.9 = 920.10 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal

```
 Adjuvant/ 10gals: DC-4 6oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.09
100.00      0.22
120.00      0.50
150.00      1.16
180.00      2.16
210.00      3.56
250.00      6.06
300.00      10.32
360.00      17.04
420.00      25.25
500.00      37.67
600.00      53.89
720.00      71.74
860.00      86.73
1020.00     95.44
1220.00     98.94
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 297.90 µm
Dv0.5 = 585.18 µm
Dv0.9 = 944.31 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: DC-4 6oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
```

74.00 0.00
86.00 0.09
100.00 0.23
120.00 0.51
150.00 1.16
180.00 2.16
210.00 3.54
250.00 6.02
300.00 10.17
360.00 16.66
420.00 24.54
500.00 36.53
600.00 52.34
720.00 70.00
860.00 85.15
1020.00 94.35
1220.00 98.37
1460.00 99.57
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 324.90 µm
Dv0.5 = 675.57 µm
Dv0.9 = 1175.20 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Iconic 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.07
100.00 0.17
120.00 0.38
150.00 0.88
180.00 1.64
210.00 2.72
250.00 4.65
300.00 7.91
360.00 12.95
420.00 19.04
500.00 28.30
600.00 40.71

720.00 55.46
860.00 70.42
1020.00 82.83
1220.00 92.07
1460.00 97.40
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 331.17 µm
Dv0.5 = 681.45 µm
Dv0.9 = 1104.52 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Iconic 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00 0.09
120.00 0.28
150.00 0.73
180.00 1.43
210.00 2.43
250.00 4.27
300.00 7.42
360.00 12.38
420.00 18.38
500.00 27.50
600.00 39.83
720.00 54.82
860.00 71.06
1020.00 85.69
1220.00 95.89
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 336.97 µm
Dv0.5 = 714.18 µm

Dv0.9 = 1171.18 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Iconic 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.00
100.00	0.10
120.00	0.29
150.00	0.75
180.00	1.47
210.00	2.46
250.00	4.24
300.00	7.20
360.00	11.74
420.00	17.16
500.00	25.40
600.00	36.67
720.00	50.68
860.00	66.30
1020.00	81.06
1220.00	92.89
1460.00	98.61
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 332.15 µm
Dv0.5 = 711.48 µm
Dv0.9 = 1248.47 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Iconic 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00

```
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.09
120.00      0.29
150.00      0.75
180.00      1.47
210.00      2.49
250.00      4.33
300.00      7.43
360.00      12.23
420.00      17.92
500.00      26.38
600.00      37.56
720.00      50.95
860.00      65.35
1020.00     78.54
1220.00     89.27
1460.00     95.46
1740.00     97.97
2060.00     98.81
2460.00     99.20
2940.00     99.62
3500.00     100.00

Dv0.1 = 325.09 µm
Dv0.5 = 700.28 µm
Dv0.9 = 1190.03 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Iconic 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.06
100.00      0.17
120.00      0.37
150.00      0.87
180.00      1.64
210.00      2.72
250.00      4.68
300.00      7.94
360.00      12.86
```

```
420.00      18.61
500.00      27.14
600.00      38.51
720.00      52.26
860.00      67.11
1020.00     80.71
1220.00     91.64
1460.00     97.63
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 338.93 µm
Dv0.5 = 722.57 µm
Dv0.9 = 1202.72 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Iconic 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.10
120.00      0.29
150.00      0.75
180.00      1.45
210.00      2.43
250.00      4.18
300.00      7.10
360.00      11.57
420.00      16.88
500.00      24.94
600.00      35.99
720.00      49.72
860.00      64.97
1020.00     79.30
1220.00     91.01
1460.00     97.52
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00
```

Dv0.1 = 370.52 µm
Dv0.5 = 753.00 µm
Dv0.9 = 1214.90 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Kabak Plus 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.00
100.00	0.08
120.00	0.25
150.00	0.63
180.00	1.19
210.00	1.96
250.00	3.32
300.00	5.60
360.00	9.20
420.00	13.76
500.00	21.19
600.00	32.09
720.00	46.20
860.00	62.31
1020.00	77.74
1220.00	90.32
1460.00	97.41
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 364.05 µm
Dv0.5 = 745.23 µm
Dv0.9 = 1179.14 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Kabak Plus 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00

```
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.09
120.00      0.28
150.00      0.71
180.00      1.33
210.00      2.17
250.00      3.62
300.00      6.00
360.00      9.69
420.00      14.31
500.00      21.85
600.00      32.88
720.00      47.07
860.00      63.32
1020.00     79.34
1220.00     92.74
1460.00     99.07
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 368.91 µm
Dv0.5 = 753.70 µm
Dv0.9 = 1184.56 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Kabak Plus 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.09
120.00      0.28
150.00      0.70
180.00      1.30
210.00      2.11
```

```
250.00      3.51
300.00      5.79
360.00      9.34
420.00      13.79
500.00      21.09
600.00      31.90
720.00      46.05
860.00      62.46
1020.00     78.74
1220.00     92.42
1460.00     98.99
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 409.72 µm
Dv0.5 = 830.13 µm
Dv0.9 = 1373.73 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Kabak Plus 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.07
120.00      0.20
150.00      0.51
180.00      0.96
210.00      1.56
250.00      2.60
300.00      4.31
360.00      7.05
420.00      10.61
500.00      16.65
600.00      25.92
720.00      38.39
860.00      53.15
1020.00     68.38
1220.00     82.93
1460.00     93.97
1740.00     100.00
2060.00     100.00
```

2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 404.12 µm
Dv0.5 = 815.33 µm
Dv0.9 = 1363.05 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Kabak Plus 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00 0.06
120.00 0.19
150.00 0.49
180.00 0.93
210.00 1.53
250.00 2.60
300.00 4.38
360.00 7.26
420.00 10.99
500.00 17.26
600.00 26.83
720.00 39.67
860.00 54.84
1020.00 70.31
1220.00 84.36
1460.00 93.82
1740.00 98.33
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 391.85 µm
Dv0.5 = 798.48 µm
Dv0.9 = 1274.29 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Kabak Plus 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

```
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.08
120.00      0.23
150.00      0.56
180.00      1.06
210.00      1.74
250.00      2.93
300.00      4.88
360.00      7.93
420.00      11.83
500.00      18.35
600.00      28.23
720.00      41.34
860.00      56.79
1020.00     72.86
1220.00     87.88
1460.00     97.26
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 347.77 µm
Dv0.5 = 755.65 µm
Dv0.9 = 1320.81 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Iconic 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.08
120.00      0.25
```

150.00	0.65
180.00	1.28
210.00	2.16
250.00	3.78
300.00	6.55
360.00	10.88
420.00	16.08
500.00	23.85
600.00	34.11
720.00	46.51
860.00	60.21
1020.00	73.64
1220.00	86.15
1460.00	95.31
1740.00	99.49
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 355.30 µm
Dv0.5 = 741.22 µm
Dv0.9 = 1204.50 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Iconic 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.00
100.00	0.08
120.00	0.23
150.00	0.61
180.00	1.19
210.00	2.02
250.00	3.54
300.00	6.15
360.00	10.33
420.00	15.49
500.00	23.49
600.00	34.40
720.00	47.74
860.00	62.62
1020.00	77.51
1220.00	91.05

```
1460.00     98.53
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 354.69 µm
Dv0.5 = 743.49 µm
Dv0.9 = 1203.20 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Iconic 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.08
120.00      0.25
150.00      0.64
180.00      1.23
210.00      2.05
250.00      3.55
300.00      6.14
360.00      10.37
420.00      15.71
500.00      23.83
600.00      34.53
720.00      47.52
860.00      62.29
1020.00     77.38
1220.00     91.16
1460.00     98.61
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 341.87 µm
Dv0.5 = 755.69 µm
Dv0.9 = 1380.09 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Spread-R 6.4oz/10gal
```

```
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.09
120.00      0.26
150.00      0.68
180.00      1.32
210.00      2.24
250.00      3.94
300.00      6.85
360.00      11.37
420.00      16.71
500.00      24.55
600.00      34.72
720.00      46.72
860.00      59.58
1020.00     72.01
1220.00     83.81
1460.00     93.09
1740.00     98.43
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 338.49 µm
Dv0.5 = 746.25 µm
Dv0.9 = 1376.75 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Spread-R 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
```

86.00 0.00
100.00 0.10
120.00 0.29
150.00 0.75
180.00 1.45
210.00 2.42
250.00 4.17
300.00 7.11
360.00 11.62
420.00 16.95
500.00 24.85
600.00 35.22
720.00 47.53
860.00 60.68
1020.00 73.12
1220.00 84.48
1460.00 92.93
1740.00 97.83
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 336.86 µm
Dv0.5 = 741.56 µm
Dv0.9 = 1260.23 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Spread-R 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.07
100.00 0.17
120.00 0.38
150.00 0.88
180.00 1.62
210.00 2.61
250.00 4.36
300.00 7.26
360.00 11.72
420.00 17.02
500.00 24.92
600.00 35.34
720.00 47.86

```
860.00      61.74
1020.00     75.65
1220.00     88.61
1460.00     96.91
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 337.79 µm
Dv0.5 = 746.95 µm
Dv0.9 = 1312.77 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Spread-R 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.10
120.00      0.31
150.00      0.79
180.00      1.52
210.00      2.52
250.00      4.29
300.00      7.21
360.00      11.64
420.00      16.83
500.00      24.54
600.00      34.81
720.00      47.33
860.00      61.21
1020.00     74.63
1220.00     86.72
1460.00     95.20
1740.00     99.14
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 335.98 µm
Dv0.5 = 738.94 µm
Dv0.9 = 1244.06 µm
```

```
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Spread-R 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00      0.10
120.00      0.30
150.00      0.79
180.00      1.53
210.00      2.54
250.00      4.34
300.00      7.31
360.00      11.80
420.00      17.05
500.00      24.84
600.00      35.26
720.00      48.05
860.00      62.44
1020.00     76.61
1220.00     89.20
1460.00     97.20
1740.00     99.92
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 338.49 µm
Dv0.5 = 734.31 µm
Dv0.9 = 1210.05 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Spread-R 6.4oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
```

52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00 0.10
120.00 0.30
150.00 0.77
180.00 1.49
210.00 2.49
250.00 4.25
300.00 7.17
360.00 11.58
420.00 16.81
500.00 24.69
600.00 35.36
720.00 48.49
860.00 63.23
1020.00 77.81
1220.00 90.64
1460.00 97.87
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 278.62 µm
Dv0.5 = 544.74 µm
Dv0.9 = 859.31 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.18
100.00 0.35
120.00 0.68
150.00 1.47
180.00 2.65
210.00 4.28
250.00 7.19
300.00 12.10
360.00 19.77
420.00 28.95

500.00	42.41
600.00	59.37
720.00	76.93
860.00	90.06
1020.00	96.85
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 279.23 µm
Dv0.5 = 563.58 µm
Dv0.9 = 969.46 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.08
86.00	0.20
100.00	0.38
120.00	0.76
150.00	1.62
180.00	2.85
210.00	4.48
250.00	7.30
300.00	11.92
360.00	19.00
420.00	27.46
500.00	39.95
600.00	55.76
720.00	72.13
860.00	84.69
1020.00	92.45
1220.00	97.22
1460.00	99.36
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 288.34 µm
Dv0.5 = 554.83 µm
Dv0.9 = 862.91 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.10
100.00	0.24
120.00	0.55
150.00	1.28
180.00	2.37
210.00	3.86
250.00	6.53
300.00	11.05
360.00	18.26
420.00	27.14
500.00	40.55
600.00	57.79
720.00	76.01
860.00	89.87
1020.00	96.90
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 276.53 µm
Dv0.5 = 567.08 µm
Dv0.9 = 963.54 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00

```
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.09
86.00 0.21
100.00      0.40
120.00      0.78
150.00      1.64
180.00      2.91
210.00      4.60
250.00      7.51
300.00      12.20
360.00      19.29
420.00      27.64
500.00      39.80
600.00      55.01
720.00      70.94
860.00      84.25
1020.00     93.13
1220.00     97.77
1460.00     99.43
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 264.60 µm
Dv0.5 = 542.25 µm
Dv0.9 = 859.43 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
 Nozzle: TTI11005
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.07
52.00 0.17
62.00 0.36
74.00 0.63
86.00 0.91
100.00      1.20
120.00      1.57
150.00      2.21
180.00      3.39
210.00      5.26
250.00      8.52
```

300.00	13.59
360.00	21.14
420.00	30.04
500.00	43.08
600.00	59.47
720.00	76.75
860.00	90.05
1020.00	96.91
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 273.28 µm
Dv0.5 = 545.73 µm
Dv0.9 = 858.51 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Cornbelt Locktite 6.4oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.09
86.00	0.21
100.00	0.40
120.00	0.77
150.00	1.65
180.00	2.95
210.00	4.69
250.00	7.71
300.00	12.63
360.00	20.17
420.00	29.17
500.00	42.38
600.00	59.04
720.00	76.57
860.00	90.14
1020.00	97.13
1220.00	100.00
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00

2940.00 100.00
3500.00 100.00

Dv0.1 = 289.11 µm
Dv0.5 = 578.99 µm
Dv0.9 = 925.48 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Tri-ALL 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.08
86.00 0.19
100.00 0.35
120.00 0.67
150.00 1.42
180.00 2.54
210.00 4.05
250.00 6.67
300.00 10.93
360.00 17.43
420.00 25.34
500.00 37.44
600.00 53.34
720.00 70.91
860.00 86.09
1020.00 95.64
1220.00 99.39
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 304.26 µm
Dv0.5 = 607.73 µm
Dv0.9 = 993.57 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Tri-ALL 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00

18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.09
86.00 0.19
100.00 0.35
120.00 0.64
150.00 1.28
180.00 2.23
210.00 3.53
250.00 5.82
300.00 9.59
360.00 15.42
420.00 22.58
500.00 33.68
600.00 48.88
720.00 66.31
860.00 81.73
1020.00 91.64
1220.00 96.78
1460.00 98.98
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 300.90 µm
Dv0.5 = 596.77 µm
Dv0.9 = 949.56 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Tri-ALL 3.2oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.09
74.00 0.19
86.00 0.30
100.00 0.43
120.00 0.68
150.00 1.28

180.00	2.28
210.00	3.66
250.00	6.03
300.00	9.91
360.00	15.96
420.00	23.43
500.00	35.02
600.00	50.50
720.00	68.30
860.00	84.37
1020.00	94.43
1220.00	98.72
1460.00	100.00
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 283.22 µm
Dv0.5 = 566.67 µm
Dv0.9 = 901.07 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Tri-ALL 3.2oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.08
86.00	0.18
100.00	0.34
120.00	0.66
150.00	1.42
180.00	2.58
210.00	4.16
250.00	6.95
300.00	11.54
360.00	18.54
420.00	26.87
500.00	39.28
600.00	55.36
720.00	73.04
860.00	87.81
1020.00	96.33
1220.00	99.41
1460.00	100.00

```
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 289.23 µm
Dv0.5 = 571.43 µm
Dv0.9 = 891.16 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Tri-ALL 3.2oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.10
100.00      0.26
120.00      0.58
150.00      1.32
180.00      2.43
210.00      3.94
250.00      6.59
300.00      10.94
360.00      17.60
420.00      25.67
500.00      38.10
600.00      54.76
720.00      73.25
860.00      88.40
1020.00     96.62
1220.00     100.00
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 284.17 µm
Dv0.5 = 577.63 µm
Dv0.9 = 916.39 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Tri-ALL 3.2oz/10gal
 Nozzle: TTI11004
```

```
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.07
74.00 0.18
86.00 0.32
100.00      0.53
120.00      0.91
150.00      1.70
180.00      2.84
210.00      4.35
250.00      6.99
300.00      11.39
360.00      18.26
420.00      26.39
500.00      38.14
600.00      53.42
720.00      71.18
860.00      86.75
1020.00     95.96
1220.00     99.45
1460.00     100.00
1740.00     100.00
2060.00     100.00
2460.00     100.00
2940.00     100.00
3500.00     100.00

Dv0.1 = 342.78 µm
Dv0.5 = 716.11 µm
Dv0.9 = 1239.67 µm
 Study: BASF
 A.I. Product: Engenia 25.6oz/10gal
 Adjuvant/ 10gals: Vertex 1.6oz/10gal
 Nozzle: TTI11004
 Pressure: 4 bar
 Wind speed: Idle
0.50  0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
```

100.00	0.08
120.00	0.26
150.00	0.66
180.00	1.30
210.00	2.22
250.00	3.91
300.00	6.79
360.00	11.29
420.00	16.76
500.00	25.17
600.00	36.60
720.00	50.45
860.00	65.13
1020.00	78.35
1220.00	89.41
1460.00	96.60
1740.00	100.00
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 343.11 µm
Dv0.5 = 714.26 µm
Dv0.9 = 1155.73 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Vertex 1.6oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.00
100.00	0.09
120.00	0.28
150.00	0.71
180.00	1.39
210.00	2.32
250.00	4.01
300.00	6.85
360.00	11.24
420.00	16.57
500.00	24.88
600.00	36.42
720.00	50.68
860.00	66.42

1020.00 81.57
1220.00 93.99
1460.00 100.00
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 341.91 µm
Dv0.5 = 722.02 µm
Dv0.9 = 1193.71 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Vertex 1.6oz/10gal
Nozzle: TTI11004
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00 0.09
120.00 0.28
150.00 0.72
180.00 1.39
210.00 2.33
250.00 4.03
300.00 6.89
360.00 11.34
420.00 16.69
500.00 24.85
600.00 36.01
720.00 49.78
860.00 65.06
1020.00 79.59
1220.00 91.58
1460.00 97.92
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 360.68 µm
Dv0.5 = 764.27 µm
Dv0.9 = 1318.30 µm
Study: BASF

A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Vertex 1.6oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00
62.00	0.00
74.00	0.00
86.00	0.00
100.00	0.08
120.00	0.25
150.00	0.64
180.00	1.23
210.00	2.05
250.00	3.53
300.00	6.02
360.00	9.95
420.00	14.74
500.00	22.19
600.00	32.53
720.00	45.42
860.00	59.90
1020.00	74.02
1220.00	86.53
1460.00	95.00
1740.00	98.98
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Dv0.1 = 356.74 µm
Dv0.5 = 746.97 µm
Dv0.9 = 1211.46 µm

Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Vertex 1.6oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle

0.50	0.00
18.00	0.00
22.00	0.00
26.00	0.00
30.00	0.00
36.00	0.00
44.00	0.00
52.00	0.00

62.00 0.00
74.00 0.00
86.00 0.00
100.00 0.09
120.00 0.26
150.00 0.66
180.00 1.27
210.00 2.11
250.00 3.62
300.00 6.19
360.00 10.22
420.00 15.18
500.00 22.92
600.00 33.68
720.00 47.08
860.00 62.22
1020.00 77.26
1220.00 90.57
1460.00 97.96
1740.00 100.00
2060.00 100.00
2460.00 100.00
2940.00 100.00
3500.00 100.00

Dv0.1 = 373.85 µm
Dv0.5 = 759.25 µm
Dv0.9 = 1349.56 µm
Study: BASF
A.I. Product: Engenia 25.6oz/10gal
Adjuvant/ 10gals: Vertex 1.6oz/10gal
Nozzle: TTI11005
Pressure: 4 bar
Wind speed: Idle
0.50 0.00
18.00 0.00
22.00 0.00
26.00 0.00
30.00 0.00
36.00 0.00
44.00 0.00
52.00 0.00
62.00 0.00
74.00 0.00
86.00 0.00
100.00 0.07
120.00 0.21
150.00 0.57
180.00 1.12
210.00 1.88
250.00 3.24
300.00 5.46
360.00 8.95
420.00 13.49
500.00 21.17

600.00	32.42
720.00	46.05
860.00	60.14
1020.00	73.18
1220.00	85.16
1460.00	94.12
1740.00	98.86
2060.00	100.00
2460.00	100.00
2940.00	100.00
3500.00	100.00

Appendix 2

Protocol

BASF Corporation

Agricultural Products Division RTP, NC 27709

The Chemical Company

P. O. Box 13528
Research Triangle Park, North Carolina 27709

Study Title:

Wind Tunnel Particle Size Analysis of Various Nozzles and Adjuvants for BAS183 09 H

FIELD PHASE TQAP

Data Requirement:

U.S. EPA Generic Verification Protocol
for Testing Pesticide Application Spray Drift Reduction Technologies
for Row and Field Crops

Principal Investigator:

Andrew Hewitt, Queensland University

Proposed Initiation Date:

November 15, 2015

Proposed Completion Date:

December 15, 2015

Study Number

819164

This Protocol Consists of 6 Pages.

Wind Tunnel Particle Size Analysis of Various Nozzles and Adjuvants for BAS183 09 H

Approved:

5-26-16

Sponsor / Submitter **Date**
Andrew Goetz, Ph.D.
BASF Corporation
Crop Protection
Research Triangle Park, NC

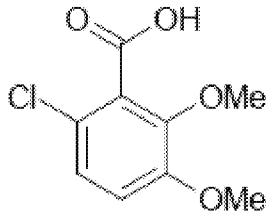
5/26/16

Study Director **Date**
Scott Jackson, Ph.D.
BASF Corporation
Crop Protection
Research Triangle Park, NC

Study Purpose The goal of this study is to determine the deposition of a dicamba containing formulation in combination with various nozzles and adjuvants utilizing EPA's DRT protocol.

1. **Compound Information**

   A. Compound Structure:



   B. Chemical Name: "salts" of 3,6-dichloro-o-anisic acid

   C. Common Name: dicamba

   D. Experimental Name: BAS 183 ..09 H

   E. CAS Number: 104040-79-1

Study Director:
Dr. Scott Jackson
BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709-3528
(919) 547-2349

Field Principal Investigator:
Dr. Andrew Hewitt
The University of Queensland
Gatton, QLD 4343
Australia

Field Testing Facility
Dr. Andrew Hewitt
The University of Queensland
Gatton, QLD 4343
Australia

Study Treatments

Multiple nozzles with the tank mix products and rates as indicated in Appendix I.

Measurements

The following measurement are required as part of the DRT protocol process and need to be measured and provided as part of this study.

1) Calculated DV10, DV50, and DV90
2) 30 or more bins regardless of particle presence. Suggested bins are as follows; 18, 22, 26, 30, 36, 44, 52, 62, 74, 86, 100, 120, 150, 180, 210, 250, 300, 360, 420, 500, 600, 720, 860, 1020, 1220, 1460, 1740, 2060, 2460, 2940, and 3500 measured all in um.
3) Tunnel Wind Speed
4) Air temperature
5) Relative Humidity
6) Spray Pressure
7) Spray Material Temperature
8) Nozzle height above wind tunnel floor

Tunnel/Laser Performance standards

According to the DRT protocol, a minimum of three replicates shall be made per treatment. However this is a minimum number since the performance specifications in the DRT protocol must be met.

Reporting

A short report must be made reporting the information required in this TQAP. Additionally any data analysis including mean separation techniques should be described.

Tank Mixing

Distributor	Dicamba Formulation	Adjuvant Name	GPA	Engenia Rate (fl oz/A)	Adjuvant Rate (fl oz/A)	Nozzle
Meherrin	Engenia	Pinpoint Plus (725A-T)	10	25.6	16	TTI11004
Dune	Engenia	Clarion	10	25.6	3.2	TTI11004
WinField	Engenia	Class Act Ridion	10	25.6	12.8	TTI11004
CNI	Engenia	DC-4	10	25.6	6	TTI11004
US	Engenia	Iconic	10	25.6	6.4	TTI11004
Simplot	Engenia	Intact Xtra	10	25.6	19.2	TTI11004
Kova	Engenia	Kabak Plus	10	25.6	6.4	TTI11004
Van Diest	Engenia	Cornbelt Locktite	10	25.6	6.4	TTI11004
Carolina Eastern	Engenia	Nu-Surf 80	10	25.6	6.4	TTI11004
Coastal	Engenia	Spectrum	10	25.6	5	TTI11004
Diamond R	Engenia	Spread-R	10	25.6	6.4	TTI11004
CPS	Engenia	Strike Force	10	25.6	6.4	TTI11004
Heartland	Engenia	Tri-ALL	10	25.6	3.2	TTI11004
Pinnacle	Engenia	Verifact	10	25.6	3.2	TTI11004
Precision Labs	Engenia	Vertex	10	25.6	1.6	TTI11004
Fertizona	Engenia	Wetcit	10	25.6	3.2	TTI11004
Meherrin	Engenia	Pinpoint Plus (725A-T)	10	25.6	16	TTI11005
Dune	Engenia	Clarion	10	25.6	3.2	TTI11005
WinField	Engenia	Class Act Ridion	10	25.6	12.8	TTI11005
CNI	Engenia	DC-4	10	25.6	6	TTI11005
US	Engenia	Iconic	10	25.6	6.4	TTI11005
Simplot	Engenia	Intact Xtra	10	25.6	19.2	TTI11005
Kova	Engenia	Kabak Plus	10	25.6	6.4	TTI11005
Van Diest	Engenia	Cornbelt Locktite	10	25.6	6.4	TTI11005
Carolina Eastern	Engenia	Nu-Surf 80	10	25.6	6.4	TTI11005
Coastal	Engenia	Spectrum	10	25.6	5	TTI11005

Distributor	Dicamba Formulation	Adjuvant Name	GPA	Engenia Rate (fl oz/A)	Adjuvant Rate (fl oz/A)	Nozzle
Diamond R	Engenia	Spread-R	10	25.6	6.4	TTI11005
CPS	Engenia	Strike Force	10	25.6	6.4	TTI11005
Heartland	Engenia	Tri-ALL	10	25.6	3.2	TTI11005
Pinnacle	Engenia	Verifact	10	25.6	3.2	TTI11005
Precision Labs	Engenia	Vertex	10	25.6	1.6	TTI11005
Fertizona	Engenia	Wetcit	10	25.6	3.2	TTI11005

Message

From: Maximilian M Safarpour [maximilian.safarpour@basf.com]
Sent: 11/23/2016 8:07:20 PM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]
CC: Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Jeffrey H Birk [jeffrey.birk@basf.com]
Subject: RE: BAPMA

Hi Dan,

We checked the weather data and in most of the deeper south and Texas the average daily high is 90 degrees or more for June July and August. Arizona and California would be very problematic but I do not believe that they have the weed problems there so probably OK. I believe most use would be earlier in the season so folks could use it in the peak season.

Soybeans are a little better as you move into the Midwest the average high drops to the 80s in most places even in Kentucky.

I agree with your proposal. But before we move forward could you please confirm with EFED colleagues that, if they have considered 0.5 lb in their modeling. Please see my previous email.

I will be happy to include an advisory statement rather than a restriction. **Could you suggest to your team that, "in order to avoid possible injury to sensitive crops avoid applications when temperatures are expected to exceed 90 degrees during and immediately after application"**.

This will be a great help.

Thanks for your consideration.

Regards,

Max

Maximilian M. Safarpour, Ph.D. Department Head, Global Regulatory & Government Affairs

Phone: +1 919 547-2675 Mobile: +1-609-510-1538 Fax: +1 919 547-2850 E-Mail: maximilian.safarpour@basf.com
Postal Address: BASF Corporation, Research Triangle Park, 27709 Research Triangle Park, USA

150 years
BASF - We create chemistry

All contents of this e-mail and any attachments thereto are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Maximilian M Safarpour
Sent: Wednesday, November 23, 2016 2:58 PM
To: 'Kenny, Daniel' <Kenny.Dan@epa.gov>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; Rowland, Grant <Rowland.Grant@epa.gov>; Jeffrey H Birk

<jeffrey.birk@basf.com>
Subject: RE: BAPMA

Hi Dan,

Thank you for you for your email. It is an Interesting to note that our EFED colleagues are still talking about a 1.0 lb rate for BAPMA. Could you please confirm that they are using the 0.5 lb/A use rate limit in their flux calculations. The modeling that we sent last week only mentioned the difference if there was a 0.5 lb/A rate limit, but did not provide the actual numbers with the 0.5 lb/A rate, only 1.0.

Appreciate it. Max

Maximilian M. Safarpour, Ph.D. Department Head, Global Regulatory & Government Affairs

Phone: +1 919 547-2675 Mobile: +1-609-510-1538 Fax: +1 919 547-2850 E-Mail: maximilian.safarpour@basf.com
Postal Address: BASF Corporation, Research Triangle Park, 27709 Research Triangle Park, USA

150 years
BASF - We create chemistry

All contents of this e-mail and any attachments thereto are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Kenny, Daniel [mailto:Kenny.Dan@epa.gov]
Sent: Wednesday, November 23, 2016 12:05 PM
To: Maximilian M Safarpour <maximilian.safarpour@basf.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; Rowland, Grant <Rowland.Grant@epa.gov>
Subject: FW: BAPMA

Hi Max. I wanted to provide what information I could as a follow up to my email yesterday and let you know where we seem to be falling out on the volatility/buffer for the BAPMA salt. EFED is feeling like they've taken the bridging, drift, and volatility data about as far as they can, and I've got some summarizing bullets for you below. There is still some uncertainty with the volatility issue and that the spray drift buffer likely needs to be bigger than for the DGA because of the lower plant endpoint. However, if you read the last bullet, we may be able to find a temporary fix. For example, if the label incorporated a restriction against applying when temperatures are expected to be above 90 degrees Fahrenheit, we could probably go with a wind directional buffer that would be closer to 100 feet. That way, we could go ahead and register the product and look at the issue further post-registration to see if there's a path forward to removing the restriction in the future. Just an idea.

Please see EFED's comments below:

EFED has completed an analysis of the Bridging of the BAPMA salt of Dicamba to the entire Dicamba acid data set. EFED believes Bridging is appropriate and thus the existing New Use Risk Assessments and ESA Assessments for soy and cotton are applicable to the BAPMA salt action

EFED has considered the rebuttal of the DER for veg vigor data for the BAPMA salt and does not concur with the position in that rebuttal. Therefore, the NOEC for BAPMA remains at 0.0001 lb./acre

EFED has completed a weight of analysis approach for the establishment of an in-field buffer for the BAPMA salt which follows that used for the recently registered Dicamba DGA products (M1691 and M1768). That approach considers the

field study as the strongest line of evidence and weighs alternative modeling with AGDISP and AgDRIFT to characterize the certainty in that conclusion. That study suggested an appropriate buffer would be 90 feet. However, several factors influence the establishment of an in-field buffer including

- the field study estimated a distance to the DGA endpoint (0.00026 lb./acre) and not the new BAPMA endpoint (0.0001 lb./acre)
- drift modeling suggests a wide range of possible outcomes using the proposed label limitations similar to the DGA analysis
- employing a weight of evidence approach and accounting for the more sensitive BAPMA endpoint suggests the BAPMA specific drift buffer should be 280 feet (110 ft. x 2.6 difference in endpoint)
- as with the DGA, the in-field drift buffer would only be in the direction of wind at the time of application

EFED has considered two sets of field volatility data conducted under differing temperature conditions. EFED's analysis mirrors that employed for the M1691 and M1768 and suggests that

- the potential for volatility is higher for the BAPMA salt than for the DGA salt
- for the 0.5 lb./acre rate the distance to the NOEC level from volatility approaches approximately 100 feet for upper bound exposures. The distance would be double for the 1.0 lb./acre rate though this is only applied pre-emergent where volatility is less likely to occur
- the majority of modeled estimates, considering the BAPMA dicamba flux data with a weather conditions from different locations where dicamba is used across the country, suggest no exposure above the NOEC beyond the edge of the field
- volatility appears to correlate with temperature, with significantly less flux occurring at less than 90F
- taken together EFED cannot preclude off-site movement above the NOEC above 90°F in some locations and that an in-field buffer would need to approach 100 feet

Please let us know what your thoughts are at this point and we'll see what we can do.

Thanks,
Dan

Message

From: Maximilian M Safarpour [maximilian.safarpour@basf.com]
Sent: 11/23/2016 7:58:20 PM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]
CC: Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Jeffrey H Birk [jeffrey.birk@basf.com]
Subject: RE: BAPMA

Hi Dan,

Thank you for you for your email. It is an Interesting to note that our EFED colleagues are still talking about a 1.0 lb rate for BAPMA. Could you please confirm that they are using the 0.5 lb/A use rate limit in their flux calculations. The modeling that we sent last week only mentioned the difference if there was a 0.5 lb/A rate limit, but did not provide the actual numbers with the 0.5 lb/A rate, only 1.0.

Appreciate it. Max

Maximilian M. Safarpour, Ph.D. Department Head, Global Regulatory & Government Affairs

Phone: +1 919 547-2675 Mobile: +1-609-510-1538 Fax: +1 919 547-2850 E-Mail: maximilian.safarpour@basf.com
Postal Address: BASF Corporation, Research Triangle Park, 27709 Research Triangle Park, USA

150 years
BASF - We create chemistry

All contents of this e-mail and any attachments thereto are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Kenny, Daniel [mailto:Kenny.Dan@epa.gov]
Sent: Wednesday, November 23, 2016 12:05 PM
To: Maximilian M Safarpour <maximilian.safarpour@basf.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; Rowland, Grant <Rowland.Grant@epa.gov>
Subject: FW: BAPMA

Hi Max. I wanted to provide what information I could as a follow up to my email yesterday and let you know where we seem to be falling out on the volatility/buffer for the BAPMA salt. EFED is feeling like they've taken the bridging, drift, and volatility data about as far as they can, and I've got some summarizing bullets for you below. There is still some uncertainty with the volatility issue and that the spray drift buffer likely needs to be bigger than for the DGA because of the lower plant endpoint. However, if you read the last bullet, we may be able to find a temporary fix. For example, if the label incorporated a restriction against applying when temperatures are expected to be above 90 degrees Fahrenheit, we could probably go with a wind directional buffer that would be closer to 100 feet. That way, we could go ahead and register the product and look at the issue further post-registration to see if there's a path forward to removing the restriction in the future. Just an idea.

Please see EFED's comments below:

EFED has completed an analysis of the Bridging of the BAPMA salt of Dicamba to the entire Dicamba acid data set. EFED believes Bridging is appropriate and thus the existing New Use Risk Assessments and ESA Assessments for soy and cotton are applicable to the BAPMA salt action

EFED has considered the rebuttal of the DER for veg vigor data for the BAPMA salt and does not concur with the position in that rebuttal. Therefore, the NOEC for BAPMA remains at 0.0001 lb./acre

EFED has completed a weight of analysis approach for the establishment of an in-field buffer for the BAPMA salt which follows that used for the recently registered Dicamba DGA products (M1691 and M1768). That approach considers the field study as the strongest line of evidence and weighs alternative modeling with AGDISP and AgDRIFT to characterize the certainty in that conclusion. That study suggested an appropriate buffer would be 90 feet. However, several factors influence the establishment of an in-field buffer including

- the field study estimated a distance to the DGA endpoint (0.00026 lb./acre) and not the new BAPMA endpoint (0.0001 lb./acre)
- drift modeling suggests a wide range of possible outcomes using the proposed label limitations similar to the DGA analysis
- employing a weight of evidence approach and accounting for the more sensitive BAPMA endpoint suggests the BAPMA specific drift buffer should be 280 feet (110 ft. x 2.6 difference in endpoint)
- as with the DGA, the in-field drift buffer would only be in the direction of wind at the time of application

EFED has considered two sets of field volatility data conducted under differing temperature conditions. EFED's analysis mirrors that employed for the M1691 and M1768 and suggests that

- the potential for volatility is higher for the BAPMA salt than for the DGA salt
- for the 0.5 lb./acre rate the distance to the NOEC level from volatility approaches approximately 100 feet for upper bound exposures. The distance would be double for the 1.0 lb./acre rate though this is only applied pre-emergent where volatility is less likely to occur
- the majority of modeled estimates, considering the BAPMA dicamba flux data with a weather conditions from different locations where dicamba is used across the country, suggest no exposure above the NOEC beyond the edge of the field
- volatility appears to correlate with temperature, with significantly less flux occurring at less than 90F
- taken together EFED cannot preclude off-site movement above the NOEC above 90°F in some locations and that an in-field buffer would need to approach 100 feet

Please let us know what your thoughts are at this point and we'll see what we can do.

Thanks,
Dan

Message

From: Jeffrey H Birk [jeffrey.birk@basf.com]
Sent: 11/15/2016 4:56:53 PM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Corbin, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1db182663b134e46b3fec580f8e0b5f2-Mark Corbin]
CC: Maximilian M Safarpour [maximilian.safarpour@basf.com]; Andrew J Goetz [andrew.goetz@basf.com]; John J Arthur [john.arthur@basf.com]; Richard L Braddock [richard.braddock@basf.com]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]
Subject: Engenia volatility improvement data.pptx
Attachments: Engenia volatility improvement data.pptx

Dan and Mark,

I am sending a summary slide set that outlines the quantitative data that was generated by BASF in its efforts to develop a dicamba formulation with improved volatility characteristics over the existing Clarity (DGA salt) product. This data is the basis for BASF's investment in the development and proposed registration of Engenia herbicide. This makes the field flux results that we will discuss during our call this afternoon, all the more surprising.

Talk to you then,

Jeff

Advancement in Dicamba Formulation

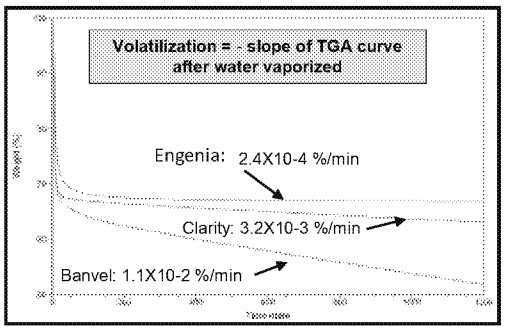
Volatilization Assessment Tools – TGA

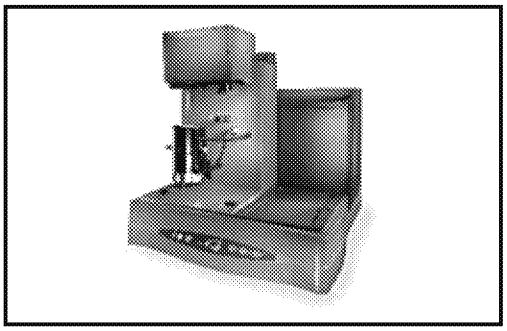
BASF
The Chemical Company

Thermo Gravimetric Analysis

- Quick, high temperature screening tool

- Loss of weight, gravimetric
- Fast sample processing (20 hr cycle)
- High, controlled temperature (100 ºC)
- Microscopic sample size (~10 mg)
- Good accuracy (CV = 6.5%)

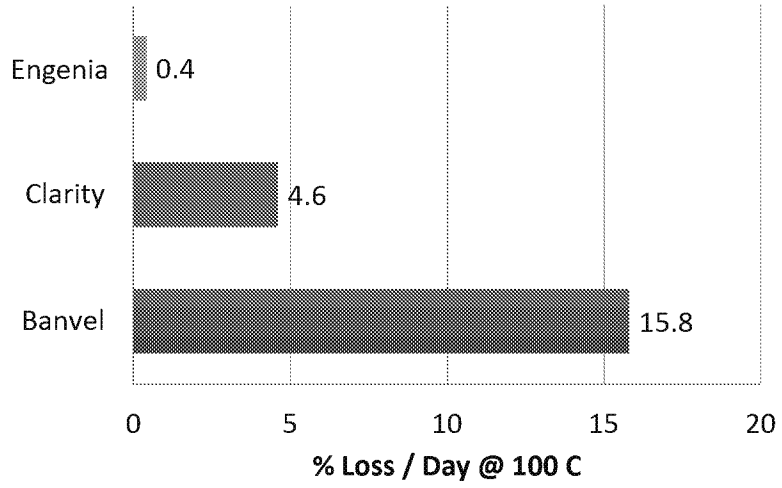




Experimental Results – Not EPA approved or available for sale

Advancement in Dicamba Formulation

Volatilization Assessment Tools – TGA Data



Test Conditions:

Temp.: 100 °C

Time: 20 hours

Air flow: 2 l/min

Relative Humidity : 0%

TGA provides quick information, differentiation

Advancement in Dicamba Formulation

Volatilization Assessment Tools - Incubator

BASF
The Chemical company

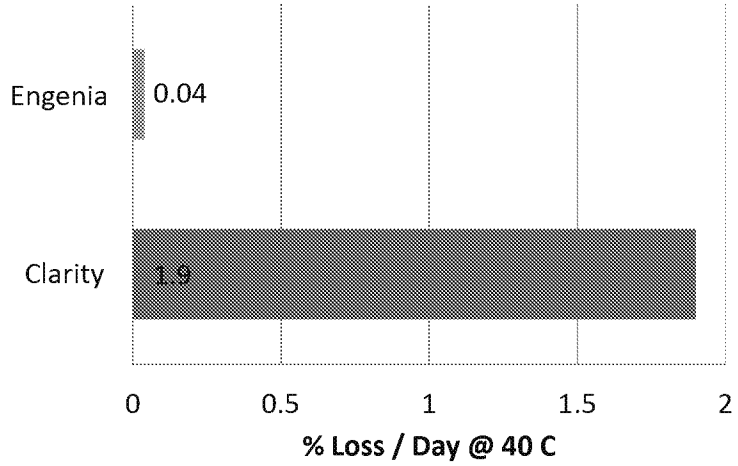
Incubator Analysis

- Analytical confirmation screening tool

- Loss determined via HPLC analysis
- 1-4 week cycle time
- Controlled temp (40ºC) & humidity (5%)
- Vacuum air flow (5 l/min)
- Macroscopic sample (1.5 mg)
- High accuracy (CV = 2.3%)

Advancement in Dicamba Formulation

Volatilization Assessment Tools – Incubator Data



Test Conditions:

Temp.: 40 °C

Time: 8 days

Air flow: 5 l/min

Relative Humidity: 5%

Incubator analysis: more time, good differentiation

Advancement in Dicamba Formulation

Volatilization Assessment Tools – ^{14}C System

BASF
The Chemical Company

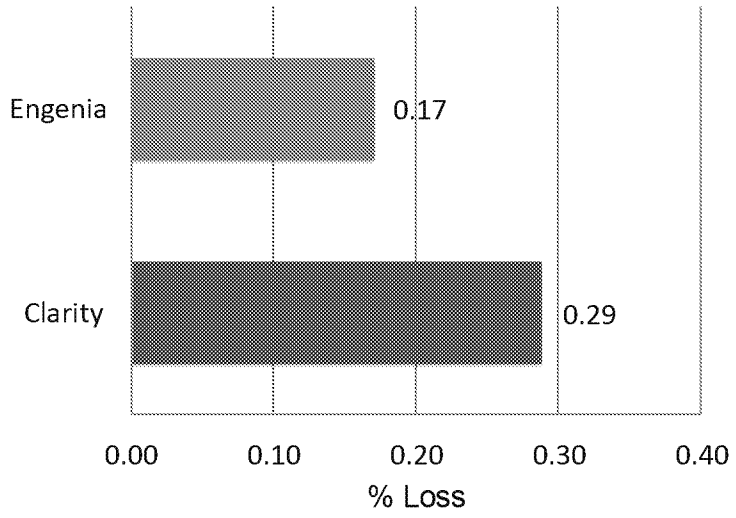
^{14}C Contained System Study

- Quantitative loss and capture in contained system

- Air flow with PUF filter capture
- Scintillation count of ^{14}C remaining in deposit, captured on surfaces and filter
- 24 hour study cycle
- Controlled temperature (40°C) and relative humidity (35%)
- Excellent material balance with flexible environmental and substrate options
- Labor and detail intensive

Advancement in Dicamba Formulation

Volatilization Assessment Tools – ^{14}C System Data



Test Conditions:

Temp.: 40 °C

Time: 1 day (24 hr)

Air flow: 0.5 l/min using 2.5 l tank

Relative Humidity: 5%

Substrate: glass

^{14}C: Capture / loss balance, lower differentiation, and special handling

Advancement in Dicamba Formulation

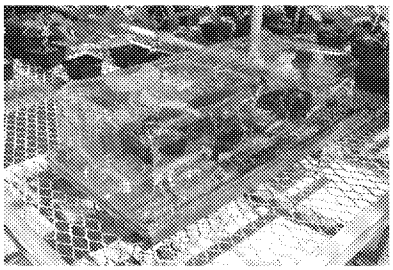
Volatilization Assessment Tools – Humidome

BASF
The Chemical Company

Humidome Bioassay

- Visual confirmation screening tool

- Treated substrate and bioassay plant placed in humidome
- Static containment for 24 hr
- Transfer plants to greenhouse
- Injury evaluation at 3 to 7 DAT
- Relatively easy procedure, but higher variability
- Provides visual confirmation of larger differences identified in analytical studies



UTC Engenia A

Clarity® Banvel® acid

Experimental Results – Not EPA approved or available for sale

Advancement in Dicamba Formulation

Volatilization Assessment Tools – Humidome Data

BASF
The Chemical Company

UTC Engenia

Clarity® Banvel ® acid

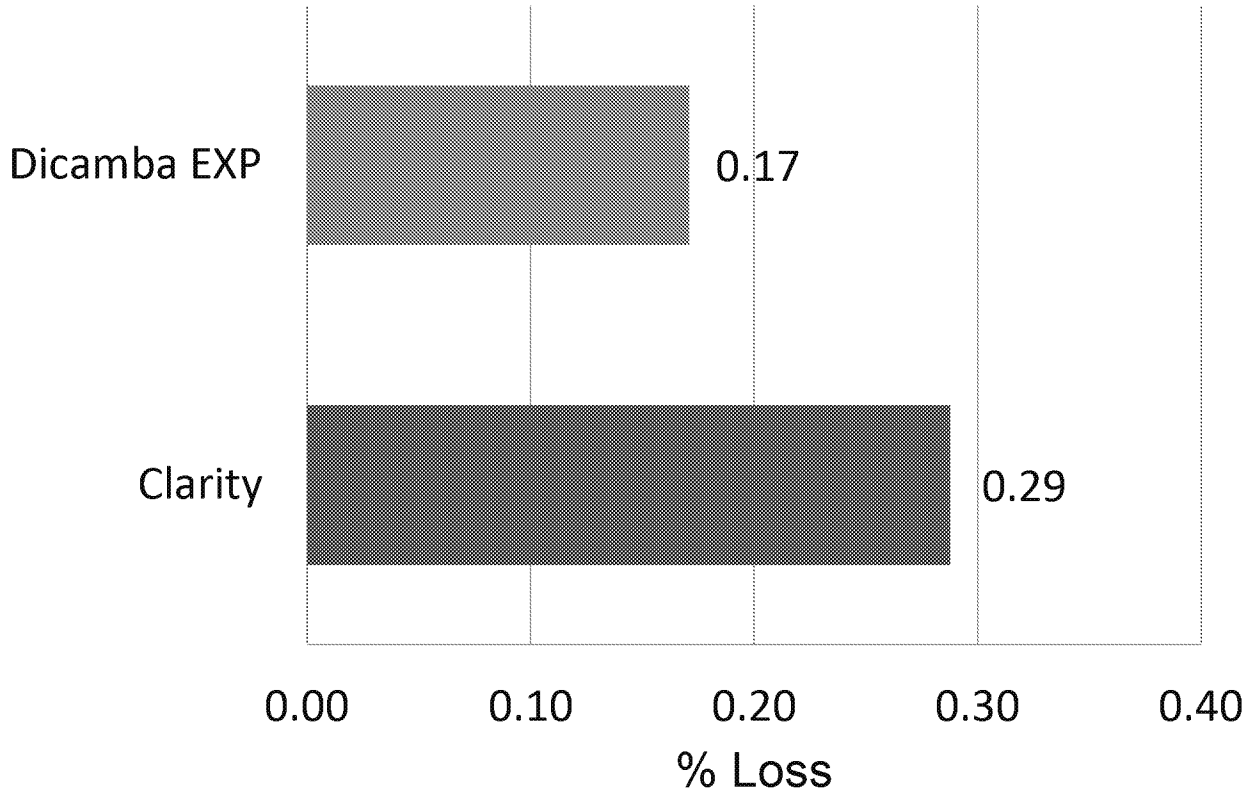
Advancement in Dicamba Formulation

Summary of Results – Stepwise Improvement

BASF
The Chemical Company

	TGA	Incubator	^{14}C Contained System	Humidome Bioassay
Clarity	71%	73%	85%	52%
% Improvement Relative to **Clarity®**				
Engenia	91%	98%	41%	77%

Consistent performance improvement across studies


Dicamba EXP
0.17
Clarity
0.29
0.00
0.10
0.20
0.30
0.40
% Loss

	% Loss @ 40 C	CV			
Clarity	0.29	0.003	0.269	0.249	0.345
Dicamba EXP	0.17	0.002	0.215	0.121	0.177

To resize chart data range, drag lower right corner of range.

Message

From: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]
Sent: 6/6/2016 11:32:00 AM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Lewis, Susan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f4f15e97124245e2906dead1e63d69d9-Susan T. Lewis]
Subject: Fwd: Monsanto published comment
Attachments: Monsanto Dicamba Public Comment_EPA-HQ-OPP-2016-0187.pdf

Courtesy copy of our submitted comment

Dan Jenkins
US Agency Lead
Monsanto Company
202.383.2851 office
571.732.6575 cell

Begin forwarded message:

> **From:** "Dan" <danieljjenkins@gmail.com>
> **To:** "JENKINS, DANIEL J [AG/1920]" <daniel.j.jenkins@monsanto.com>
> **Subject: Monsanto published comment**

Dan

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

MONSANTO

MONSANTO COMPANY
1300 I (Eye) Street, NW
Suite 450 East
Washington, D.C. 20005
http://www.monsanto.com

May 31, 2016

Philip W. Miller
Vice President, Global Regulatory and Government Affairs

Docket ID No. EPA-HQ-OPP-2016-0187
Dicamba: New Use on Herbicide-Tolerant Cotton and Soybeans
Environmental Protection Agency
Mailcode 28221 T
1200 Pennsylvania Ave, NW
Washington, DC 20460

Attention: Jack Housenger

Dear Mr. Housenger:

Please find enclosed Monsanto's comment to Docket ID No. EPA-HQ-OPP-2016-0187 in support of Dicamba: New Use on Herbicide-Tolerant Cotton and Soybeans.

Sincerely,

Philip W. Miller, Ph.D.
Vice President, Global Regulatory and Government Affairs

COMMENTS OF MONSANTO COMPANY ON EPA'S PROPOSED REGISTRATION OF DICAMBA FOR USE ON DICAMBA-TOLERANT COTTON AND SOYBEAN

EPA-HQ-OPP-2016-0127-0016

Submitted by:

Monsanto Company
800 North Lindbergh Blvd.
St. Louis, MO 63167

TABLE OF CONTENTS

Page

I. INTRODUCTION AND EXECUTIVE SUMMARY 1

II. THE NEW DICAMBA USE WILL PROVIDE SIGNIFICANT BENEFITS TO U.S. AGRICULTURE AND THE ENVIRONMENT 2

A. Studies Confirm Dicamba Has Effective Pre-Emergent Control 3

B. Approval of Dicamba for Use on Dicamba-Tolerant Soybean and Cotton Will Further Facilitate No-Till Farming, Which Provides Significant Environmental Benefits 4

C. Approval of Dicamba for Use On Dicamba-Tolerant Soybean and Cotton Will Provide Additional Benefits to Farmers 5

III. A DOWNWIND BUFFER OF 110 FEET IS MORE THAN SUFFICIENT TO PROTECT ENDANGERED SPECIES AND NON-TARGET ORGANISMS 8

A. A Four-Sided Buffer Would Harm Farmers and Agriculture 9

B. A Buffer Is Not Needed to Protect Against Volatilization of the Monsanto Dicamba Products. 10

1. Laboratory (Humidome) Relative Volatility Study Showed Low Volatility Levels, Particularly Compared to Banvel 11

2. EPA Guideline Field Volatility Studies Conducted Under Varied Environmental Conditions Provide Additional Data for the Assessment of Off-Site Movement 12

3. Modeling of Off-Target Movement Due to Volatility Demonstrates That a Buffer Is Not Necessary to Protect Against Volatilization of the Monsanto Dicamba Products 13

4. Any Effects of the Monsanto Dicamba Formulations From Off-Site Movement Are Limited to Downwind Particle Drift at the Time of Application 16

C. The Available Data on Particle Drift Support That a Downwind Buffer of No More Than 110-Feet at the Time of Application Is More Than Sufficiently Protective 17

D. Information from Product Development Research and Extraneous Incidents Do Not Undermine the Sufficiency of a 110-Foot Downwind Buffer for Particle Drift, and No Buffer for Volatility 18

ED_002084_00044094-00003

1. M1691 Herbicide Was Not Used Alone in the Product Development Research 18

2. EPA's Analysis of Field Trial Data Did Not Consider Dose Response 18

3. Reported Impacts From Specific Sites Are Due to Uses That Are Inconsistent With Current Proposed Label Conditions 23

E. Other Lines of Evidence Also Support the Sufficiency of 110-Foot Downwind Buffer For Particle Drift Only 25

1. The Published Literature Does Not Show High Vapor Drift for Dicamba Resulting in Non-Target Plant Injury 25

2. The Buffer Distance for Vapor Movement Estimated From Egan and Mortensen Is Incorrect 26

IV. EPA'S RISK ASSESSMENTS ARE SCIENTIFICALLY-SOUND AND SUPPORTED BY THE LAW 27

A. EPA's Approach to the Risk Assessments Is Scientifically-Sound and Well-Supported 27

B. EPA's Authority for a Mitigated No-Effect Finding Is Well-Established 29

C. Dicamba Does Not Pose a Risk to Terrestrial Invertebrates 30

D. EPA Properly Considered Runoff in Its No Effect Rationale for Listed Species 31

E. Dicamba Acid Seedling Emergence Endpoints Should Not Have Been Considered in the Dicamba DGA Salt Risk Assessment 31

V. MONSANTO SUPPORTS EPA'S WEED RESISTANCE PLAN, WITH CERTAIN REFINEMENTS 33

A. Monsanto Suggests Adjustments That Will Help to Reinforce Practices That Assist Growers With Herbicide Resistance Management 34

B. Monsanto Product Recommendations Will Maintain the Durability of M1691 Herbicide 36

VI. ENABLING TANK MIXES IS CRITICAL FOR EFFECTIVE WEED RESISTANCE MANAGEMENT AND ENVIRONMENTAL STEWARDSHIP 37

A. Tank Mixing Provides Multiple Benefits to Growers 37

B. EPA Should Consider Specific Tank Mixes Where Requested 38

ED_002084_00044094-00004

VII. EPA'S ANALYSIS IS TECHNICALLY AND SCIENTIFICALLY SOUND 39

A. EPA's Human Health Risk Assessment Is Highly Conservative and Amply Demonstrates a Reasonable Certainty of No Harm 39

B. EPA's Occupational Risk Assessment Demonstrates Ample Protection From Occupational Exposure 40

C. The Proposed Label Is Protective of Non-Target Susceptible Plants 41

VIII. REFERENCES 42

IX. APPENDIX: TECHNICAL CORRECTIONS 48

ED_002084_00044094-00005

I. INTRODUCTION AND EXECUTIVE SUMMARY

Monsanto is pleased to have the opportunity to comment on EPA's proposed approval of M1691 Herbicide, the new use of dicamba in the Roundup Ready® Xtend Crop System for soybean and cotton. This comment discusses the following products (collectively referred to as "the Monsanto Dicamba Products"): (1) M1691 Herbicide (Clarity®)[1]; (2) M1768 Herbicide (Xtendimax™ with VaporGrip™ Technology)[2]; and (3) M1769 Herbicide (Roundup® Xtend™ with VaporGrip™ Technology).[3] The assessment that EPA has conducted for M1691 Herbicide further supports EPA's assessment for the in-crop use of Monsanto's M1768 and M1769 Herbicides containing the DGA salt of Dicamba. Monsanto's comments make the following key points:

First, the new use of dicamba will provide important and wide-ranging benefits to cotton and soybean production in the United States. Dicamba use on dicamba-tolerant soybean and cotton will (1) help further promote the sustainability of crop production in the U. S.; (2) provide more weed control options for farmers; (3) slow the development of resistant herbicide genotypes for other herbicide mechanisms-of-action that are currently registered for use in soybean and cotton; and (4) further facilitate the adoption of no-till and conservational tillage practices.

Second, a downwind buffer of 110 feet (for 0.5 lb a.e./A) would be more than sufficient to protect non-target organisms and threatened or endangered species from any effects of dicamba. Multiple studies show that no buffer whatsoever is necessary to be protective of volatilization, while available data support that a 110-foot downwind buffer at the time of application is more than amply protective of the effects of particle drift.

Third, EPA's risk assessments are scientifically sound and supported by a large body of law. EPA's registration of M1691 Herbicide for dicamba-tolerant soybean and cotton is based on extensive toxicity and ecological effects evaluations. As part of this process, EPA requires data on environmental fate, and ecological effects on non-target terrestrial and aquatic animals, and non-target plants. EPA also specifically focuses on potential effects a pesticide may have to listed species by conducting thorough ecological risk assessments. EPA's Environmental Fate and Effects Division (EFED) conducted EPA's assessments of both ecological effects and exposure, to evaluate whether M1691 Herbicide may affect listed species. Where, based on its ecological risk assessment, EPA concluded that M1691 Herbicide would have "no effect" on listed species, it ended its endangered species assessment. Where EPA concluded, instead, that M1691 Herbicide "may affect" but was "not likely to adversely affect," a species, it conducted further analysis and informal consultation with the U.S. Fish & Wildlife Service. Where EPA concluded that M1691 Herbicide "may affect" and was "likely to adversely affect" a species, EPA imposed a label restriction preventing dicamba from being applied in that county. Additionally, EPA's authority for a mitigated "no effect" finding is well-established. In relying upon maximum use scenarios, EPA's no effect determinations already take into account multiple

---

[1] Clarity® is a dicamba diglycolamine (DGA) salt containing formulation.

[2] Xtendimax™ with VaporGrip™ Technology Herbicide is a dicamba DGA salt containing formulation.

[3] Roundup® Xtend with VaporGrip™ is a dicamba DGA salt and glyphosate ethanolamine salt containing formulation.

ED_002084_00044094-00006

M1691 Herbicide label mandates. The conditions on the FIFRA label mandated by EPA are legally enforceable under FIFRA and become part of the proposed registration under the Endangered Species Act. Critically, EFED's screening-level assessments *already* rely upon the label's mandatory conditions as part of the effects determination. EPA also may take into account *other* mandatory conditions on pesticide labels, such as mandatory appropriate downwind buffer zones. This is entirely appropriate given that failure to follow the label requirements is unlawful. Absent reliance on label application rates and frequency, it would be impossible for EPA to assess potential exposure – and thus impossible for EPA to make either a "no effect" or a "may affect" determination.

Fourth, Monsanto supports a Weed Resistance Plan, with certain refinements. Monsanto greatly values maintaining the durability of our products and agrees that the benefits of tools such as M1691 Herbicide should be preserved for agriculture. Sustainability of this tool is important for American farmers and a business objective for Monsanto. As such, Monsanto supports voluntary stewardship, which enables the marketplace to adjust to emerging challenges around herbicide resistance.

Fifth, EPA should consider tank mixes where specifically requested, as tank mixing is critical for weed resistance management and environmental stewardship. Tank mixing also provides economic, sustainability, efficacy and productivity benefits to U.S. agriculture and the environment.

Lastly, EPA's analysis is technically and scientifically sound. EPA's Human Health Risk Assessment is highly conservative and demonstrates a reasonable certainty of no harm, and EPA's Occupational Risk Assessment demonstrates that the proposed label will provide ample protection from occupational exposure. The proposed label also is protective of non-target susceptible plants.

Technical corrections are included in an appendix to the comments.

II. THE NEW DICAMBA USE WILL PROVIDE SIGNIFICANT BENEFITS TO U.S. AGRICULTURE AND THE ENVIRONMENT

The new use of dicamba in the Roundup Ready® Xtend Crop System for soybean and cotton provides a new management tool for overall weed management, including the management of herbicide-resistant weeds. Specifically, dicamba use on dicamba-tolerant soybean and cotton will help further promote the sustainability of crop production in the United States. As discussed below, this new use of dicamba will offer a valuable weed management tool, provide more weed control options for farmers, and slow the development of resistant herbicide genotypes for other herbicide mechanisms-of-action (i.e., ALS, PPO, HPPD, glufosinate, glyphosate) that are currently registered for use in soybean and cotton, while also supporting the adoption of no-till and conservational tillage practices.

Existing herbicides present challenges to growers' ability to consistently control problematic weeds. As of April 2013, 400 herbicide-resistant weed biotypes have been reported to be resistant to 21 different herbicide modes-of-action worldwide (Heap, 2013). Dicamba-resistant and glufosinate-resistant weeds, however, account for only <1% and 0.5% of resistant biotypes,

respectively (Heap, 2013). Glyphosate-resistant weeds account for approximately 6% of the herbicide-resistant biotypes. Weeds resistant to herbicides that inhibit acetolactate synthase (ALS) account for 32% of the herbicide-resistant biotypes. Specifically, ALS-herbicide resistance is present in most of the major broadleaf weed species commonly found in cotton and soybeans. In several geographies—especially the mid-South—the invasive and aggressive weed Palmer amaranth, which is one of the worst pests for cotton and soybean producers, has become resistant to PPO and ALS inhibitors. As a result, PPO and ALS inhibitors standing alone often are not effective weed control options for many soybean and cotton farmers today.

The widespread occurrence of ALS- and glyphosate-resistant Palmer amaranth has led to higher use of PPO-inhibiting herbicides on soybean and cotton. As a result, Palmer amaranth in the U.S. mid-South has become resistant to PPO inhibitors. Studies conducted in 2016 have confirmed resistance to foliar applied PPO inhibitors (Salas et al., 2016). Additionally, Larry Steckel, Tennessee extension weed specialist, stated in a 2016 Delta Farm Press article that "We can safely say PPO resistance will be more widespread this spring and in a higher proportion of the population in fields where it was confirmed in 2015." He further stated that "Liberty® is the last herbicide standing that will control Palmer amaranth post in our soybean fields in 2016." (Steckel, 2016). However, the use of Liberty for post-emergent control is only available to farmers planting glufosinate-tolerant soybeans. Also of enormous concern is the overdependence currently being placed on glufosinate for the control of Palmer amaranth, resulting in tremendous selective pressure that facilitates development of glufosinate resistance (Sosnoskie et al., 2011).

In contrast, dicamba has been shown to be effective for control of multiple herbicide-resistant Palmer amaranth (Reiofeli et al., 2016). Dicamba also will be an important tool in preventing the development and further spread of other herbicide-resistant weeds, including glufosinate-tolerant weeds. The use of dicamba in the Roundup Ready® Xtend Crop System will be a benefit to farmers for controlling resistant weeds and maintaining the durability of currently available weed control options. BEAD's review confirmed the importance of dicamba in post-emergent control of herbicide-resistant weeds: "Dicamba used during the growing season would target new flushes of weeds and could have the effect of reducing populations of these weeds and particularly would help reduce weed seed banks (i.e., viable seeds in the soil) to reduce populations of a new generation of weeds. Postemergence use of dicamba on genetically modified cotton and soybean during the growing season will expand options for broadleaf weed control." (U.S. EPA, 2016).

A. Studies Confirm Dicamba Has Effective Pre-Emergent Control

BEAD's benefits review states that "dicamba does not control weeds before they emerge." (U.S. EPA, 2016). While dicamba is not strictly classified as a pre-emergent herbicide, it is an effective tool for pre-emergent weed management. When used on dicamba tolerant soybean or cotton, multiple mechanisms-of-action including dicamba applied pre-plant or pre-emergent can provide more consistent residual control of Palmer amaranth on dryland acres (Steckel 2013). A study by Purdue University in 2015 comparing use of dicamba alone and with multiple mechanisms-of-action found that mixtures containing dicamba applied to soil pre-emergent provided up to 91% control of Palmer amaranth species (Spaunhorst et al., 2010). Experiments using dicamba susceptible and resistant kochia seed suggested that both susceptible and resistant kochia can be over 95% controlled by pre-applied dicamba. The study concluded that "PRE application of dicamba can be a feasible option to manage kochia in rangeland or crop fields and,

more importantly, to minimize the spread of resistant plants." (Ou et al., 2010).

The residual weed control provided by dicamba is another reason why farmers will benefit from use dicamba in a pre-emergent weed control regimen. A 2013 study found that under moderate rainfall conditions dicamba provided 50 to 80% control of glyphosate-resistant waterhemp 21 days after treatment (Logan et al., 2013). Bare ground field experiments at 20 locations across the Midwest evaluated the length of residual control of dicamba used alone and in combination with other herbicides. Using dicamba with additional mechanisms of action improved weed control across all species. The addition of dicamba to burndown and in-season weed management in dicamba-tolerant soybean can provide more consistent weed control and a more sustainable solution to management of glyphosate-resistant and hard to control weeds (Willis et al., 2012). Waterhemp emergence was evaluated in a study of soil persistence of dicamba. The study concluded "Initial results suggest that soil applied dicamba can significantly reduce waterhemp emergence up to 35 days." (Schlichenmayer et al., 2011).

Dicamba is currently labeled for pre-emergent use on soy and cotton, but concerns over potential damage to crops and label restrictions such as waiting 21 days before planting cotton and 28 days before planting soybean (BASF Corporation, 2008) limit its use as a pre-emergent herbicide. The proposed label for use in the Roundup Ready® Xtend Crop System, however, allows for the use of dicamba before, during, or immediately after planting (Proposed Label, EPA-HQ-2016-0187-0015). The use of dicamba in the Roundup Ready® Xtend Crop System thus removes the pre-plant restrictions, providing greater flexibility to farmers.

B. Approval of Dicamba for Use on Dicamba-Tolerant Soybean and Cotton Will Further Facilitate No-Till Farming, Which Provides Significant Environmental Benefits

Dicamba-tolerant soybeans and cotton will also provide significant benefits by facilitating no- and low-till farming, which in turn confers significant environmental and economic benefits. Tillage is used for seedbed preparation and may also be used for weed control. The primary purposes of pre-plant tillage are to incorporate residue from the previous crop, reduce wheel traffic compaction from the previous season, improve water filtration and soil aeration, control weeds, loosen the soil for root penetration, and provide a suitable environment for planting and germination (Hake et al., 1996). Conventional tillage is associated with intensive plowing and less than 15% crop residue at the soil surface; reduced tillage is associated with 15 to 30% crop residue; and conservation tillage, including no-till practices, is associated with at least 30% crop residue and substantially less soil erosion than other tillage practices (CTIC, 2011).

The benefits of conservation tillage or no-till systems relative to conventional tillage are well-documented and include: reduced soil erosion; reduced fuel and labor costs; conservation of soil moisture; improvement of soil structure; reduction of soil compaction; and improvement of soil organic matter content. A study by CropLife America demonstrated that in 2005 the use of herbicides saved U.S. farmers 337 million gallons of fuel, produced $16 billion in crop yield increases, and cut weed control costs by $10 billion as compared to production without the use of herbicides (Gianessi and Reigner, 2006). Additionally, without herbicides, growers would have to abandon no-till or other conservation tillage production practices, which reduce soil erosion. If U.S. growers stopped using herbicides and resumed tillage on the number of acres not tilled in

2005, an additional 356 billion pounds of sediments would be deposited in streams and rivers, resulting in an estimated $1.4 billion in downstream damage (Gianessi and Reigner, 2006).

BEAD's benefits review recognizes the benefits of no-till farming practices but states that no data was provided to support how the use of dicamba in the Roundup Ready® Xtend Crop System would support the continued use of no-till practices. However, the new use of dicamba in the Roundup Ready® Xtend Crop System will provide environmental and economic benefits by enabling the continued use of reduced tillage practices and reducing the inputs required to produce a successful crop. An analysis of farmer survey data in 2011 (Monsanto, 2012) demonstrated a preference for use of post-emergent products on reduced tillage acres compared to reliance on pre-emergent applications of soil residual herbicides.

Soybean and cotton production is more productive when herbicides are used to protect the crop from the stress of weed competition. However, controlling weeds can be more difficult in a no-till system due to the accumulation of residue from prior plantings, the lack of tillage in the cropping system, and the economics and effectiveness of various herbicide options. With the ability to make pre-plant and in-crop applications with effective and economical herbicides, no-till farmers are able to effectively manage weeds throughout the growing season. Specifically, the approval of dicamba for in-crop use would add new control options for weeds, including herbicide resistant weeds that threaten to eliminate the benefits of no-till.

Roundup Ready® crop systems provided better weed management options in no-till and reduced-tillage systems, facilitating greater adoption of conservation tillage systems in cotton and soybeans (Baldwin and Baldwin, 2002). Just as the introduction of effective post-weed control options in Roundup Ready crop systems led to an increase in no-till and reduced tillage farming, the introduction of dicamba-tolerant crop systems will provide additional effective post-weed control options in the Roundup Ready® Xtend Crop System, and therefore likely will increase the use of no-till and reduced tillage farming. Studies support this conclusion. For example, a 2015 paper demonstrated the effectiveness of dicamba for controlling horseweed in a conservation tillage system (Flessner et al., 2015). Horseweed is among the most troublesome weeds in glyphosate-resistant (GR) cropping systems (Kruger et al., 2009). Control of GR horseweed prior to conservation tillage planting is particularly challenging, often necessitating the use of other herbicides in addition to, or in lieu of, glyphosate as a pre-plant treatment (Steckel et al., 2006). One such herbicide is dicamba. Only 20% GR horseweed control was reported with glyphosate at 0.84 kg a.e./ha, but 77% control was obtained when dicamba at 0.28 kg a.e./ha was tank-mixed with glyphosate applied at spring planting (Owen et al., 2009). GR horseweed was controlled 90 to 100% 8 weeks after dicamba was applied pre-plant at 0.60 kg a.e./ha (Byker et al., 2013); 93 and 98% control was reported 4 weeks after treatment with dicamba at 0.14 and 0.28 kg a.e./ha, respectively (Everitt and Keeling, 2007).

C. Approval of Dicamba for Use On Dicamba-Tolerant Soybean and Cotton Will Provide Additional Benefits to Farmers

A farmer's choice of herbicide is based on several factors such as efficacy, crop safety, rotational restrictions, convenience, and the ability to use integrated pest management practices. Many farmers will choose dicamba instead of alternative herbicides for the following reasons:

a) **Herbicide effectiveness:** Dicamba provides control of over 95 annual and biennial weed species and control or suppression of over 100 perennial broadleaf and woody species. While 2,4-D is more effective than dicamba on some weeds, dicamba provides more effective pre-emergent weed control than 2,4-D on cutleaf evening primrose, clover, and chickweed (Loux et al., 2010). Furthermore, dicamba provides better control compared to 2,4-D on summer annuals including those with a prostrate growth habit such as knotweed and purslane. With regard to winter annual weeds, University of Arkansas data indicated that dicamba is more effective in controlling marestail compared to 2,4-D (University of Arkansas, 2011).

Dicamba also provides excellent control of wild buckwheat, while 2,4-D has only limited activity and provides inadequate control (Zollinger, 2006). Other pre-emergent or post-emergent herbicides often provide incomplete control of wild buckwheat including dinitroanilines or PPO inhibitors. The most effective herbicides for buckwheat are dicamba and some sulfonylurea products; however, some of the sulfonylurea herbicides may persist and carry over for more than one growing season, especially in high pH soils.

Dicamba has been valued as more efficacious on lambsquarters than fomesafen, based on university weed control guidelines (Moechnig et al., 2010; University of Illinois, 2008). In addition, dicamba exhibits improved control of sicklepod, kochia and common ragweed, and waterhemp compared to fomesafen.

Dicamba has improved post-emergent weed control and added residual efficacy compared to other commercially available herbicides to control tough broadleaf weeds and weeds that are resistant to glyphosate and other herbicides (Johnson et al., 2010). Residual herbicides, in addition to dicamba, will be recommended in the Roundup Ready® Xtend Crop System. Depending upon crop safety and best management practices for overall weed management, including resistance management, dicamba use may reduce the number of applications of soil residual herbicides needed for season long control of *Palmer amaranth* (e.g. fomesafen, pyrithiobac, fluometuron) (L. Steckel 2012, Personal Communication; S. Culpepper 2012, Personal Communication). Currently, multiple applications of residual herbicides are needed because of the lack of effective post-emergent options (Southeast Farm Press, 2009).

b) **Crop safety:** The proposed use of dicamba in the Roundup Ready® Xtend Crop System in soybean and cotton will allow more flexibility for control of weeds just prior to or at planting of the crop, due to elimination of pre-plant intervals or plant back restrictions on present dicamba labels. These restrictions were in place due to concern over potential crop injury, which would be eliminated by the introduction of the dicamba tolerance trait. Current practice is to use dicamba or 2,4-D for pre-plant burndown of weeds that are present prior to planting cotton. When applied too close to cotton planting, dicamba or 2,4-D can potentially reduce crop stands and cause injury to new seedlings (Thompson et al., 2007). For most dicamba products, a pre-plant interval of 21 days per 0.25 lb a.i. and a minimum of 1" rain prior to planting are required. For 2,4-D, a minimum of 1" of rainfall and a waiting interval of 30 days is required prior to planting with rates up to 1.0 lb a.i. per acre.

ED_002084_00044094-00011

c) **Rotational restrictions:** Some residual and post-emergent herbicides have extensive rotational restrictions of up to 20 months after application to avoid subsequent crop injury to the rotational crop due to herbicide remaining in the soil. These limitations reduce the choice of crops that can be re-planted the same season in case the initial crop is destroyed, or even the crops that may be planted the following growing season. Examples of replanting limitations among four of the alternative herbicides are shown in the table below.

	Planting Restrictions (months) for Some Alternative Herbicide Products			
ROTATIONAL CROP	**Reflex** (fomesafen-sodium)	**Treflan HFP** (trifluralin)	**Envoke** (Trifloxysulfuron-sodium)	**Staple LX** (pyrithiobac-sodium)
Field corn	10	12 - 20	7	10 - 20
Wheat	4	5	3	4
Soybean	0	same season	7	4 - 12
Peanut	10	5	7	10
Sorghum	10 - 18	12 - 20	12	More than 10
Onions	18	5	18	4 - 12

The combination of dicamba and the Roundup Ready® Xtend Crop System will remove pre-plant restrictions providing greater flexibility to farmers and will increase the adoption of dicamba use in pre-plant weed control systems. Dicamba does not have rotational restrictions for such extended time periods, and therefore provides a substantial advantage in flexibility. For the majority of crops, no rotational restrictions apply after 120 days following a dicamba application. In addition, there are no rotational restrictions for planting corn following a dicamba application. The lack of long rotational restrictions allows farmers to keep their land in productive cultivation of crops and avoids unproductive fallow periods, which is of critical importance in selecting which herbicide(s) to use.

d) **Greater convenience:** Dicamba use in the Roundup Ready® Xtend Crop System in soybean and cotton will reduce the need for some herbicides that require use of specialized application equipment such as hooded and directed spray equipment (diuron, paraquat, flumioxazin, MSMA) to prevent crop injury. Hooded sprayers in particular require more time to make herbicide applications and application errors can lead to significant crop damage. In addition, hooded spray rigs employ shorter boom lengths compared to 100-foot spray booms requiring more passes across the field, which in turn use more resources such as labor, fuel, and wear-and-tear on equipment.

e) **Support integrated pest management practices:** Dicamba use in the Roundup Ready® Xtend Crop System in soybean and cotton will continue to support the adoption of integrated pest management (IPM) practices by allowing farmers to continue to focus on post-emergent, in-crop weed control, as they have practiced with glyphosate- and glufosinate-tolerant crops, and making current practices more effective

by providing an additional mechanism-of-action. This will allow farmers to avoid unnecessary herbicide treatments and to delay some herbicide treatments until field scouting indicates a need for additional weed control, which is consistent with the principles of IPM.

In sum, dicamba is a particularly effective herbicide, especially on multiple-herbicide resistant weeds and hard-to-control weeds. The use of dicamba in the Roundup Ready® Xtend Crop System will benefit farmers by controlling resistant weeds and maintaining the durability of currently available weed control options. It will provide environmental and economic benefits by expanding the use of reduced tillage agronomic practices and reducing crop inputs. Thus, the registration of dicamba for use in the Roundup Ready® Xtend Crop System represents a significant opportunity to extend the well-established benefits of herbicide-tolerant cropping systems. The new use of dicamba will improve the management of herbicide-resistant weeds, and thus overall weed management and sustainability of crop production in the United States. It will provide a valuable weed management tool, provide more weed control options for farmers, and help to slow the selection for resistant herbicide genotypes for all herbicide mechanisms-of-action (i.e., ALS, PPO, HPPD, glufosinate, glyphosate) that are currently registered for use in soybean and cotton while supporting the adoption of no-till and conservational tillage practices.

III. A DOWNWIND BUFFER OF 110 FEET IS MORE THAN SUFFICIENT TO PROTECT ENDANGERED SPECIES AND NON-TARGET ORGANISMS

EPA has proposed to mandate a 110-foot buffer in all directions to protect non-target plants and threatened and endangered species from dicamba off-site movement from volatilization and particle drift. Particle drift is also known as spray drift.

EPA concluded that a 100-110 foot downwind buffer was sufficient to address particle drift, but proposed to impose that buffer in all four directions to protect against off-site movement from volatilization (Ecological Risk Assessment for Cotton, EPA-HQ-OPP-2016-0187-0005). For particle drift, Monsanto data confirms that a 110-foot downwind buffer is more than sufficient to protect endangered species and non-target organisms for the TTI 11004 nozzle (MRID 49424601)[4]; for volatility, Monsanto data establishes that no buffer is required to protect endangered species and non-target organisms regardless of wind direction.

EPA's proposed registration stated that "… if EPA receives volatility data under varied conditions of temperature and relative humidity, as these factors play a strong role in volatility under field conditions, it may reconsider whether this mitigation requirement [*in-field buffer in all directions*] is necessary." In response to this request, on April 12, 2016, Monsanto provided EPA with additional volatility data conducted under varied conditions of temperature and relative humidity in key use areas for the Monsanto Dicamba Products. The data demonstrate that a buffer is not necessary to protect against volatilization. Although earlier dicamba products (including Banvel®) had the potential to move off-site through volatilization, multiple lines of evidence demonstrate that there should be no concern of off-site movement due to volatility for the Monsanto Dicamba Products, and that a downwind buffer of 110 feet is more than adequate

[4] Any nozzle that does not increase the drift potential of M1691 Herbicide relative to the nozzle for which the buffer has been determined should be acceptable

to protect non-target organisms from potential adverse effects when the mandatory application requirements described in the draft M1691 Herbicide label are instituted. These lines of evidence include a laboratory humidome study, flux measurements from field volatility studies, and air modeling to predict off-target air concentrations and deposition due to off-target movement via volatility, as described further below. Thus, EPA should remove the proposed requirement for an omnidirectional buffer and instead retain only a downwind buffer to protect non-target plants and threatened and endangered species in order to prevent unreasonable impacts to U.S. agriculture. As discussed further in Section III.A, a four-sided buffer would impose large costs on growers, and disproportionately impact smaller-scale farms.

A. A Four-Sided Buffer Would Harm Farmers and Agriculture

Requiring a buffer around the entire perimeter of the field would impose substantial complexity, management challenges and potential economic impacts on growers, and large costs on growers and commercial applicators. The percentage of a field that would be occupied by a four-sided buffer is large, regardless of field size, as shown in Table 1. This would leave a substantial area at risk of poor weed control and decreased yield, forcing growers to apply multiple herbicide mixes on every field, at significant financial cost, by using multiple applicator rigs, or frequently rinsing existing rigs.

Table 1. Field Buffer As Percentage of Field[5]

FIELD ACRES	% FIELD TREATED WITH DICAMBA	% FIELD AS BUFFER (4 sides @ 110')
1	0%	100%
5	28%	72%
10	44%	56%
20	58%	42%
40	69%	31%
80	78%	22%
100	80%	20%
120	82%	18%
160	84%	16%
180	85%	15%
200	86%	14%

Critically, field sizes between 10 and 120 acres are common; growers of those fields, in particular, may not be able to economically withstand leaving this portion of their field untreated. Moreover, the percentages in Table 1 assume a square or rectangular field. However, many fields are irregularly shaped, which exacerbates greatly the applicator's ability to observe a buffer on the entire perimeter of the field. These impacts would be disproportionate on smaller scale farmers and farmers with large numbers of small or irregular-shaped fields. It will be impractical to use the technology in many small fields where such a significant portion will require alternative weed control measures. Compliance with the buffer requirements will also be

[5] These data assume fields are immediately adjacent to sensitive areas on all sides.

ED_002084_00044094-00014

challenging in irregular-shaped fields and may result in unintended herbicide application overlaps and gaps.

Moreover, cotton is commonly produced on raised beds which require equipment passes over the field to be in the same direction as the rows. It will be impossible to manage weed control in buffers on the ends of the field with applicator passes perpendicular to the rows. This means the applicator will have to run across the entire field twice- once to apply a dicamba-based herbicide program and a second time to apply a non-dicamba-based program in the buffer areas, resulting in additional labor, fuel, equipment wear and mechanical damage to the crop and soil. Applicators may be able to mitigate some of the challenges posed by buffers around the entire perimeter of the field by installing direct injection systems on existing equipment or purchasing new equipment with this capability. However, this would require significant equipment investments and may not be practical for smaller scale growers.

This buffer requirement will also prevent the use of dicamba-based herbicide programs for management of resistant weed populations on significant numbers of acres. This will limit M1691 Herbicide's utility as a herbicide resistance management tool and allows potential proliferation of resistant weeds that would otherwise be controlled by this technology.

Lastly, Monsanto agrees with EPA that the following areas should be included in the buffer distance calculation when adjacent to field edges:

- Roads, paved or gravel surfaces.
- Planted agricultural fields containing dicamba-tolerant crops and monocot crops such as corn, sorghum, proso millet, small grains and sugarcane.
- Agricultural fields that have been prepared for planting.
- Areas covered by the footprint of a building, shade house, silo, feed crib, or other man-made structure with walls and/or a roof.

B. A Buffer Is Not Needed to Protect Against Volatilization of the Monsanto Dicamba Products.

Monsanto has provided EPA with additional volatility data and exposure modeling for the Monsanto Dicamba Products. EPA previously concluded that volatility is not a major component to offsite movement (EPA-HQ-OPP-2016-0187-0005, pg. 7); this additional evidence demonstrates that there should be no concern of off-site movement due to volatility.

These data provide multiple lines of evidence that the Monsanto Dicamba Products do not require any omnidirectional buffers to address volatility. The flux values, calculated from EPA guideline field volatility studies, are consistent with the assessments of low-exposure concerns previously made by the EPA from the previously submitted and reviewed Theoretical Profile Shape (TPS) method volatility study (MRID 49022501). These GLP guideline studies were conducted under varied environmental conditions (higher temperatures, varied relative humidity, and different soil types in Texas and Georgia), rates (0.5 lb/A and 1.0 lb/A) and agronomic

ED_002084_00044094-00015

conditions (in-crop and pre-emergence) that are consistent with typical applications in cotton and soybean growing regions. These additional flux values as well as the TPS method flux value are at least two to three orders of magnitude lower than the conservative modeling estimate that was determined by the EPA using the Woodrow equation. These low flux values, obtained under varied environmental conditions, provide additional weight of evidence that M1691 Herbicide is a low-volatility formulation, and that M1768 and M1769 herbicides are also low volatility formulations. These values have been used as input parameters for standard EPA models (PERFUM and AERMOD) to estimate off-site dicamba air concentrations and deposition, respectively. These modeling results, consistent with EPA's assessment using flux values from the TPS study, predict that there would be no effects to non-target plants outside of the treated area on any side of the field, regardless of wind direction. EPA previously concluded that volatility is not a major component to offsite movement; this additional evidence demonstrates that there should be no concern of off-site movement due to volatility. Therefore, an in-field buffer in all directions is not necessary to address volatility; only a downwind buffer for particle drift is necessary to protect non-target organisms and threatened or endangered species.

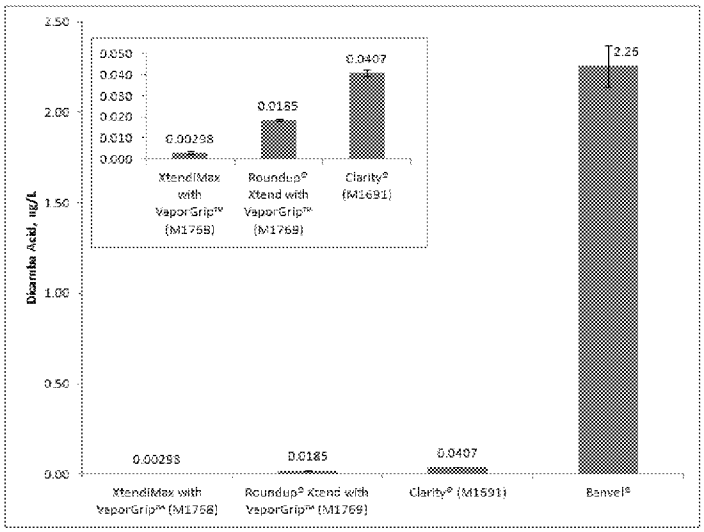
1. Laboratory (Humidome) Relative Volatility Study Showed Low Volatility Levels, Particularly Compared to Banvel

A laboratory method utilizing a growth chamber under controlled environmental conditions was used to assess the relative volatility of formulated products (Gavlick et al., 2016). This published method has been used to assess the relative volatility of the Monsanto Dicamba Products and Banvel® (dicamba dimethylamine (DMA) salt containing formulation) (MRID 49888605). The relative volatility[6] of four dicamba containing formulations was determined. M1768 Herbicide was approximately three orders of magnitude less volatile than Banvel®, and over one order of magnitude less volatile than M1691 Herbicide. M1769 Herbicide exhibited half the volatility of M1691 Herbicide (Figure 1).

[6] The humidome method is designed to assess relative volatility of different formulations. Measured concentrations for a given formulation may vary from study to study.

ED_002084_00044094-00016

Figure 1. Relative volatility data

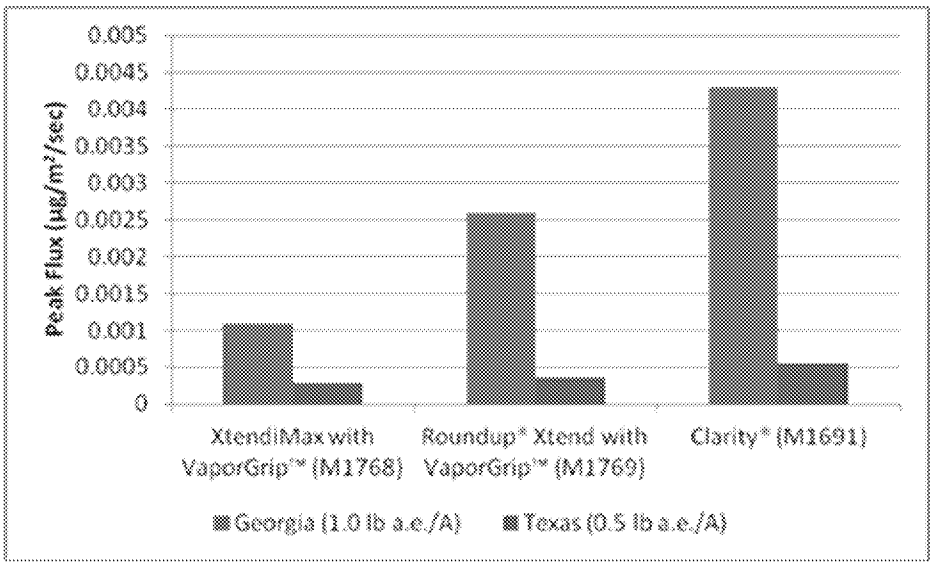


2. EPA Guideline Field Volatility Studies Conducted Under Varied Environmental Conditions Provide Additional Data for the Assessment of Off-Site Movement

Monsanto conducted a total of six new EPA Guideline 835.8100 field volatility studies to support the conclusion that the Monsanto Dicamba Products are low-volatility formulations (MRIDs 49888401, 49888403, 49888501, 49888503, 49888601, 49888603), which is in agreement with the already submitted TPS field volatility study described above (MRID 49022501). The field volatility studies were conducted under varied environmental conditions (higher temperatures, varied relative humidity, and different soil types in Texas and Georgia), application rates (0.5 lb/A and 1.0 lb/A), agronomic conditions (in-crop and pre-emergence) and data was collected over longer duration (3 days). Flux values from these studies were calculated using the EPA Study Profile template.

A comparison of the peak flux values from Texas and Georgia for M1768 Herbicide and M1769 Herbicide shows that these formulations are lower volatility relative to M1691 Herbicide from the same locations (Figure 2) and are consistent with the same formulation volatility trends (M1691 (Clarity) > M1769 (Roundup Xtend) > M1768 (Xtendimax)) observed in the humidome study (MRID 49888605) described above and shown in Figure 1.

Figure 2. Peak Flux Values from field studies conducted in Texas and Georgia



The results from these field volatility studies on the three formulations were used in conjunction with standard EPA models (PERFUM and AERMOD) to demonstrate that there will be no effects outside of the field due to volatilization. The analysis of potential offsite movement of dicamba due to volatility is discussed in more detail in the following section.

3. Modeling of Off-Target Movement Due to Volatility Demonstrates That a Buffer Is Not Necessary to Protect Against Volatilization of the Monsanto Dicamba Products

Flux values calculated from the field volatility studies were used along with a range of weather data to predict off-target movement via volatility. The selected weather conditions used in this assessment represent widely varied weather conditions, covering a broad geographical range representative of soy and cotton-growing regions that represents conservative worst case conditions. The predicted air concentrations and deposition values were then compared to no-effect concentrations/rates to assess distances from the application area that would result in no effects to listed non-target plant species. These analyses are described further below, and demonstrate that no effects of dicamba will occur outside the boundaries of the field.

a. AERMOD Volatility Deposition Modeling Demonstrates That The NOER Is Not Exceeded In Any Direction

Estimates of dry and wet deposition that could potentially occur downwind of an application of the Monsanto Dicamba Products were derived using the U.S. EPA dispersion model AERMOD[7]

[7]AERMOD reports were submitted on May 27, 2016 (MRIDs 49925701, 49925801, and 49925901 for M1691, M1768, and M1769 herbicides, respectively).

considering the application window for dicamba during the year.[8] The major inputs to AERMOD include the flux rate, which represents the mass off-gassing on an hourly basis after an application, and the meteorological conditions. Flux rates were derived from the field volatility (flux) studies conducted in Georgia and Texas by Monsanto for all three formulations. AERMOD also requires meteorological data files with hourly values for wind speed, wind direction, air temperature, atmospheric stability, and characteristics of the planetary boundary layer. Meteorological files were developed using National Weather Service data sources for Raleigh, North Carolina; Peoria, Illinois; and Lubbock, Texas[9] which represent a range of key growing areas and widely varied environments.

AERMOD deposition estimates were made for an 80-acre application[10] using hourly weather data from each day of the application window at three locations. Estimates were made at several downwind distances from the edge of the field, including 5, 10, 20, 30, 40, 50, 75, 100, 125, and 150 meters. The estimates represent high-end values that may occur in the direction the wind is blowing during meteorological conditions that are least conducive to gas dispersion (*i.e.,* conditions that maximize offsite deposition – a conservative assumption).

At the Georgia site, the 90th percentile dry deposition at 5 m ranged from 9.55×10^{-7} to 4.55×10^{-6} g/m^2, and the 90th percentile wet deposition ranged from 2.28×10^{-9} to 4.41×10^{-8} g/m^2. At the Texas site, the 90th percentile dry deposition at 5 m ranged from 5.77×10^{-7} to 2.12×10^{-6} g/m^2, and the 90th percentile wet deposition ranged from 2.72×10^{-9} to 1.99×10^{-8} g/m^2. In all cases, the 90th percentile deposition results were below the NOER for listed non-target plant (2.91×10^{-5} g/m^2) in the downwind direction and represent worst case exposure estimates. Deposition from volatility in other directions would be even lower than levels predicted in the downwind direction, and thus the deposition would be less than the NOER in all directions from the spray area. Based on this analysis, the NOER is not exceeded in any direction; therefore, no buffer whatsoever is required to protect non-target organisms from any potential effects to due to volatility. Moreover, such a four-sided buffer would impose large and unnecessary costs on growers, and would disproportionately impact small-scale farms.

---

[8] Since dicamba is only applied for this use during the growing season, the deposition values were only determined during the following time periods: Lubbock, TX (May 1 – Jan. 4); Peoria, IL (Apr. 1 – Jul. 31); Raleigh, NC (Apr. 1– Dec 8.). Time periods that extend into the winter are the result of the extended application window of cotton versus soybean.

[9] Phoenix, AZ is included in the PERFUM modeling described below but was not included in the AERMOD assessment for two reasons: (1) cotton growing regions were already represented by the Texas and Raleigh scenarios; and (2) the air concentrations from Phoenix were comparable to the air concentrations from either Raleigh or Peoria, depending on the averaging period, and thus the Phoenix site was not modeled.

[10] AERMOD deposition estimates were based on application rates of 1.0 lb a.e./A for the Georgia site and 0.5 lb a.e./A for the Texas site.

ED_002084_00044094-00019

b. Additional Analysis of Dicamba Air Concentrations from Volatility Demonstrate That There Would Be No Effects Outside the Field From Volatilization

To assess potential effects to non-target plant species as a result of exposure to dicamba in air, predicted off-target dicamba air concentrations were compared to a vapor phase no effect concentration (NOEC) for soybean, the plant species most sensitive to dicamba. The vapor phase NOEC was determined from a study designed to evaluate the relationship between dicamba vapor concentrations and plant effects. Dicamba air concentrations were estimated outside the spray area using the U.S. EPA model PERFUM.[11] The NOEC was not exceeded in the downwind direction and thus would not be exceeded in any other direction; as such, a buffer in all directions is not necessary to protect threatened or endangered species and non-target organisms from the effects of volatilization from the Monsanto Dicamba Products. Additional details regarding the air concentration plant effects study used to determine the vapor phase NOEC and the off-target vapor modeling are provided below.

Monsanto recently conducted and submitted a humidome study (MRID 49925703, submitted to EPA on May 27, 2016) to generate laboratory-based data to determine the relationship between dicamba vapor concentration and crop response. The results of this study determined a no-effect concentration of at least 17.7 ng/m^3 for a 24-hour period, which served as a basis of comparison to the air concentration estimates from the PERFUM modeling analysis described below for the Monsanto Dicamba Products.

Air concentration estimates that could potentially occur downwind of an application of the Monsanto Dicamba Products were derived using the Probabilistic Exposure and Risk model for FUMigants (PERFUM) considering the application window for dicamba for the year.[12] The major inputs to PERFUM include the flux rate, which represents the mass off-gassing on an hourly basis after an application, and the meteorological conditions. Flux rates were derived from the field volatility (flux) studies conducted in Georgia and Texas by Monsanto for all three formulations, as described above. PERFUM requires meteorological data files for a multiyear period with hourly values for wind speed, wind direction, air temperature, atmospheric stability, and mixing height. Meteorological files were developed using U.S. Environmental Protection Agency data sources for Raleigh, North Carolina; Peoria, Illinois; Lubbock, Texas; and Phoenix, Arizona which represent a range of key growing regions and widely varied environments.

---

[11] PERFUM reports were submitted on May 27, 2016 (MRIDs 49925702, 49925802, and 49925902 for M1691, M1768, and M1769 herbicides, respectively).

[12] Since dicamba is only applied for this use during the growing season, the deposition values were only determined during the following time periods: Lubbock, TX (May 1 – Jan. 4); Peoria, IL (Apr. 1 – Jul. 31); Phoenix, AZ (Mar. 1 to Dec. 18); Raleigh, NC (Apr. 1– Dec 8.). Time periods that extend into the winter are the result of the extended application window of cotton versus soybean.

ED_002084_00044094-00020

PERFUM air concentration estimates were made for an 80-acre application[13] at several downwind distances from the edge of the field, including 5, 10, 25, and 50 meters. The air concentration estimates presented are the 95th percentile[14] (95% of air concentration values would be lower) of all values at a given distance from the field, considering all wind directions and all the meteorological data for a given site. Thus, the estimates represent high-end values that may occur in the direction the wind is blowing during meteorological conditions that are least conducive to gas dispersion (*i.e.,* conditions that maximize offsite air concentrations – a conservative assumption). Additionally, air concentration estimates were made for four different averaging times, including 1, 4, 8, and 24 hours.

The 24-hour air concentration estimates at the nearest distance predicted by the model range from 1.5 to 16.1 ng/m^3, which are less than the no-effect concentration of at least 17.7 ng/m^3 determined in a laboratory (humidome) plant effects study (described above).

Air concentrations from volatility in other directions would be even lower than the concentrations predicted in the downwind direction since dicamba vapor is carried with the wind in the downwind direction, and thus air concentrations would also be lower than the NOEC at all other directions from the spray area. Based on this conservative exposure estimate, the NOEC is not exceeded in the downwind direction (*i.e.,* conditions that maximize offsite air concentrations – a conservative assumption) and would not be exceeded in any other direction, regardless of whether wind direction changes after application; therefore, a buffer in all directions is not necessary in order to sufficiently protect threatened or endangered species and non-target organisms from the effects of volatilization from the Monsanto Dicamba Products.

4. Any Effects of the Monsanto Dicamba Formulations From Off-Site Movement Are Limited to Downwind Particle Drift at the Time of Application

The results from these additional lines of evidence for the Monsanto Dicamba Products – including laboratory (humidome) volatility studies, field volatility studies, and off-target movement modeling – demonstrate that there should be no concern of off-site movement due to volatility. Any potential effects from movement of the Monsanto Dicamba Products therefore only occur in a downwind direction at the time of application, and the Monsanto Dicamba Products do not leave the field in any other directions at levels that could impact non-target organisms or threatened or endangered species. Furthermore, the field volatility studies and off-target modeling consider varied temperature and relative humidity conditions, as specified by U.S. EPA. As such, a downwind buffer for particle drift is protective of any potential effects to non-target organisms and threatened and endangered species, and no buffer at all is necessary to

---

[13] PERFUM air concentration estimates were based on flux values from studies with application rates of 1.0 lb a.e./A for the Georgia site and 0.5 lb a.e./A for the Texas site.

[14] EPA exposure assessments typically consider the 90th percentile value (US EPA, 2013) as representative of an appropriate level of conservatism for assessment of exposure. Thus, use of the 95th percentile value represents an even more conservative assessment. Use of either 90th or 95th percentile values is consistent with the recommendation of the National Academy of Science panel (NRC, 2013) that recommended the use of probabilistic risk assessment.

ED_002084_00044094-00021

protect non-target organisms or threatened or endangered species from the effects of volatilization of the Monsanto Dicamba Products. Any buffer, other than a downwind 110-foot buffer at the time the Monsanto Dicamba Products are applied, would be unnecessary and unreasonably restrictive to growers.

C. The Available Data on Particle Drift Support That a Downwind Buffer of No More Than 110-Feet at the Time of Application Is More Than Sufficiently Protective

Monsanto previously submitted multiple lines of evidence to support that a downwind buffer of 110 feet will be protective of potential adverse effects to non-target organisms and threatened or endangered species (MRID 49292801, MRID 49424601). Specifically, a 70-foot buffer will be protective of potential adverse effects from ultra coarse droplets, and a 110-foot buffer will be protective of potential adverse effects from extremely coarse droplets. Therefore, a 110-foot buffer will be protective of adverse effects from both ultra coarse and extremely course droplets.

The lines of evidence previously submitted to EPA included deposition curves derived from both generic[15] and dicamba-specific particle drift deposition data used in conjunction with the most sensitive endpoint from the DGA salt vegetative vigor study to estimate a no effect distance. Chemical deposition data included data from a 1993 Spray Drift Task Force trial using an extremely coarse nozzle, data from Agriculture, Agri-Food Canada trials conducted in 2000 at relevant weather conditions using an extremely coarse nozzle, and data from a dicamba diglycolamine salt-specific BASF field deposition study (MRID 49067704) using the TTI nozzle. Collectively, these lines of evidence indicate that a downwind buffer distance of 110 ft for dicamba applications at a rate of 0.5 lb a.e./A is more than adequate to protect non-target organisms from potential adverse effects when the mandatory application requirements described in the draft M1691 Herbicide label are instituted[16]. This conclusion is further supported by plant effect studies conducted under strict data quality standards (MRID 48876001). Furthermore, the data collected to support these lines of evidence were collected under protocol following GLP methods or implemented strict data quality measures and should be given greater weight than ancillary information obtained from product development research or incident reports that lack sufficient detail to fully reproduce the conditions of the dicamba applications.

---

[15] Particle drift is primarily influenced by the drop size distribution that results from a solution being sprayed through a nozzle. Generic deposition data are appropriate for a broad range of spray solutions provided that the data used to generate the generic deposition curve have a similar drop size classification to that produced by a spray nozzle. This approach is consistent with the approach used in standard EPA exposure assessments that utilize generic spray deposition curves in AgDRIFT.

[16] Monsanto has also submitted product-specific field deposition studies for M1768 (Submitted November 19, 2015; MRID 49770301) and M1769 (Submitted April 12, 2016; MRID 49888606) herbicides that provide evidence that the no-effect distances are less than the 110-foot downwind buffer distance for both M1768 and M1769.

D. Information from Product Development Research and Extraneous Incidents Do Not Undermine the Sufficiency of a 110-Foot Downwind Buffer for Particle Drift, and No Buffer for Volatility

1. M1691 Herbicide Was Not Used Alone in the Product Development Research

Monsanto agrees with EFED that data generated as part of product development research – including academic field trials – is not suitable for regulatory decision-making (see EPA-HQ-OPP-2016-0187-0005, pg. 25); no attempts were made to comply with rigorous data quality standards or EPA test guidelines, and no formal study reports were generated. The data do not meet the standards of CFR Parts 158 and 160 and are wholly unsuitable for use in EPA's decision-making process for the registration of M1691 Herbicide.

Indeed, it is important to recognize that the 'field trials' that EPA references were conducted to understand and refine components (nozzles, formulations and spray mixtures, label restrictions) of the Roundup Ready® Xtend Crop System – components that ultimately will become part of the label requirements for the product. As such:

- M1691 Herbicide alone was not used in any of the field trials;
- Experimental formulations that were evaluated are not being commercialized;
- There has been no confirmation that these treatments have droplet size distributions that would fall within the acceptable range compared to the droplet size distribution of the spray mixture on which the 110 ft buffer is based; and
- In all cases not all currently proposed label requirements were met.

These field trials are a critical part of product development, and are essential to help determine the appropriate conditions and requirements for the product to ensure appropriate stewardship. Moreover, these field trials necessarily must include some level of "trial and error" – such that incidents are expected to occur. It therefore would be profoundly inappropriate for EPA to use these field trials – which are not representative of the product that will be sold or consistent with the requirements of the label – to make determinations about potential off-target movement, and therefore about appropriate buffers or other label conditions. Pesticide manufacturers should not be penalized for conducting critical research that informs the ultimate label requirements.

2. EPA's Analysis of Field Trial Data Did Not Consider Dose Response

Even if the field trial data were considered, a rigorous modeling approach would show no adverse effects beyond 110 feet (MRIDs 49570501 and 49570502), with one exception likely caused by important differences between the experimental formulation and M1691 Herbicide, including the surfactant loading and potential differences in the drop size distribution. These data support that a 110 ft. downwind buffer is protective of sensitive crops and threatened and endangered species.

Off-target movement was evaluated by spraying a block of sensitive soybean plants in the middle

of a much larger field, and then taking measurements on quantitative endpoints (e.g., plant height, yield) downwind. If off-target movement was sufficient to impact plants downwind, distance-dependent variation in plant height (or yield) was observed (i.e. a dose-response, Figure 3). If off-target movement was not sufficient to impact plants downwind, variation in plant height (or yield) was independent of distance (Figure 4). The absence of a distance-dependent relationship (i.e. no dose response) indicates that the level of dicamba exposure was not sufficient to impact plants, *even immediately adjacent to the spray application.*

Figure 3. An example of distance-dependent variation in yield (i.e. a dose-response) and illustration of the segmented regression analysis.

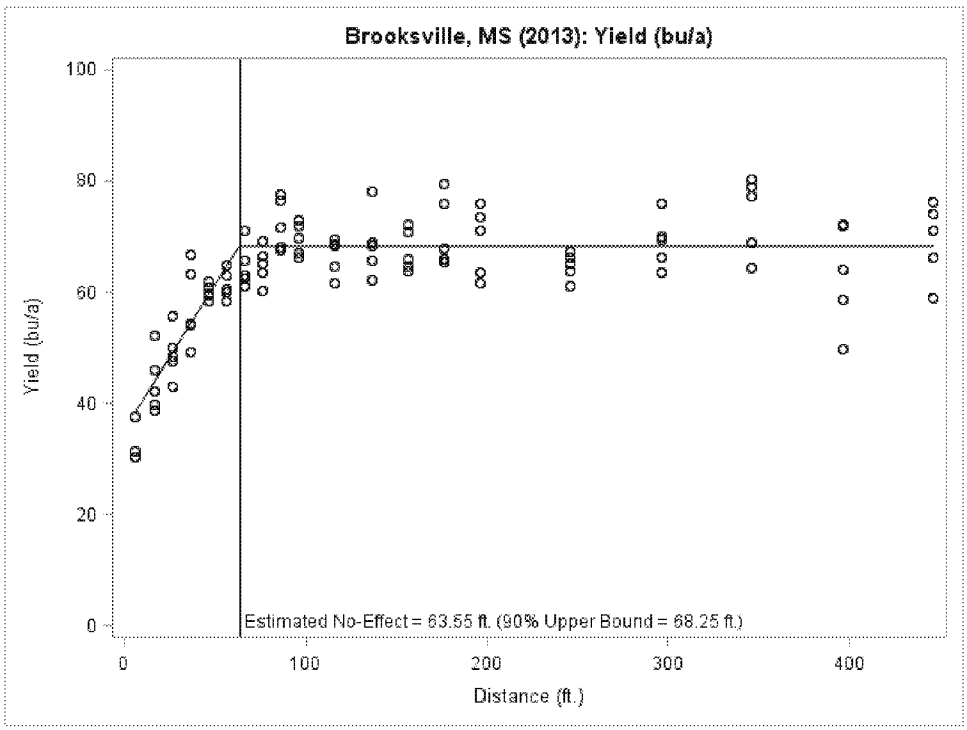
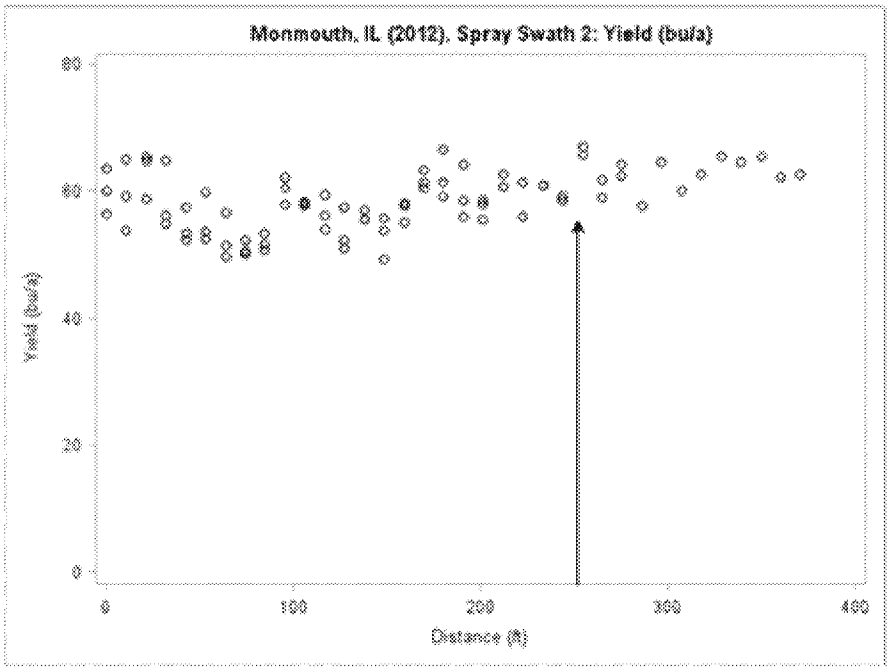


Figure 4. A lack of distance-dependent variation in yield (i.e. no dicamba effect). EFED's use of hypothesis testing led to purported effects on yield up to approximately 250 ft., indicated by the arrow.



Applying a segmented regression modeling approach (illustrated in Figure 3), there are no adverse effects on non-target plant growth or reproduction beyond 110 feet, with the exception of one spray application. This exception likely was caused by dissimilarities between the spray mixture used in the field and M1691 Herbicide, as discussed in greater detail at the end of this section.

In their analysis, however, EFED employed a hypothesis testing method which used two-sample t-tests (one-tailed, α=0.1) to compare plant height and yield at each measured distance to "control groups", represented by the two farthest distances downwind of the spray application. The "no-effect" distance for a given site was considered to be the first distance greater than the furthest distance downwind which had a significant decrease compared to the control group. Based on this analysis and without evaluating or considering dose-response, EFED concluded that several of the field trials provided evidence that a 110-foot buffer might not be sufficient to protect listed species. But consideration of a dose-response is especially important in a field situation where non-uniformity in soil type, soil moisture content, soil compaction, soil fertility level, crop emergence, etc. may cause an increase or decrease in plant height or yield in a small area of a field, completely independent of any exposure to dicamba. With the potential for this type of variability, it is important that samples not be evaluated individually against a control, but rather the evaluation should consider the response across the field in its entirety.

As a result, the hypothesis testing method employed by EFED had an uncontrolled and unknown Type 1 error rate (i.e., the rate of false positives) and generated no-effect estimates that were, at least in part, an artifact of the experimental design (i.e., results were dependent on the distances

at which measurements were taken). Consider the analysis of the second spray swath for yield at Monmouth, Illinois (Figure 4). In this trial, measurements were taken at 35 downwind distances. Using EFED's one-tailed t-test approach, yield was un-impacted at the highest levels of dicamba exposure – the p-values for the first three distances immediately downwind of the spray were 0.22, 0.40, and 0.18, respectively. Considering the entire dataset, variation in yield is clearly independent of distance and a conclusion of no adverse effect is warranted. Nonetheless, EFED proceeded with an analysis consisting of 33 unprotected hypothesis tests using a "control group" with 2 plants. One concern when making several comparisons in a single analysis is whether significant differences are due to real differences or simply the result of making a large number of comparisons. Making a large number of comparisons increases the chance of finding differences that appear to be significant when they are not. With an α-level of 0.10 and assuming the tests were independent, we would expect to find (0.10)(33) = 3.3 significant differences even in the absence of any real dicamba effect. The family-wise error rate is $1-0.90^{33} = 0.9691$. This means that the probability of making at least one false claim of a dicamba effect is approximately 97%. Further complicating the interpretation is the fact that these hypothesis tests are not independent, because yield is correlated in space. This dependence between the 33 hypothesis tests and the inadequate level of replication in the control group have the potential to inflate the Type 1 error rate a very large, but unknown amount. P-values cannot be interpreted within the framework of hypothesis testing when the Type 1 error rate is unknown and uncontrolled. The conclusions at this and all other sites are therefore suspect. In addition to the limitations and weaknesses of the statistical analysis, site-specific considerations are discussed below.

Rower, AR

M1691 Herbicide was not evaluated in this field trial. Additionally, no dose-response was observed; yield was un-impacted at the highest levels of dicamba exposure (immediately adjacent to the spray application).

The result from EPA's analysis in Rower is not supported by other measured endpoints. Based on EPA's analysis, the no-effect distances for plant height, the most sensitive endpoint from the vegetative vigor study with Clarity, were 7.9 and 20.6 ft. for 14 and 28 DAT, respectively.

Combined with the limitations and weaknesses of the statistical analysis conducted by EFED (see above), data from this site do not undermine the sufficiency of a 110-foot downwind buffer for protection of non-target plants and threatened and endangered species.

Kirkwood, IL

M1691 Herbicide was not evaluated in this field trial. Additionally, variation in plant height was independent of distance after approximately 50 ft.

The result from EPA's analysis in Kirkwood is not supported by other measured endpoints. Based on EPA's analysis, the no-effect distance for yield was 16.25 ft.

Combined with the limitations and weaknesses of the statistical analysis conducted by EFED (see above), data from this site do not undermine the sufficiency of a 110-foot downwind buffer for protection of non-target plants and threatened and endangered species.

Monmouth, IL Swath 1

M1691 Herbicide was not evaluated in this field trial. Instead, the trial used an experimental formulation that has difference surfactant properties and potentially a different droplet size distribution than M1691 Herbicide.

The result from EPA's analysis in Monmouth Swath 1 is not supported by other measured endpoints. Based on EPA's analysis, the no-effect distances were 74.2 and 0 ft. for plant height 14 DAT and yield, respectively.

Combined with the limitations and weaknesses of the statistical analysis conducted by EFED (see above), data from this site do not undermine the sufficiency of a 110-foot downwind buffer for protection of non-target plants and threatened and endangered species.

Monmouth, IL Swath 2

M1691 Herbicide was not evaluated in this trial. Instead, the trial used an experimental formulation that has difference surfactant properties and potentially a different droplet size distribution than M1691 Herbicide. Additionally, no dose-response was observed; instead, yield was un-impacted at the highest levels of dicamba exposure (immediately adjacent to the spray application).

The result from EPA's analysis in Monmouth Swath 2 is not supported by other measured endpoints. Based on EPA's analysis, the no-effect distances for plant height, the most sensitive endpoint from the vegetative vigor study with Clarity, were 53 and 95.4 ft. for 14 and 28 DAT, respectively.

Combined with the limitations and weaknesses of the statistical analysis conducted by EFED (see above), data from this site do not undermine the sufficiency of a 110-foot downwind buffer for protection of non-target plants and threatened and endangered species.

Haubstadt, IN Swath 2

M1691 Herbicide alone was not evaluated in this trial. Spray application was made under environmental conditions (e.g., wind speed) that are not compliant with draft label requirements for M1691 Herbicide.

The result from EPA's analysis in Haubstadt Swath 2 is not supported by other measured endpoints. Based on EPA's analysis, the no-effect distances for plant height, the most sensitive endpoint from the vegetative vigor study with Clarity, were 40 and 80 ft. for 14 and 28 DAT, respectively.

Combined with the limitations and weaknesses of the statistical analysis conducted by EFED (see above), data from this site do not undermine the sufficiency of a 110-foot downwind buffer for protection of non-target plants and threatened and endangered species.

Lastly, it is also important to note that the spray solutions included in the academic trials were not consistent with the draft M1691 Herbicide label (i.e., M1691 Herbicide was not sprayed

alone in any of the academic trials) and are not directly relevant to the proposed M1691 Herbicide registration. Furthermore, there has been no confirmation that the droplet size distributions in these treatments would fall within the acceptable range compared to the droplet size distribution of the spray mixture on which the 110-foot buffer is based.

3. Reported Impacts From Specific Sites Are Due to Uses That Are Inconsistent With Current Proposed Label Conditions

The incident data discussed by EPA for specific sites were not compiled for the purpose of being included in EPA's risk assessment for listed species. The site-specific incident information that was reported does not have the same quality measures (e.g., full data documentation, study protocols, QA/QC, study reports) in place as the regulatory studies, and therefore is not suitable for inclusion in EPA's risk assessment. ***All incident information reported to EPA appeared to result from applications that were inconsistent with current label application requirements. In other words, there were no incidents reported when current proposed label application requirements were met.*** (*See* MRID 49570501, submitted to EPA April 13, 2015.)

The Missouri Department of Agriculture (MDA) reported incidents occurring from 2013 to 2015, and the Arkansas Plant Board (APB) reported incidents occurring in 2015. As discussed by EPA, eight of the 15 total incidents were reported to be a result of a single instance of post-emergent dicamba application to DT-cotton of Strut herbicide mixed with glyphosate and applied at two times the labeled rate for proposed M1691 post-emergent use (EPA-HQ-OPP-2016-0187-005, p.32). The remaining incidents were reported to be from pre-emergent applications of dicamba, or it is unknown as to whether any dicamba applications were made. In its investigation of a 2014 incident, MDA determined that it is uncertain whether the damage observed was due to dicamba or another cause. A 2013 incident reported by MDA is discussed in further detail below.

<u>MO Case File #81513M00701/EIIS Incident #I026579-001</u>

The MDA notified EPA of an incident in 2013 in which it was alleged that damage was observed in a non-DT soybean field from a nearby application of M1691 Herbicide (Clarity®). The final report executed by MDA to EPA did not determine any cause of the damage. However, EPA has indicated that, in a subsequent communication reported by EPA (2015 letter from D. Slade, MDA to Grant Rowland, EPA), MDA concluded that the reported damage was caused by off-site movement due to volatilization. It is not clear what additional information was provided to make this determination, or why it was not included in the final MDA written report of the investigation, but a number of factors indicate that the damage observed on the non-DT soybean field was not caused by the M1691 Herbicide application, consistent with the conclusion in the final MDA report.

First, typically plant response in particle drift or volatilization incidents gradually diminishes as the distance from the herbicide application increases (Sosnoskie et al., 2015). In this incident, however, the plant response did not exhibit a gradual decline in the extent of plant response. Instead, there was evidence of slight crop response in soybeans directly east of the sprayed field; however, after a very short distance, all crop response stopped and was not seen in the remainder of the distance (890 yards) between the sprayed field and the non-DT soybean field. This is not

consistent with vapor drift, as vapor drift generally results in a gradual diminishment of symptoms as one moves further from the source.

The non-DT soybean field is east of the seed production field in question, and during the time of the dicamba application, the wind was blowing from the southeast. The wind direction was verified from independent weather records from three University of Missouri Extension Centers. Wind from the southeast direction would carry any drift from the sprayed field to the northwest, not to the east where the claimant's field is located.

Last, and most importantly, crop visual response was observed on the non-DT soybean field before the dicamba application was made. Plant dicamba residue data also were inconclusive. Plant samples were taken from the non-DT soybean field for analysis of pesticide residue, and of the 3 samples taken and analyzed only one had a dicamba level above the limit of detection. Therefore, it could not be confirmed there was any dicamba present in the other two samples. A county road runs to the west of the claimant's field, bisecting the area of crop response, which included the northeastern corner of the seed production field. No samples were taken from west of the road, in an area that exhibited similar symptoms. Therefore, the limited available plant dicamba residue data does not link dicamba exposure to the visual response observed.

EPA also noted that volatilization at this site may have occurred due to climatic conditions following the application which fall outside the range of conditions for which EPA has data. Monsanto has submitted field volatility studies conducted in Texas under conditions favoring volatility, including high heat and humidity. Historical weather data for Bernie, MO, as reported at the Poplar Bluff Municipal Airport for the week following the spray application date reported in MO Case File #81513M00701, EIIS Incident report number I026579-001 was compared to temperature and relative humidity conditions from an application of M1691 Herbicide from a 2015 field volatility study conducted in Texas (June 8 – 11, 2015) (MRID 49888403). The ranges (minimum and maximum) of mean daily temperature, maximum daily temperature, mean relative humidity, and maximum relative humidity reported in the week following the application of dicamba for MO Case File #81513M00701, EIIS Incident report number I026579-001 were comparable to conditions reported for the M1691 Herbicide field volatility study. As such, based on the results of the M1691 Herbicide flux study conducted in Texas, along with the subsequent AERMOD and PERFUM modeling, a downwind buffer is more than adequate to be protective of non-target organisms. It is highly unlikely that crop damage reported in MO Case File #81513M00701, EIIS Incident report number I026579-001 was the result of off-site movement of dicamba through volatility.

This comparison of temperature and relative humidity data is summarized in Table 2.

Table 2: Temperature and Relative Humidity Data Comparison; Bernie, MO and M1691 Herbicide Volatility Study (TX)

	Bernie, MO July 5-11, 2013		M1691 Volatility Study (TX) June 8-11, 2015	
	Min	Max	Min	Max
Maximum Daily Temperature (F)	87	95	78	98
Average Daily Temperature (F)	76	86	73	83
Maximum Relative Humidity (%)	85	94	89	99
Mean Relative Humidity (%)	66	75	51	86

E. Other Lines of Evidence Also Support the Sufficiency of 110-Foot Downwind Buffer For Particle Drift Only

1. The Published Literature Does Not Show High Vapor Drift for Dicamba Resulting in Non-Target Plant Injury

In the Ecological Risk Assessments for Dicamba-Tolerant Cotton and Dicamba-Tolerant Soybean, EPA has stated that papers in the published literature demonstrate that there is high vapor drift from soybean fields resulting in non-target plant injury: "It is important to note that multiple literature studies show that there is a high vapor drift from soybean fields resulting in non-target plant injury." EPA cited the following studies in support of this conclusion: Al-Khatib and Tamhane, 1999; Auch and Arnold, 1978; Everitt and Keeling, 2009; Kelley et al., 2005; Hamilton and Arle, 1979; Lanini, 2000; Marple et al., 2008; Wall, 1994; Weidenhamer et al., 1989; and Wax et al., 1969. Importantly, however, *none* of these literature references support the conclusion that there is "high vapor drift from soybean fields."[17] In fact, none of these studies quantified or assessed vapor drift in any way. All of the reviewed papers intentionally made direct applications of dicamba at low rates to simulate particle drift – not volatilization – in order to assess plant effects at known rates. One of the papers (Auch and Arnold, 1978) described a survey of farmers regarding drift, but did not distinguish between particle drift and volatility. In addition, only four of the nine reviewed papers were even conducted with soybeans. These peer-reviewed journal articles do not support the conclusion that "there is high vapor drift from soybean fields resulting in non-target plant injury."

[17] The Lanini, 2000, reference was from the Proceedings of the Annual Meeting of the California Weed Science Society rather than a peer-reviewed journal and was not readily available for review.

ED_002084_00044094-00030

2. The Buffer Distance for Vapor Movement Estimated From Egan and Mortensen Is Incorrect

The Ecological Risk Assessments for Dicamba-Tolerant Soybean (MON 87702) and Dicamba-Tolerant Cotton (MON 87791) rely upon a peer-reviewed literature paper by Egan and Mortensen (2012) to conclude the following regarding the buffer distance sufficient to reduce exposure below the soybean NOAEC from dicamba vapor movement:

> "Based on damage assessments of non dicamba-tolerant soybean plants near treated fields after spray drift from a 0.5 lb/A DGA salt application had dissipated, the authors estimated the exposure at distance by correlation to known dose-damage correlations. They estimated that the 95% upper bound vapor exposure would drop below the soybean NOAEC at approximately a distance of 25 meters (82 feet)."[18]

Although not directly stated in the dicamba risk assessment documents, it appears that EPA may have used this distance estimate to support the need for an in-field buffer of 110 feet in all directions to be protective of potential effects to non-target plants outside the field due to volatilization. The use of a 25 meter distance to define a buffer based on the 95% confidence interval from this study is inappropriate for three reasons. First, the bootstrap procedure used to generate this confidence interval is well-known to be inconsistent (e.g., Andrews 2000; Hall & Miller 2010) when the parameter (i.e. amount of dicamba) is at or near the boundary of the parameter space (i.e. 0 g a.e./ha). Figure 4c of Egan and Mortensen (2012) shows that all empirical measures of dicamba were at or near zero after approximately 15 meters. Thus, the bootstrap is attempting to put a confidence interval around 0 – the boundary of the parameter space – and there is no way of knowing if the procedure converged to the value that it was designed to estimate. Because of this uncertainty around estimation of the 95% confidence interval, it is inappropriate to use this endpoint to set a buffer distance. Second, if the predicted dose, rather than the 95% confidence interval, is considered, the predicted dose 3 meters from the edge of the plot (0.11 g/ha at 15 m from the center of the plot[19]) is well below the NOAEC for the most sensitive non-target plant endpoint (0.29 g a.e./ha for foliar exposure of soybeans), indicating no effects outside the treated area would be predicted. Third, since 25 meters is measured from the center of the plot, even if the 95% confidence interval was used, the actual distance from the edge of the plot would be 13 meters (42 feet) not 25 meters. Based on the points above, the results from the Egan and Mortensen (2012) paper support the conclusion that a

---

[18] Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) for the Proposed Post-Emergence New Use on Dicamba-Tolerant Soybean (MON 87702), at p. 10; Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 87701), at p. 29.

[19] The distances cited in Table 3 of the Egan and Mortensen paper (2012) were measured from the center of the dicamba-treated area not the edge. The legend to Table 3 of the paper clearly states that "Distance is from the center of the treated plot, and distance >12 m are located outside of the treated plot." Adjusting distances for distance from the edge of the plot, rather than the center, 15 meters becomes 3 meters, and 25 meters becomes 13 meters.

ED_002084_00044094-00031

buffer is not required to protect non-target plants outside the field from dicamba vapor movement.

IV. EPA'S RISK ASSESSMENTS ARE SCIENTIFICALLY-SOUND AND SUPPORTED BY THE LAW

A. EPA's Approach to the Risk Assessments Is Scientifically-Sound and Well-Supported

EPA's registration of M1691 Herbicide for dicamba-tolerant soybean and cotton is based on extensive toxicity and ecological effects evaluations. As part of this process, EPA requires data on environmental fate, 40 C.F.R. §158.1300, and ecological effects on non-target terrestrial and aquatic animals, *id.* at §158.630, and non-target plants, *id.* at §158.660. EPA also specifically focuses on potential effects a pesticide may have to listed species by conducting thorough ecological risk assessments. EPA's Environmental Fate and Effects Division (EFED) conducted EPA's assessments of both ecological effects and exposure, to evaluate whether M1691 Herbicide may affect listed species. Where, based on its ecological risk assessment, EPA concluded that M1691 Herbicide would have "no effect" on listed species, it ended its endangered species assessment. Where EPA concluded, instead, that M1691 Herbicide "may affect" but was "not likely to adversely affect," a species, it conducted further analysis and informal consultation with the U.S. Fish & Wildlife Service (the "Service"). Where EPA concluded that M1691 Herbicide "may affect" and was "likely to adversely affect" a species, EPA imposed a label restriction preventing dicamba from being applied in that county.

For screening-level and some higher tier assessments, EPA has developed specific methods for calculation of estimated exposure concentrations. These methods are highly conservative and specifically designed to overstate—and not understate—concentrations that may be present in the environment. EPA also has defined methods for conducting toxicity studies as required by 40 C.F.R. part 158. Designated species within different taxonomic groups of non-target organisms are routinely used in the mandated toxicity studies. The designated species are surrogate species, and have been selected for a number of reasons, including relative sensitivity in a class of organisms, as well as availability and amenability to routine laboratory testing. Especially in the case of threatened or endangered species, it would not be possible to conduct toxicity tests with the species itself.

Because values from the same exposure models and toxicity studies are used, EPA typically conducts the screening-level FIFRA general ecological assessment and the threatened and endangered species assessment at the same time. While the safety standards under FIFRA and the ESA are different, EPA uses the screening-level assessment as the first step of both assessments. This is because the first step is a "worst-case" assessment: If an herbicide passes this worst-case screening-level assessment, EPA can conclude that the herbicide will have "no effect" on threatened and endangered species or their habitats under the ESA, and will not cause unreasonable adverse effects to the environment under FIFRA.

As a general matter, EFED's initial screening-level assessments are based, in large part, on levels of concern (LOC) for listed species, which indicate the level of pesticide use at which listed species "may be potentially affected by use." EPA, Office of Pesticide Programs, Overview of

the Ecological Risk Assessment Process in the Office of Pesticide Programs: Endangered and Threatened Species Effects Determinations, 46 (Jan. 2004). The acute LOC for listed species is just a fraction of the LOC for non-listed species. *Id.* at 47. If the LOC is triggered for a species within a taxonomic group, EPA conducts further analysis for that entire taxa.

In performing a screening-level assessment, EPA compares the toxicity value from the most sensitive species tested for a class of organisms to exposure values derived from worst-case exposure scenarios. Further, to add further conservatism to the protection of threatened and endangered species, EPA adds an additional safety factor when evaluating acute risk (10x for aquatic animals, 5x for terrestrial animals) so that the threatened and endangered species under investigation is assumed to be far more sensitive than the most sensitive organism tested. As a general rule, this assumption will substantially overstate the potential adverse effects of the herbicide to the threatened or endangered species.

In addition, in estimating the amount of exposure of the species to the herbicide, EPA assumes that the herbicide will be used in proximity to the threatened and endangered species, and that it will be applied at the highest rate of application and number of applications permissible. Again, these assumptions generally overstate the amount of exposure because the herbicide may not be used near the species' habitat, or at the highest application rate or highest number of applications. Thus, the amount of actual exposure may be considerably less than the amount estimated using the worst-case assumptions.

If, using these conservative worst-case assumptions, the screening-level assessment shows that no direct or indirect effects on threatened and endangered species are indicated, EPA can conclusively rule out the potential for adverse effects and properly conclude that there will be "no effect" on threatened and endangered species or critical habitat from use of the herbicide. Thus the screening-level assessment is used to identify herbicide use scenarios where adverse ecological effects are not expected to occur. An herbicide that passes the screening-level assessment is deemed acceptable for use under both FIFRA and the ESA, and both the FIFRA assessment and the threatened and endangered species effects determination are concluded.

If the screening-level assessment does not result in a "no effect" determination, EPA does not conclude that an herbicide "may affect" threatened and endangered species. Instead, EPA conducts a more refined risk assessment, replacing some of the generic worst-case assumptions which are designed to overstate potential exposures dramatically, instead using more site-specific, real-world information pertaining to potential exposure (such as the application rates used under normal agricultural practice; herbicide usage data compiled by the relevant State; the proximity of herbicide use in relation to the habitat of the threatened and endangered species; the results of monitoring for the herbicide in the environment, particularly in or near the species habitat; and the impact of label use restrictions in reducing exposure). Where available, the refined assessment also uses toxicity information relating to the species under examination, in order to assess whether use of an herbicide may have an effect on the listed species.

In an abundance of caution, EPA adopted an even more conservative approach here. Specifically, for each state in which M1691 Herbicide is proposed to be registered, EPA evaluated which threatened or endangered species might be present in the state. EPA then evaluated whether those species might be present on or near fields where M1691 Herbicide could potentially be

used. Where there was overlap between the species and potential usage, EPA conducted a detailed evaluation of the species' habitat requirements, life cycle, dietary needs, etc. Based on that analysis, EPA determined whether there would be "no effect" on the TES (in which case EPA's inquiry concluded), M1691 Herbicide "may affect" but is "not likely to adversely affect" the TES (in which case EPA consulted informally with FWS and obtained the Service's concurrence with its conclusion) or "may affect" and is "likely to adversely affect" the TES, in which case M1691 Herbicide usage is prohibited in the relevant county.

B. EPA's Authority for a Mitigated No-Effect Finding Is Well-Established

In relying upon maximum use scenarios, EPA's no effect determinations already take into account multiple M1691 Herbicide label mandates. The conditions on the FIFRA label mandated by EPA are legally enforceable under FIFRA, 7 U.S.C. § 136j(a)(2)(G), and become part of the proposed registration under the ESA. *Cf. Center for Biological Diversity v. BLM*, No. 10-72356 at *12722 (9th Cir. Oct. 22, 2012) (conservation measures should have been considered as part of the proposed action because that would have made them enforceable under the ESA); 50 C.F.R. § 402.02. Critically, EFED's screening-level assessments *already* rely upon the label's mandatory conditions as part of the effects determination. Specifically, "[s]creening-level risk assessments rely on labeled statements of the *maximum rate of pesticide application, the maximum number of applications, and shortest interval between applications*. Together, these assumptions constitute a maximum use scenario." *Id.* at 51 (emphasis supplied). *See, e.g.*, Nikiba Daughtry, Environmental Field Branch, Office of Pesticide Programs, Oxyfluorfen: Analysis of Risks to Endangered and Threatened Salmon and Steelhead, Supporting No Effect Determination for Oxyfluorfen, 1 (April 28, 2004) ("The use of oxyfluorfen will have no direct or indirect effect from loss of food supply or loss of cover in the 26 ESUs of Pacific salmon and steelhead when used according to labeled application directions.").[20] EPA also may take into account *other* mandatory conditions on pesticide labels, such as mandatory buffer zones. This is entirely appropriate given that failure to follow the label requirements is unlawful. Absent reliance on label application rates and frequency, it would be impossible for EPA to assess potential exposure – and thus impossible for EPA to make either a "no effect" or a "may affect" determination.[21]

Courts have held that mitigation measures or other enforceable protections *should* be taken into account when determining the impact of the proposed action on listed species. *See, e.g.*, *Sierra Club v. Van Antwerp*, 661 F.3d 1147 (D.C. Cir. 2011) (finding "no reason why the general principle of taking mitigation into account should not apply to the decision whether the ESA requires formal consultation."); *Selkirk Consfervation Alliance v. Forsgren*, 336 F.3d 944, 956 (9th Cir. 2003) ("If a Conservation Agreement is in place, then the reviewing agencies ought to consider it when evaluating the impact of the proposed action [in the ESA context]"); *Sierra*

---

[20] http://www.epa.gov/espp/litstatus/effects/oxyfluorfen/oxyfluorfen_analysis.pdf.

[21] EPA would either have to make unsupported assumptions about potential exposures – which almost by definition would be arbitrary – or, in the alternative, without any boundaries for analysis, EPA arguably would have to consult with the U.S. Fish & Wildlife Service or the National Marine Fisheries Service regarding every single pesticide and every single endangered species. No court has ever held that this is required.

ED_002084_00044094-00034

Club v. Marsh, 816 F.2d 1376, 1379-80 (9th Cir. Cal. 1987) (explaining that agency relied upon mitigation to support conclusion that agency action was not likely to jeopardize the species' continued existence); *Center for Biological Diversity v. BLM*, No. 10-72356 at * 12739 (9th Cir. Oct. 22, 2012). In fact, outside of the ESA context, case law has long supported the notion that agencies may rely upon mitigation measures to contribute to compliance with environmental laws even where mitigation measures are actually carried out by private parties. *See Selkirk Conservation Alliance*, 336 F.3d at 955 (listing a number of such cases).

Action agencies commonly take into account mitigation or other enforceable requirements that are part of the proposed action to support a no effect determination. So does the U.S. Fish and Wildlife Service, which itself recognizes the propriety of relying on mitigation in the no effect context. For example, as the action agency (rather than the consulting agency) the U.S. Fish and Wildlife Service has, in a number of instances, relied upon herbicide label application rates as well as binding agreements between the agency and refuge farmers to support a no effect determination for the use of herbicides in cooperative farming on the National Wildlife Refuge System. *See, e.g.*, U.S. Fish and Wildlife Service, Midwest Region, Environmental Assessment: Use of Row Crop Farming and Genetically-modified, Glyphosate-tolerant Corn and Soybeans on National Wildlife Refuges and Wetland Management Districts, 26-27 (March 2011); U.S. Fish and Wildlife Service, Mountain-Prairie Region, Environmental Assessment: Use of Genetically Modified, Glyphosate-Tolerant Soybeans and Corn on National Wildlife Refuge Lands in the Mountain–Prairie Region (Region 6), 15 (April 2011).

As another example, the U.S. Food and Drug Administration's no effect determination with respect to its approval of genetic modifications to Atlantic salmon relied on numerous containment measures that were part of the proposed action. *See* Appendix D, U.S. Food and Drug Administration, Draft Environmental Assessment: AquAdvantage Salmon (May 2012). The U.S. Food and Drug Administration submitted that no effect determination to the Services to amend its previous "may affect" determination. The U.S. Fish and Wildlife Service deemed the no effect determination "well supported" in light of the containment facilities and NOAA had no objections. *See id.*

C. Dicamba Does Not Pose a Risk to Terrestrial Invertebrates

In addition to the lines of evidence that EPA has used to conclude that M1691 Herbicide does not pose a risk to threatened or endangered terrestrial invertebrates, Monsanto has identified two publications that also support EPA's conclusion of low acute and chronic risk for honey bees (*Apis mellifera* L.) that serve as the surrogate species for terrestrial invertebrates. Scientists at the United States Department of Agriculture, Agricultural Research Service Laboratory in Tucson, Arizona concluded that the survival of adult worker bees was not affected after chronic exposure to dicamba technical active ingredient or to a dicamba salt formulation at dietary concentrations up to 1000 ppm in a sucrose solution (Morton et al., 1972). Scientists from the same lab also concluded that honey bee brood production was not affected when the colony was fed concentrations of a dicamba salt formulation at concentrations up to 1000 ppm a.e. in a sucrose solution (Morton et al., 1972).

Based on predicted dicamba residues in pollen and nectar from the new use of dicamba on dicamba tolerant soy and cotton, exposure to honey bee brood would not be expected to exceed

the levels tested in this study. In addition, dicamba residues decline rapidly with a half-life of less than 9 days on foliage, and plant species sensitive to dicamba to which dicamba is applied will die and no longer be a source of nectar or pollen. For these reasons, the new use of dicamba would have no effect on brood production, survival and development.

Data available in the dicamba registration package demonstrate that dicamba does not pose an acute contact or oral risk to honey bees. These two papers from the published literature demonstrate that dicamba does not pose a chronic risk to either adult honey bees or to brood production at doses up to 1000 ppm dicamba acid equivalent. Dicamba, therefore, does not pose an acute or chronic risk to honey bees. Since honey bees are the surrogate species for other terrestrial invertebrates, dicamba would also not pose an acute or chronic risk to other terrestrial invertebrates.

D. EPA Properly Considered Runoff in Its No Effect Rationale for Listed Species

EPA's screening-level risk assessment for cotton and soybean characterized risk following exposure to dicamba residues in runoff and found that the predicted concentrations from modeling were lower than the most sensitive taxa's endpoint (soybean plant height). EFED concluded that all available lines of evidence supported a "no effects" determination for runoff exposure for off-field listed plants for the proposed labeled use of dicamba DGA. In addition, a "no effect" conclusion from run-off can be extended to animals. The levels of dicamba off-field resulting from runoff and erosion are estimated to be only a small fraction of the application rate; therefore, none of the acute or chronic levels of concern for dicamba would be exceeded. Further, the rainfast mitigation on the label would further protect all listed species in off-field habitats from exposure.

E. Dicamba Acid Seedling Emergence Endpoints Should Not Have Been Considered in the Dicamba DGA Salt Risk Assessment

In the soybean and cotton risk assessments for use of dicamba on dicamba-tolerant soybean (EPA-HQ-OPP-2016-187-0008) and cotton (EPA-HQ-OPP-2016-187-0005), EPA has not only evaluated effects to non-target plants based on endpoints from the non-target plant studies conducted with the proposed M1691 (dicamba DGA salt) end use product, but has also evaluated effects to non-target plants considering endpoints from the dicamba acid seedling emergence study. In these risk assessments EPA has stated:

> "For dicamba acid, which DGA salt may dissociate to and which has more sensitive seedling emergence values, RQ values would exceed the LOC of 1.0 for all listed and non-listed monocots and dicots in semi-aquatic areas and for listed monocots and listed and non-listed dicots in dry areas."

However, the dicamba acid study – conducted in 1993 under the previous EPA test guidelines for non-target plant studies – is not relevant to the current risk assessment. A number of differences in methodology between previous and current test guidelines support the use of the most current study which used the dicamba DGA salt, rather than dicamba acid. The table below illustrates some significant differences in test methodology between the two studies:

Table 3. Comparison of non-target plant testing methodology

Subdivision J guideline Dicamba Acid Seedling Emergence Study (Hoberg, 1993)	Current Series 850 Guideline Clarity® (Dicamba DGA salt) Seedling Emergence Study (Porch, 2009)
Silica sand	Natural or artificial soil
OM = 0.11 – 0.17%	Up to 1.5% OC (approx 3% OM)
Growth chamber	Growth chamber, glasshouse, semi-field
¼ strength AAP nutrient solution	Fertility as needed based on controls
200 ml solution "added" to sand	Surface application
Seeds planted 1 cm deep	Seeding depth appropriate for seeds
Onion seedling survival in control = 83%	Control survival of at least 90% needed
30 ml test solution sprayed (1026 gal/A)	Typical application volumes (10-100 gal/A) "not to exceed runoff"
NOEC not determined for all species	1 dose below EC25, 1 dose above EC50, determine NOEC (or calculate EC_{05} if necessary)

The dicamba acid seedling emergence study was conducted in a growth chamber, and the test substance for this study was dicamba acid rather than a typical end use product as is currently required. In addition, the study report from the initial study (Hoberg, 1993) documents numerous observations that cast doubt on the validity and interpretation of the test results. For example, the study report notes visual injury symptoms of brown leaf tips, necrosis, and chlorosis. However, these plant responses are different than typical sublethal plant symptoms associated with exposure to dicamba such as leaf curling, epinasty, thickened internodes, and shortened plants (Auch and Arnold, 1978; Weidenhamer et al.,1989).

It is likely that the observed plant responses in the 1993 study were the result of unfavorable test conditions rather than the test material itself. The tip browning and necrosis observed in the studies were likely caused by excess salt accumulation in the leaf tips and leaf margins. The excess salt accumulation, in turn, was likely the result of growing the plants in silica sand, a medium with little or no buffering capacity, coupled with the use of a nutrient solution that was one-quarter strength AAP nutrient solution and applied daily without regard to nutritional requirements for the plants.[22] This continued application of nutrient solution likely resulted in the accumulation of excess salt in the leaf tips and leaf margins and in the desiccation and

[22] The 1993 study did not follow the most current guidance which requires that nutrient and fertilizer needs should be based on observations of the control plants.

browning of the tissue.[23]

Another key test condition was the use of KNO_3 in the media in place of NH_4NO_3. The use of KNO_3 commonly leads to alkalinization over time and plant chlorosis due to iron and magnesium deficiencies. The AAP medium was designed for use in hydroponic systems and in algal studies where the solution is replaced at regular intervals rather than allowed to accumulate in a closed container. There are also differences between the guidelines used in the 1993 study as compared to the current guidelines, thus making the current study more relevant for this risk assessment: the previous use of growth chambers to grow plants versus the current use of greenhouses or field-grown plants; the previous planting of seeds from all species at the same depth (1 cm) versus the current guidance to plant seeds at a depth appropriate to the seed size; and the previous germination of seeds first in paper "rag dolls", followed by transfer to pots, versus the current guidance to allow germination to occur in soil.

In summary, the dicamba DGA salt seedling emergence study endpoints are the appropriate endpoints to use in the current risk assessments because the dicamba DGA salt seedling emergence study was conducted according to the current EPA seedling emergence test guideline, and the methodology used in the dicamba acid seedling emergence study likely resulted in plant injury due to causes other than dicamba treatment resulting in endpoints that should not be attributed to dicamba. Furthermore, based on EPA's refined analysis using the DGA salt seedling emergence study no effects were observed.

V. MONSANTO SUPPORTS EPA'S WEED RESISTANCE PLAN, WITH CERTAIN REFINEMENTS

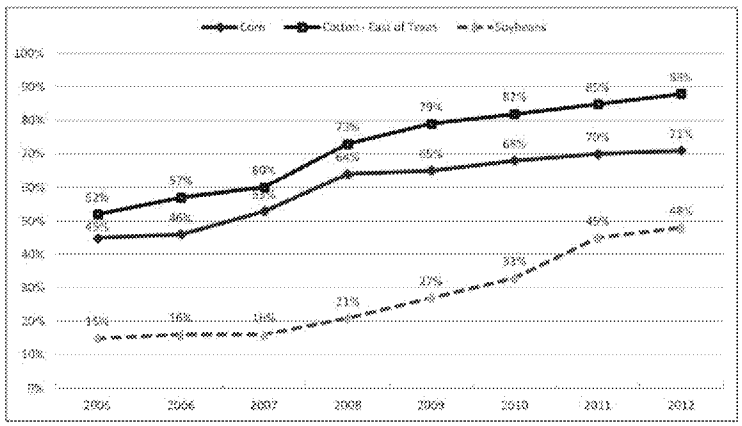
Monsanto greatly values maintaining the durability of our products and agrees that the benefits of tools such as low-volatility formulations of M1691 Herbicide should be preserved for agriculture. Sustainability of this tool is important for American farmers and a business objective for Monsanto. As such, Monsanto supports voluntary stewardship (including as described in PR 2001-5), which enables the marketplace to adjust to emerging challenges around herbicide resistance. For example, over the last 10 years market flexibility has allowed/encouraged farmers to incorporate the use of soil residual herbicides as needed and other complementary post-emergent herbicides to address the emerging weed management challenges posed by glyphosate-resistant weeds. If proposed weed management plans were to become overly prescriptive, the ability of the market to adjust to new or future emerging weed control challenges could be negatively impacted. Voluntary stewardship should therefore be the basis of EPA's proposed management of herbicide resistance.

---

[23] The fact that tip browning noted in the 1993 study was reported as occurring on corn, a plant that is not normally sensitive to dicamba effects, is a further demonstration that the effects observed were not dicamba specific effects.

ED_002084_00044094-00038

Herbicide programs in U.S. glyphosate tolerant crops have diversified significantly from 2005-2012, as evidenced by the incorporation of non-glyphosate residual herbicides



Source: Monsanto Market Research Studies

With this in mind we provide comments on two areas of the proposed resistance management plans including A) The Herbicide Resistance Management Plan for M1691; B) Maintaining the durability of M1691.

A. Monsanto Suggests Adjustments That Will Help to Reinforce Practices That Assist Growers With Herbicide Resistance Management

Monsanto is generally supportive of an appropriate *Herbicide Resistance Management Plan*. For example, Monsanto supports offering education, consultation, and recommendations for implementing additional weed control measures, when requested. Monsanto also supports reporting weed species resistant to M1691 Herbicide under appropriate circumstances.

However, Monsanto is opposed to restrictions that go beyond these principles, as discussed below.

- ***Herbicide categorization.*** Monsanto opposes the categorization scheme proposed by EPA entitled "Herbicide Resistance Categories of Concern and Resistance Management Elements for Use by Risk Managers." In particular, the implication that because an herbicide is used on a herbicide tolerant plant produced through biotechnology (genetically engineered {GE}) or other breeding methods that the herbicide is automatically categorized as "site of high concern for resistance." This implies that adoption of biotechnology has caused a rapid onset of resistance in weeds. There is nothing inherently different about GE crops such that the EPA should regulate for herbicide resistance any differently than it should do for herbicides in other crops.

  Additionally, separating herbicides into different groups will cause confusion about herbicide resistance management and confusion about why and how an herbicide is included in a particular category. Herbicide resistance in weeds is an herbicide and herbicide-use issue. It is not associated with how the crop was bred or developed or if the crop is tolerant, resistant or susceptible to an herbicide. Monsanto urges EPA to eliminate

the categorization and rather review as appropriate each herbicide against the 11 elements outlined in Table A. This will reinforce practices to help with herbicide resistance management, will be equitable across manufacturers, and will avoid confusion about the categorization.

- ***Specific elements of the Herbicide Resistance Management Plan Checklist.*** EPA proposes to mandate *all* of the elements in Table A in the final resistance management plan. While Monsanto will endeavor to address each element, it is important to consider that some do not apply to this product. For example, Element 10 is an element specific to combination products with multiple Mechanisms of Action. Element 11 is not applicable, as no additional specific requirements for resistance management were identified that were not already stated in the registration.

    - ***Element 7.*** We oppose the implementation of Element 7: " List confirmed resistant species in separate table and list effective or recommended rates for these weeds with the table." While Monsanto supports making information about weeds resistant to the Monsanto Dicamba Products available to stakeholders and farmers, there are a number of communication challenges. For example, if this information were to be listed on product labels, the label could be out of date as soon as a new resistant species were identified. In many cases labels are not updated for a period of time permitted by EPA. As such, product users may not gain complete awareness to the full list of weeds to have developed resistance in the interim from the product label itself. If EPA suggests a separate website listing, it is unclear if this website then becomes a legal extension of the label. Furthermore, since the occurrence of confirmed resistant weeds are reported to EPA under 6(a)(2) reporting by various registrants, it is unclear how different dicamba registrants would provide consistent information about resistant weeds to growers and stakeholders.

    - ***Element 9.*** Monsanto is also concerned about the implementation of Element 9: "Provide growers with: Resistance Management Plan, Remedial Action Plan, Educational materials on resistance management." Monsanto is willing to make such information available to farmers to develop and implement appropriate resistance management plans. Furthermore, farmer decisions on purchasing herbicides for their intended use is based on a variety of weed management decisions and practices. Generalized considerations for weed management and management of herbicide-resistant weeds are encompassed by best management practices and are appropriately provided to farmers through university extension, company informational, and other educational materials. However, each farmer must make these decisions based on their crop, the weeds present, equipment, economics, other herbicide choices, and many other farm or field specific needs/requirements. Therefore providing information pertinent to a resistance management plan is an appropriate approach to this element.

In summary, Monsanto is supportive of an appropriate herbicide resistance management plan. Herbicide-resistant management plans that enable and support farmer best management practices, maintain a farmers' ability to adjust practices to address the challenges of weed

management including the management of herbicide-resistant weeds, and allow the use of new tools for weed management, are critical to maintaining our agricultural productivity.

B. Monsanto Product Recommendations Will Maintain the Durability of M1691 Herbicide

Maintaining the durability of M1691 Herbicide was carefully considered as the herbicide resistance management plan was developed. Although Monsanto believes that the risk of resistance to M1691 Herbicide in many weed species is inherently low due to the high probability that the herbicide would be used as part of a diversified weed management program including multiple the use of other herbicides and a low frequency of resistant alleles present in weed species/populations, product and weed control program recommendations will strongly reinforce and support best management practices for diversified weed management to reduce selection for – and manage existing populations of – weeds resistant to this herbicide.

Dicamba, the active ingredient in M1691 Herbicide, has been used for more than 50 years in agriculture with only two known resistant species in the United States, and a total of five resistant species worldwide. Furthermore, auxin-based classes of herbicides are known for having low rates of resistance. Possible reasons for low level of resistance are: resistant alleles occur infrequently; the manifestation of resistance is likely multi-genic; and resistance genes are associated with a fitness penalty (Mithlia et. al. 2011).

Notably, M1691 Herbicide will be used in systems that include the use of other herbicides. Since M1691 Herbicide is primarily used to control broadleaf weeds, other herbicides will be needed in the overall system to control other species, including grasses. Recommendations will include the use of soil-applied residual and foliar applied post-emergent herbicides, as appropriate to provide multiple effective mechanisms of action on target weed species. Dicamba tolerance is stacked with glyphosate tolerance in the soybean and with glyphosate and glufosinate tolerance in the cotton product thus enabling, where appropriate, the use of these herbicides to manage weeds. Furthermore, M1691 Herbicide will be part of the Roundup Ready plus program. This program currently includes education, recommendation, and incentive components that have contributed to the diversification of weed management programs including increased in the use of soil applied residual herbicides and herbicides with different mechanisms of action to control weeds – both considered Best Management Practices for weed management and to manage and/or delay the selection of herbicide-resistant weeds. The product label will also require a minimum single application use rate of 0.5 lb a.e. to further reduce potential selection for resistant weeds.

ED_002084_00044094-00041

VI. ENABLING TANK MIXES IS CRITICAL FOR EFFECTIVE WEED RESISTANCE MANAGEMENT AND ENVIRONMENTAL STEWARDSHIP

A. Tank Mixing Provides Multiple Benefits to Growers

The benefits of herbicide tank mixtures can be grouped into three general categories: weed resistance management, economics and sustainability, and efficacy and productivity.

Weed Resistance Management
The use of herbicide tank mixes facilitates one of the most practical, convenient and reliable methods to ensure use of multiple herbicide sites of action in weed control programs, which is a fundamental component of weed resistance management best practices (Beckie 2006, Dill et al. 2008, Gustafson 2008, Green and Owen 2011, Norsworthy et al. 2012). Recent research indicates that herbicide tank mixtures are more effective at delaying the development of herbicide resistance or managing herbicide resistant populations than herbicide rotation (Diggle et al., 2003, Beckie 2006, Beckie and Reboud 2009, Evans et al 2015).

Tank mixtures also facilitate use of herbicide combinations to provide both foliar and residual activity to control emerged weeds and subsequent flushes of newly germinating weeds in a single application (Spaunhorst 2012). The use of tank mixtures with herbicides that provide residual control can minimize weed species shifts and resistance selection pressure (Dill et al. 2008, Gustafson 2008) and can extend the effective window of application for subsequent herbicide applications to be made at proper weed growth stage timings (VanGessel et al. 2000).

Herbicide tank mixtures are a key enabler for the use of multiple sites of action and effective and sustainable weed management systems.

Economics and Sustainability
Tank mixing herbicides provides convenience, efficiency and economic benefits for growers and applicators. "The use of mixtures decreases the number of trips across the field, saves fuel, decreases labor, reduces equipment wear and lessens the mechanical damage to the crop and soil. These economical aspects are increasingly important in the U.S. where the trend is toward larger farms, fewer workers, and higher application costs" (Green and Bailey 1987).

Tank mixing herbicides that would otherwise be applied in sequential applications also facilitates time management across farm operations with multiple fields and crops that require management practices within the same windows of time. This enables growers to manage more acres more efficiently with existing equipment and resources.

Environmental benefits can also be realized with fewer applications across the field. As an example, each application trip eliminated across a single 100-acre field would conserve between 1,000 – 2,000 gallons of water carrier and 2.5-20 gallons of a single adjuvant at 10 - 20 gallon per acre spray volumes and typical adjuvant use rates of 0.25 to 1.0% v/v concentration. Less fuel use through fewer applications trips also corresponds to reduced CO_2 emissions.

ED_002084_00044094-00042

Efficacy and Productivity
Tank mixing herbicides enables the farmer to choose the best combination and ratios of herbicide components for his individual, unique weed control needs and conditions. Herbicide mixtures improve control and provide a broader weed control spectrum including control of herbicide-resistant weeds (Beckie 2006, Green and Owen 2011, Barnett 2013).

Proper timing of post-emergence weed control applications based on weed height is critical to optimize weed control and minimize yield losses (Gower et al., 2002, Gower et al. 2003, Dalley et al. 2004). Herbicide programs that contain tank mix combinations and are applied to smaller plants earlier in the season provide generally greater soybean yield than sequential application programs (Vink et al. 2012, Riley and Bradley 2014).

Sequential application of multiple herbicide program components requires an interim period of time between applications. The planned time period can often be extended or the sequential application missed altogether due to weather, time constraints or other unplanned issues. Uncontrolled weeds can rapidly grow beyond the planned target growth stage reducing yield potential (Carey and Kells 1995). "Palmer amaranth plants can grow 2-3 inches *per day* under good growing conditions. The effectiveness of most foliar-applied herbicides dramatically decreases when Palmer amaranth plants are taller than 4 inches." (Hager 2014).

Compared to sequential applications, tank mixing allows for more consistently optimal application timings for multiple program components and reduces potential for mistimed or missed applications, inadequate weed control and yield loss.

B. EPA Should Consider Specific Tank Mixes Where Requested

Monsanto intends to submit additional data to demonstrate that tank mixing the Monsanto Dicamba Products with other Active Ingredients would be consistent with EPA's risk assessment. The practice of tank-mixing herbicides is an important tool used in agriculture that gives growers flexibility in a comprehensive weed resistance management program to include multiple modes of action while expanding the spectrum of weed control. Specifically, in the proposed registration of M1691 Herbicide for uses on Dicamba-Tolerant Cotton and Soybean, EPA has expressed concern about potential "synergistic" effects from tank mixing dicamba with other active ingredients With regard to EPA's concern about "synergistic effects" Monsanto has evaluated various sources of information for reliability and relevance to an endangered species and non-target organism assessment. This evaluation resulted in the following conclusions:

- True synergistic interactions between chemicals are rare and are generally not predicted to occur under low exposure scenarios (Verbruggen and van den Brink 2010, Cedergreen, 2014).
- For synergistic interactions to occur among herbicides, or other pesticides, in the environment, interacting substances have to co-occur at high enough levels to exceed the toxic threshold for each product (Cedergreen, 2014, COT, 2002; Kortenkamp and Altenburger; 2011). The NAS panel report (NRC 2013, p. 134) is consistent on this point by also stating, "*...components do not need to be considered when present at concentrations below their toxic thresholds.*" Effects should only be assessed with biologically relevant endpoints (i.e., growth and survival for non-target plants (NTPs)).

The buffer distance of 110 feet for M1691 Herbicide particle drift is being implemented to keep exposure levels below the threshold effect level (NOAER) for non-target plants – and therefore would also protect against potential synergistic effects.

- When evaluating tank mixtures it's important that the conclusions of the data are limited to application rates relevant to the threatened and endangered species analysis. Conclusions of synergy at field rates, often the focus of literature and patent data, are of little use and not appropriate in identifying and quantifying synergy at low, environmentally relevant concentrations outside of the spray application area.
- An acceptable statistical test must be used to distinguish whether the response produced by a dose combination is larger than that predicted by the "no-interaction" hypothesis.

In sum, we believe that EPA should be willing to consider specific tank mixtures where requested.

VII. EPA'S ANALYSIS IS TECHNICALLY AND SCIENTIFICALLY SOUND

A. EPA's Human Health Risk Assessment Is Highly Conservative and Amply Demonstrates a Reasonable Certainty of No Harm

EPA's Human Health Risk Assessment (HHRA) demonstrates that there is a reasonable certainty of no harm to the general public, including infants and children, from the proposed new uses of dicamba on dicamba-tolerant soybean and cotton.[24] However, EPA's decision to establish a chronic reference dose (cRfD) for dicamba of 0.04 mg/kg/day based on a Point of Departure (POD) of 4 mg/kg/day determined from the 2-generation rat reproduction study with the DCSA metabolite is extremely conservative and appears to lead to inconsistencies both within the HHRA and between the HHRA and Environmental Fate and Ecological Risk Assessment documents. This decision is also inconsistent with (i.e., more conservative than) the conclusions of the Joint FAO/WHO Meeting on Pesticide Residues (JMPR).

Section 5.1.4 of the HHRA states, "Based on available toxicity studies and structural similarities, HED considers the parent and all three metabolites [DCSA, DCGA and 5-OH dicamba] to be of comparable toxicity." This is similar to the JMPR (2010) conclusion that "DCSA and DCGA have toxicity similar to or lower than that of dicamba" while 5-OH dicamba "appears to be of lower toxicity than the parent." In contrast, Section 4.3 of the HHRA indicates that DCSA is approximately 12-fold more toxic to offspring than dicamba acid. The latter statement is apparently based on the most recent EPA conclusions regarding the multi-generation rat reproduction studies with both compounds that were conducted at different times in different laboratories. Although full details are not available, this conclusion appears to be based, at least in part, on different Agency approaches used in evaluating or re-evaluating pup weights. Slight decreases in pup weight or pup weight gain relative to concurrent control were apparently reported in only one generation of both studies at 500 ppm. For DCSA, F1 pup weights at 500 ppm were lower than the concurrent control but were similar to those observed in the F2 controls as well as the laboratory's historical control values and were thus not considered to be a treatment related adverse effect. Although JMPR agreed with this conclusion, EPA apparently did not and instead concluded that 500 ppm was a Lowest Observed Adverse Effect Level

[24] M1768 and M1769 herbicides would also be covered under the current HHRA for dicamba.

ED_002084_00044094-00044

(LOAEL). This resulted in a No Observable Adverse Effect Level (NOAEL) of 50 ppm, the next lowest concentration tested. In contrast, for dicamba, EPA apparently recently concluded that the decreased pup weights reported in one generation at both 500 and 1500 ppm were not treatment related due to the values being comparable to historical control data. EPA thus raised the dicamba offspring NOAEL from 500 ppm to 1500 ppm. It is not clear why comparisons to historical control data were acceptable for dicamba but not for DCSA. However, the end result is that although both the DCSA and dicamba studies appear to have similar marginal responses at 500 ppm, EPA conclusions regarding offspring NOAELs for these molecules are now quite different, 50 ppm and 1500 ppm, respectively. This does not appear to be consistent with the EPA conclusion that the two molecules exhibit comparable toxicity.

The EPA decision to reduce the chronic reference dose (cRfD) for dicamba from 0.45 to 0.04 mg/kg/day and to use this value for dietary risk assessment also does not appear to be justified. DCSA is only a very minor metabolite in conventional crops. Accordingly, the primary source for DCSA in the diet from the proposed uses will be from use of dicamba on dicamba-tolerant soybean (cotton consumption is negligible). However, based on the EPA analysis, potential residues in soybean represent only a very small percentage of the total dietary intake of dicamba. As a result, the vast majority of dietary exposure will be to parent dicamba, not DCSA. Therefore, it would seem more appropriate to assess the risks from these residues utilizing a cRfD based on dicamba data rather than an 11-fold lower cRfD based on a marginal response seen in a DCSA study.

The cRfD of 0.04 mg/kg/day proposed by EPA for use in dietary risk assessment is much lower than the value recommended by JMPR. JMPR concluded that the NOAEL for both the dicamba and DCSA rat reproduction studies was 500 ppm (~35 mg/kg/day for dicamba and ~37 mg/kg/day for DCSA). JMPR then concluded that an Acceptable Daily Intake (ADI) of 0.3 mg/kg/day was appropriate to characterize potential risks to both dicamba and its metabolites. This value was based on the NOAELs from the rabbit teratology and rat reproduction studies with dicamba and a 100-fold uncertainty factor.

Finally, the use of a Point of Departure (POD) of 4 mg/kg/day from the DCSA rat reproduction study for determining the cRfD for dicamba seems inconsistent with information included in the Second Addendum to the Environmental Fate and Ecological Risk Assessment (March 24, 2016). According to that document, EPA has conducted a benchmark dose analysis of the DCSA reproduction study and concluded that the threshold value for the NOAEL would be 8 mg/kg/day and that the lower 95% confidence limit on the benchmark dose resulting in a 5% change from background ($BMDL_5$) would be 34.9 mg/kg/day. It is not clear why these analyses were not summarized and utilized in the selection of the POD and cRfD in the HHRA.

B. EPA's Occupational Risk Assessment Demonstrates Ample Protection From Occupational Exposure

EPA's occupational risk assessment of dicamba DGA salt demonstrates that the proposed label restrictions are adequately protective of human health. For occupational mixer, loader and applicator assessments, EPA's selection of relevant exposure scenarios, baseline personal protective equipment (i.e., long-sleeved shirt, long pants, shoes and socks, but no respiratory protection), an application rate consistent with the proposed label, best available unit exposure

data, ExpoSAC Policy 9.1-consistent assumptions regarding number of acres treated per day, relevant exposure durations, toxicological endpoint and level of concern result in calculations of sufficient margins of exposure. For the occupational post-application exposure assessment, potential inhalation exposure to individuals performing post-application activities in previously treated fields would be expected to be less than inhalation exposure related to occupational activities involving mixing, loading and applying. Therefore, EPA's occupational risk assessment of dicamba DGA salt is adequately protective of health.[25]

C. The Proposed Label Is Protective of Non-Target Susceptible Plants

The Proposed Dicamba Label sufficiently protects sensitive crops from the offsite movement of the Monsanto Dicamba Products. As demonstrated in sections III.B-C, a downwind buffer of 110 feet is more than sufficiently protective of non-target organisms, which include sensitive crops. First, volatility data provided by Monsanto on April 12, 2016, demonstrate that volatility is not a major component of offsite movement; additional evidence demonstrates that there should be no concern of off-site movement due to volatility, and that a downwind buffer of 110 feet is more than adequate to protect non-target organisms from potential adverse effects when the mandatory application requirements described in the draft M1691 Herbicide label are instituted. Second, Monsanto previously submitted multiple lines of evidence to support that a downwind buffer of 110 feet will be protective of potential adverse effects to non-target organisms (MRID 49292801, MRID 49424601). However, as an additional layer of protection for sensitive crops, the Proposed Label for M1691 Herbicide specifies the following application restrictions:
"Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption. Avoid contact of herbicide with foliage, green stems, exposed non-woody roots of crops, and desirable plants, including beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potato, soybean, sunflower, tobacco, tomato, and other broadleaf plants, because severe injury or destruction may result, including plants in a greenhouse. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants. Applicators are required to ensure that they are aware of the proximity to sensitive areas, and to avoid potential adverse effects from off-target movement of M1691 Herbicide. The applicator must survey the application site for neighboring sensitive areas prior to application. The applicator also should consult sensitive crop registries for locating sensitive areas where available.

Failure to follow the requirements in this label could result in severe injury or destruction to desirable sensitive broadleaf crops and trees when contacting their roots, stems or foliage.

Specifically, commercially grown tomatoes and other fruiting vegetables (EPA crop group 8), cucurbits (EPA crop group 9), and grapes are sensitive to dicamba. In order to prevent unintended damage from any drift of this product, do not apply this product when the wind is

[25] EPA's current occupational exposure assessment for use of M1691 Herbicide on dicamba-tolerant cotton and soy would also cover occupational exposure assessments for similar use patterns of other dicamba DGA salt formulations containing VaporGrip™ technology, M1768 Herbicide (EPA Reg. No. 524-617) and M1769 Herbicide (EPA Reg. No. 524-616).

blowing toward adjacent commercially grown sensitive crops."

Extensive data further illustrates that use of the Monsanto Dicamba Products will not have a negative impact on yield of other crops since other crops may be exposed to higher rates of dicamba than soybean without having a negative impact on growth or yield (MRID 48892302).

VIII. REFERENCES

Andrews, D. 2000. Inconsistency of the bootstrap when a parameter is on the boundary of the parameter space. Econometrica 68:399-405.

Auch, D.E. and W.E. Arnold. 1978. Dicamba use and injury on soybeans *Glycine max* in South Dakota. Weed Science 26:471-475.

Baldwin, F.L. and T.L. Baldwin. 2002. Impact of herbicide resistant crops in the Americas - A southern prospective. Pages 650-654 in Thirteenth Australian Weeds Conference, Council of Australian Weed Societies Inc., Perth, Western Australia.

Barnett, K. A., T. C. Mueller and L. E. Steckel. 2013. Glyphosate-resistant giant ragweed (*Ambrosia trifida*) control with glufosinate or fomsafen combined with growth regulator herbicides. Weed Tech. 27:454-458.

BASF Corporation. 2008. Clarity® herbicide label. BASF Corporation, Research Triangle Park, North Carolina.

Beckie, H. J. 2006. Herbicide-resistant weeds: management tactics and practices. Weed Tech. 20:793-814.

Beckie, H.J. and X. Reboud. 2009. Selecting for weed resistance: herbicide rotation and mixture. Weed Tech. 23:363-370.

Byker, H.P., N. Soltani, D.E. Robinson, F.J. Tardif, M.B. Lawton and P.H. Sikkema. 2013. Control of glyphosate-resistant horseweed (*Conyza canadensis*) with dicamba applied preplant and postemergence in dicamba-resistant soybean. Weed Technology 27:492-496.

Carey, J.B. and J.J. Kells. 1995. Timing of total postemergence herbicide applications to maximize weed control and corn (*Zea mays*) yield. Weed Tech. 9:356–361.

Cedergreen N. 2014. Quantifying synergy: a systematic review of mixture toxicity studies within environmental toxicology. PLoS One. 2;9(5):e96580. doi: 10.1371/journal.pone.0096580.

COT. 2002. Risk assessment of mixtures of pesticides and similar substances. London: Committee of toxicity of chemical in food, consumer products and the environment. Available from: https://cot.food.gov.uk/sites/default/files/cot/reportindexed.pdf . Last accessed April 21, 2016.

CTIC. 2011. Top 10 conservation tillage benefits. Conservation Technology Information Center, West Lafayette, Indiana.

Dalley, C.D., J.J. Kells and K.A. Renner. 2004. Effect of glyphosate application timing and row spacing on corn (*Zea mays*) and soybean (*Glycine max*) yields. Weed Tech. 18:165-176.

Diggle, A. J., P.B. Neve and F.P. Smith. 2003. Herbicides used in combination can reduce the probability of herbicide resistance in finite weed populations. Weed Res. 43:371-382.

Dill, G. M., C. A. CaJacob and S. R. Padgette. 2008. Glyphosate-resistant crops: adoption, use and future considerations. Pest Management Sci. 64:326-331.

Egan, J.F. and D.A. Mortensen. 2012. Quantifying vapor drift of dicamba herbicides applied to soybean. Environmental Toxicology and Chemistry 31:1023-1031.

Evans, J.A., P. J. Tranel, A. G. Hager, B. Schutte, C. Wu, L.A. Chatham and A.S. Davis. 2015. Managing the evolution of herbicide resistance. Pest Management Sci. 72:74-80.

Everitt, J.D. and J.W. Keeling. 2007. Weed control and cotton (*Gossypium hirsutum*) response to preplant applications of dicamba, 2,4-d, and diflufenzopyr plus dicamba. Weed Technology 21:506-510.

Everitt, J.D. and J.W. Keeling. 2009. Cotton growth and yield response to simulated 2,4-D and dicamba drift. Weed Technology 23:503-506.

Flessner, M.L., J.S. McElroy, J.D. McCurdy, J.M. Toombs, G.R. Wehtje, C.H. Burmester, A.J. Price and J.T. Ducar. 2015. Glyphosate-resistant horseweed (*Conyza canadensis*) control with dicamba in Alabama. Weed Technology 29:633-640.

Gavlick, W.K., D.R. Wright, A. MacInnes, J.W. Hemminhaus, J.K. Webb, V.I. Yermolenka and W. Su. 2016. A method to determine the relative volatility of auxin herbicide formulations. Pages 24-32 in Pesticide Formulation and Delivery Systems. Volume 35. G.R. Goss (ed.). ASTM International, West Conshohocken, Pennsylvania.

Gianessi, L. and N. Reigner. 2006. The value of herbicides in U.S. crop production: 2005 update. CropLife Foundation, Washington, D.C.

Gower, S.A., M.M. Loux, J. Cardina, and S.K. Harrison. 2002. Effect of planting date, residual herbicide, and postemergence application timing on weed control and grain yield in glyphosate-tolerant corn (*Zea mays*). Weed Tech. 16:488-494.

Gower, S.A., M.M. Loux, J. Cardina, S.K. Harrison, P.L. Sprankle, N.J. Probst, T.T. Bauman, W. Bugg, W.S. Curran, R.S. Currie, R.G. Harvey, W.G. Johnson, J.J. Kells, M.D.K. Owen, D.L. Regehr, C.H. Slack, M. Spaur, C.L. Sprague, M. VanGessel, and B. G. Young. 2003. Effect of postemergence glyphosate application timing on weed control and grain yield in glyphosate-resistant corn: results of a 2-yr multistate study. Weed Tech. 17:821-828.

ED_002084_00044094-00048

Green, J. M. and S.P. Bailey. 1987. Chapter 4 *in* Methods of applying herbicides. WSSA monograph 4. C.G. McWhorter and M. R. Gebhardt *eds.*

Green, J.M. and M.D.K. Owen. 2011. Herbicide-resistant crops: utilities and limitations for herbicide-resistant weed management. J. Agric. Food Chem. 59:5819-5829.

Gustafson, D. I. 2008. Sustainable use of glyphosate in North American cropping systems. Pest Management Sci. 64:409-416.

Hager. A.G. 2014. Management of Palmer amaranth in Illinois. University of Illinois, Weed Science Extension update April 2014.

Hake, S.J., T.A. Kerby and K.D. Hake. 1996. Preparation for the new crop season - Fall/winter. Pages 6-14 in Cotton Production Manual. S.J. Hake, T.A. Kerby, and K.D. Hake (eds.). University of California Division of Agriculture and Natural Resources, Davis, California.

Hall, P. and H. Miller. 2010. Bootstrap confidence intervals and hypothesis tests for extrema of parameters. Biometrika 97:881-892.

Heap, I. The International Survey of Herbicide Resistant Weeds. Online. Internet. Accessed 2013. Available www.weedscience.com

Hoberg JR. 1993. Dicamba Technical – Determination of the Effects on Seed Germination, Seedling Emergence and Vegetative Vigor of Ten Plant Species. BASF Reg DOC. No. 1993/5257. MRID 42846301.

Johnson, B., B. Young, J. Matthews, P. Marquardt, C. Slack, K. Bradley, A. York, S. Culpepper, A. Hager, K. Al-Khatib, L. Steckel, M. Moechnig, M. Loux, M. Bernards and R. Smeda. 2010. Weed control in dicamba-resistant soybeans. Plant Management Network, St. Paul, Minnesota.

Kelley, K.B., L.M. Wax, A.G. Hager and D.E. Riechers. 2005. Soybean response to plant growth regulator herbicides is affected by other postemergence herbicides. Weed Science 53:101-112.

Kortenkamp, A. and R. Altenburger. 2011. Toxicity of combined exposure to chemicals. Mixture Toxicity, LInking Approaches from Ecological and Human Toxicology. C.A.M. Van Gestel, M.J. Jonker, J.E. Kammenga, R. Laskowski, and C. Svendsen (eds.). CRC Press, Boca Raton, Florida.

Kruger, G.R., W.G. Johnson, S.C. Weller, M.D.K. Owen, D.R. Shaw, J.W. Wilcut, D.L. Jordan, R.G. Wilson, M.L. Bernards and B.G. Young. 2009. U.S. grower views on problematic weeds and changes in weed pressure in glyphosate-resistant corn, cotton, and soybean cropping systems. Weed Technology 23:162-166.

ED_002084_00044094-00049

Lanini, W.T. and V. Carrithers. 2000. Simulated drift of herbicides on grapes, tomatoes, cotton and sunflower. 2000 Proceedings of the California Weed Science Society, Monterey, California. 52:107-110.

Logan, S.T., B.G. Young, J.M. Young, S. Seifert-Higgins and S.M. Allen. 2013. Dicamba in a residual system for glyphosate-resistant waterhemp control in soybean. 2013 North Central Weed Science Society Proceedings 68:17.

Loux, M.M., D. Doohan, A.F. Dobbels, W.G. Johnson, G.R.W. Nice, T.N. Jordan and T.T. Bauman. 2010. Weed control guide for Ohio and Indiana. Bulletin 789. Purdue University and Ohio State University Extension, West Lafayette, Indiana.

Marple, M.E., K. Al-Khatib and D.E. Peterson. 2008. Cotton injury and yield as affected by simulated drift of 2,4-D and dicamba. Weed Technology 22:609-614.

Moechnig, M., D.L. Deneke and L.J. Wrage. 2010. Weed control in cotton: 2010. South Dakota State University, Brookings, South Dakota.

Monsanto. 2012. Unpublished grower survey data performed by a contracting agency. Monsanto Company, St. Louis, Missouri.

Morton, H.L., J.O. Moffett and R.H. McDonald. 1972. Toxicity of herbicides to newly emerged honey bees. Environmental Entomology 1:102-104.

Norsworthy, J. K. , Ward, S. M., Shaw, D.R., Llewellyn, R. S. , Nichols, R. L., Webster, T. M., Bradley, K. W., Frisvold, G., Powles, S. B., Burgos, N. R., Witt, W. W., Barrett, M. 2012. Reducing the risks of herbicide resistance: Best Managment Practices and Recommendations. Weed Science Special Issue: 31-62. http: //wssajoumals.org/doi/pdf/10.1614/WS-D-11-00155.1.

NRC. 2013. Assessing risks to endangered and threatened species from pesticides. Natural Resources Council, National Academy of Sciences, Washington, D.C. http://www.nap.edu/catalog.php?record_id=18344 [Accessed April 28, 2016].

Ou, J., C.R. Thompson, M. Jugulam and P.W. Stahlman. 2010. Kochia response to pre and post applied dicamba. 2010 North Central Weed Science Society Conference Proceedings 65:92.

Owen, L.N., L.E. Steckel, C.H. Koger, C. Main and T.C. Mueller. 2009. Evaluation of Spring and Fall burndown application timings on control of glyphosate-resistant horseweed (*Conyza canadensis*) in no-till cotton. Weed Technology 23:335-339.

Riley, E. B. and K. W. Bradley. 2014. Influence of Application Timing and Glyphosate Tank-Mix Combinations on the Survival of Glyphosate-Resistant Giant Ragweed (*Ambrosia trifida*) in Soybean. Weed Tech. 28:1-9.

ED_002084_00044094-00050

Salas, R.A., N.R. Burgos, P.J. Tranel, S. Singh, L. Glasgow, R.C. Scott and R.L. Nichols. 2016. Resistance to PPO-inhibiting herbicide in Palmer amaranth from Arkansas. Pest Management Science 72:864-869.

Schlichenmayer, A.A., T.C. Shauck, S.A. Riley, C.F. Page and R.J. Smeda. 2011. Soil persistence of dicamba. 2011 North Central Weed Science Society Proceedings 66:28.

Sosnoskie, L.M., J.M. Kichler, R.D. Wallace and A.S. Culpepper. 2011. Multiple resistance in Palmer amaranth to glyphosate and pyrithiobac confirmed in Georgia. Weed Science 59:321-325.

Sosnoskie, L.M., A.S. Culpepper, L.B. Braxton and J.S. Richburg. 2015. Evaluating the volatility of three formulations of 2,4-D when applied in the field. Weed Technology 29:177-184.

Southeast Farm Press. 2009. Resistant pigweed control programs updated. Southeast Farm Press, Prism Business Media, Lewisville, Texas. http://southeastfarmpress.com/management/resistant-pigweed-control-programs-updated [Accessed April 10, 2013].

Spaunhorst, D.J., B.G. Young and W.G. Johnson. 2010. Palmer amaranth (*Amaranthus palmeri*) control with soil-applied herbicide programs which contain dicamba, isoxaflutole, and 2,4-D. 2010 North Central Weed Science Society Conference Proceedings 65:140.

Spaunhorst, D.J., S. Seifert-Higgins, C.M. Mayo, E.B. Riley and K.W. Bradley. 2012. Programs for the management of glyphosate-resistant waterhemp and giant ragweed in dicamba-resistant soybean. *Proc.* North Central Weed Science Vol. 67

Steckel, L. 2013. In fight against resistance – New weed control technology promising, deltafarmpress.com.

Steckel, L. 2016. PPO/glyphosate resistance in Palmer not an overnight event. Delta Farm Press, Kansas City, Kansas. http://deltafarmpress.com/soybeans/ppoglyphosate-resistance-palmer-not-overnight-event [Accessed May 10, 2016].

Steckel, L.E., C.C. Craig and R.M. Hayes. 2006. Glyphosate-resistant horseweed (*Conyza canadensis*) control with glufosinate prior to planting no-till cotton (*Gossypium hirsutum*). Weed Technology 20:1047-1051.

Thompson, M. A., L. E. Steckel, A. T. Ellis, and T. C. Mueller. 2007. Cotton Tolerance to early Preplant Application of 2,4-D Ester, 2,4-D Amine, and Dicamba. Weed Technology 21:882-885.

University of Arkansas. 2011. Recommended chemicals for weed and brush control. University of Arkansas, Cooperative Extension Service, Division of Agriculture, Fayetteville, Arkansas.

University of Illinois. 2008. 2008 Illinois agricultural pest management handbook. University of Illinois Extension, Champaign, Illinois.

ED_002084_00044094-00051

U.S. EPA. 2013. EFED Environmental Risk Assessment of Proposed Label for Enlist (2,4-D Choline Salt), New Uses on Soybean with DAS 68416-4 (2,4-D Tolerant) and Enlist (2,4-D + Glyphosate Tolerant) Corn and Field Corn. EPA-HQ-OPP-2014-0195-0002. U.S. Environmental Protection Agency, Washington, D.C.

U.S. EPA. 2016. Biological and Economic Analysis Division (BEAD) review of the benefits document submitted by Monsanto to support the registration of the use of dicamba on dicamba tolerant soybean and cotton. EPA-HQ-OPP-2016-0187-0012. U.S. Environmental Protection Agency, Washington, D.C.

VanGessel, M.J., A.O. Ayeni, and B.A. Majek. 2000. Optimum glyphosate timing with or without residual herbicides in glyphosate-tolerant soybean (Glycine max) under full-season conventional tillage. Weed Technology 14:140-149.

Verbruggen, E.M.J. and P.J. van den Brink. 2010. Review of recent literature concerning mixture toxicity of pesticides to aquatic organisms. RIVM Report 601400001/2010. RIVM, National Institute for Public Health and the Environment, Bilthoven, the Netherlands.

Vink, J. P., N. Soltani, D. E. Robinson, F. J. Tardif, M. B. Lawton and P. H. Sikkema. 2012. Glyphosate-Resistant Giant Ragweed (Ambrosia trifida) Control in Dicamba-Tolerant Soybean. Weed Tech. 26:422-428.

Wall, D.A. 1994. Potato (*Solanum tuberosum*) response to simulated drift of dicamba, clopyralid and tribenuron. Weed Science 42:110-114.

Wax, L.M., L.A. Knuth and F.W. Slife. 1969. Response of soybeans to 2,4-D, dicamba, and picloram. Weed Science 17:388-393.

Weidenhamer, J.D., G.B. Triplett and F.E. Sobotka. 1989. Dicamba injury to soybean. Agronomy Journal 81:637-643.

Willis, J.B., C.D. Kamienski, M.S. Malik and S. Seifert-Higgins. 2012. Dicamba contributes residual weed control to Roundup Ready® 2 Xtend soybean systems. 2012 North Central Weed Science Society Proceedings 67:16.

Zollinger, R. 2006. The glyphosate weeds and crop series: Biology and management of wild buckwheat. GWC-10. Purdue Extension, West Lafayette, Indiana.

ED_002084_00044094-00052

IX. APPENDIX: TECHNICAL CORRECTIONS

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
EPA-HQ-OPP-2016-0187-0002	Addendum to Dicamba Diglycolamine Salt (DGA) and its Degradate, 3,6-dichlorosalicylic ac id (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Soybean and Cotton in 16 states (Arkansas, Illinois, Iowa, Indiana, Kansas, Louisiana, Minnesota, Mississippi, Missouri,	"EPA has a specific process based on sound science that it follows when assessing risks to listed species for pesticides like dicamba that will be used on seeds that have been genetically modified to be tolerant to the pesticide."	2	Replace: "seeds" with "crops." Dicamba is not a seed treatment. It will not be used on seeds that have been genetically modified to be tolerant to the pesticide. It will be used either by (1) application to soil either, pre-plant or pre-emergence of the dicamba tolerant crop, or (2) by foliar application over the dicamba tolerant crop.

ED_002084_00044094-00053

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, and Wisconsin).			
EPA-HQ-OPP-2016-0187-0002	Addendum to Dicamba Diglycolamine Salt (DGA) and its Degradate, 3,6-dichlorosalicylic ac id (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Soybean and Cotton in 16 states (Arkansas, Illinois, Iowa, Indiana, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio,	"Similar modeling of DCSA residues, which are formed inside the tolerant-soybean and tolerant-cotton plants through plant metabolism, is not feasible at this time due to a lack of sufficient data tracking DCSA residues in plant tissues over time to ascertain degradation rates."	7	Analysis needed: Data are available and decline of DCSA residues should be considered in the risk assessment. Decline of DCSA residues has been reported for three sites in MRID 48644205: Determination of Dicamba Residue Decline in Forage after Application to Dicamba-Tolerant Soybean MON 87708 × MON 89788. Although a half-life has not been calculated, residues appear to have declined by approximately 50% or more within 7 days after application.

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Oklahoma, South Dakota, Tennessee, and Wisconsin)			
EPA-HQ-OPP-2016-0187-0002	Addendum to Dicamba Diglycolamine Salt (DGA) and its Degradate, 3,6-dichlorosalicylic ac id (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Soybean and Cotton in 16 states (Arkansas, Illinois, Iowa, Indiana, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee,	"Mass of soybean plants consumed per day = 22.44 kcal/day/(0.63 kcal/gX0.47 AE) = 75.79 g/day."	Pg 15	Replace: Energy requirements for soybean plants should be 2.2 kcal/g (broadleaf forage).

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	and Wisconsin)			
EPA-HQ-OPP-2016-0187-0002	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 16 states (Arkansas, Illinois, Iowa, Indiana, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, and Wisconsin)	"The screening level risk assessment found that DCSA residues in arthropods in cotton fields (based on the empirical residues in broadleaf plant tissues and extrapolated via the Kenaga nomogram to residues in arthropods) would not exceed any chronic levels of concern for mammals. The analysis of the Louisiana Black Bear's recovery plan described above indicates that in soybean fields, the attractive food source in these fields would be soybean grain (seeds). On the basis of this information, the refinement of the soybean screening level assessment was initiated to reflect the	24	Add: "Using arthropods as a food source would not alter the conclusion of the screening level assessment for the Louisiana Black Bear."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
		conservative assumption of exclusive consumption of exposed soybean grain containing the maximum measured DCSA residues."		
EPA-HQ-OPP-2016-0187-0003	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 7 U.S. States (Alabama, Georgia, Kentucky, Michigan, North Carolina, South	Similar modeling of DCSA residues, which are formed inside the tolerant-soybean and tolerant-cotton plants through plant metabolism, is not feasible at this time due to a lack of sufficient data tracking DCSA residues in plant tissues over time to ascertain degradation rates.	8	Analysis needed: Data are available and decline of DCSA residues should be considered in the risk assessment. Decline of DCSA residues has been reported for three sites in MRID 48644205: Determination of Dicamba Residue Decline in Forage after Application to Dicamba-Tolerant Soybean MON 87708 × MON 89788. Although a half-life has not been calculated, residues appear to have declined by approximately 50% or more within 7 days after application.

ED_002084_00044094-00057

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Carolina, and Texas)			
EPA-HQ-OPP-2016-0187-0003	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 7 U.S. States; Appendix 2: Listed Species Rationale for NO Effects When Action Area is Limited to Treated Agricultural Field – Accounting for Spray Drift Mitigation Labeling	Rationale: "The proposed dicamba DGA uses are not expected to overlap with rivers or other water bodies."	77	Add: Rationale should include "streams and creeks."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Restrictions; Lacy elimia			
EPA-HQ-OPP-2016-0187-0003	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 7 U.S. States; Appendix 2: Listed Species Rationale for NO Effects When Action Area is Limited to Treated Agricultural Field – Accounting for Spray Drift Mitigation	Rationale for fleshy-fruit gladecress: "Technical consultation with USFWS biologist indicated that this species *will not persist* in soy or cotton fields due to the competing vegetation."	109	Add: "The U.S. Fish & Wildlife Service concurs that fleshy-fruit gladecress will not occur in row crop agricultural fields."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Labeling Restrictions			
EPA-HQ-OPP-2016-0187-0003	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 7 U.S. States; Appendix 2: Listed Species Rationale for NO Effects When Action Area is Limited to Treated Agricultural Field – Accounting for Spray Drift Mitigation	"The proposed dicamba DGA uses are not expected to overlap with plains."	119	Replace "plains" with "South Texas Plains vegetation area."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Labeling Restrictions; Ashy dogweed			
EPA-HQ-OPP-2016-0187-0003	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 7 U.S. States; Appendix 2: Listed Species Rationale for NO Effects When Action Area is Limited to Treated Agricultural Field – Accounting for Spray Drift	Hairy rattleweed rationale: "The proposed dicamba DGA uses are not expected to overlap with the margins of cultivated land."	125	Add: "An in-field buffer will be protective of species at the field margins."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Mitigation Labeling Restrictions			
EPA-HQ-OPP-2016-0187-0003	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 7 U.S. States; Appendix 2: Listed Species Rationale for NO Effects When Action Area is Limited to Treated Agricultural Field – Accounting for Spray Drift	Sensitive joint-vetch habitat: "Majority are found in natural tidal marsh habitats, but also a few documented cases of a pocket marsh wetland, edge of a moist soybean field, and a mowed grassy strip between a manmade drainage channel and dirt road."	136-37	Add: "An in-field buffer will be protective of species at the field margins."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Mitigation Labeling Restrictions			
EPA-HQ-OPP-2016-0187-0004	Addendum to Dicamba Diglycolamine Salt (DOA) and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Soybean and Cotton in in 11 U.S. States: (Arizona, Colorado, Delaware, Florida, Maryland, New Mexico, New Jersey, New York, Pennsylvania, Virginia and West	"Similar modeling of DCSA residues, which are formed inside the tolerant-soybean and tolerant-cotton plants through plant metabolism, is not feasible at this time due to a lack of sufficient data tracking DCSA residues in plant tissues over time to ascertain degradation rates."	8	Analysis needed: Data are available and decline of DCSA residues should be considered in the risk assessment. Decline of DCSA residues has been reported for three sites in MRID 48644205: Determination of Dicamba Residue Decline in Forage after Application to Dicamba-Tolerant Soybean MON 87708 × MON 89788. Although a half-life has not been calculated, residues appear to have declined by approximately 50% or more within 7 days after application.

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Virginia).			
EPA-HQ-OPP-2016-0187-0004	Addendum to Dicamba Diglycolamine Salt (DOA) and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Soybean and Cotton in in 11 U.S. States: (Arizona, Colorado, Delaware, Florida, Maryland, New Mexico, New Jersey, New York, Pennsylvania, Virginia and West Virginia).	Audubon's Crested Caracara	12	Add: "There is currently no commercial cotton production in the southern part of Florida. Cultivation of *B.t.*-cotton is not permitted south of Florida State Highway 60 due to potential cross-pollination with a wild relative, *G. hirsutum*. DT-cotton will therefore not be grown in Palm Beach County since it will only be available commercially as a stacked product that also possesses a *B.t.* trait and Palm Beach County is south of Highway 60. Since no DT cotton will be grown in proximity to the Audubon Crested Caracara (and thus no dicamba applied to DT cotton there), a no-effect determination is amply supported. Bt Plant-Incorporated Protectants October 15, 2001 Biopesticides Registration Action Document. http://www.epa.gov/oppbppd1/biopesticides/pips/bt_brad2/3-ecological.pdf."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
EPA-HQ-OPP-2016-0187-0004	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 11 U.S. States; Birds; California Condor; DCSA Assessment for California condor consuming prey that had previously consumed soybean forage	The first step in the refinement process is to calculate DCSA residues in the prey species. Using the assumption that the prey species is represented by a 1000 g mammal and the conservative assumptions that the prey animal feeds exclusively on exposed soybean forage containing the maximum measured residues of 61.1 ppm, EFED calculated the residues based on the following allometric equations (USEPA, 1993): 1000 g mammal prey ingestion rate (dry) = 0.621(1000)0.564 =30.56 g /day 1000 g mammal prey ingestion rate (wet) = 30.56/0.2 = 152.8	12	Add: "A Chronic Dose-Based RQ of 0.02 does not exceed the LOC of 0.1. Consequently, a 'no effect' determination is appropriate for the California condor."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
		g/day DCSA residue in prey eating soybean forage/hay 61.1 mg DCSA/kg-food (ww) x 0.1528 kg food/kg-bw = 9.34 mg/kg-bw/day The next step is to calculate the expected daily dose for a typical 10 kg (10000 g, Dunning 1984) condor, the adjusted LD50 value, and the acute dose-based RQ for the condor based on the following allometric equations: Food Intake (wet) = (0.301(10000)0.75)/(1-0.69)/1000 = 0.97 kg wet/day Dose-based EEC in condor eating large mammal= 9.34 mg/kg wet x 0.97/(10000/1000) =		

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
		0.91 mg/kg-bw/day Avian Chronic Endpoint of 695 mg/kg-diet (from mallard duck study for parent dicamba) modified by ratio of parent dicamba to metabolite DCSA from chronic rat studies (17x) results in Avian chronic NOAEC of 40.88 mg/kg-diet. Chronic Dose-Based RQ = 0.91/40.88 = 0.02		
EPA-HQ-OPP-2016-0187-0004	Addendum to Dicamba Diglycolamine (DGA) Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) Section 3 Risk Assessment: Refined Endangered	"This analysis suggests that if a pronghorn NE for Sonoran pronghorn is feeding in a soybean field there is a potential for a lethal event. Establishing a potential for overlap between species range and the cropped areas	21-24	Add: "A no effect determination is supported by limited exposure in cotton fields, no exposure in soy fields, and screening-level risk assessment results that identify no risk to mammalian species for exposure in cotton fields."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Species Assessment for Proposed New Uses on Herbicide-Tolerant Cotton and Soybean in 11 U.S. States; Mammals; Sonoran pronghorn; DCSA assessment	proposed for treatment is an important consideration in how likely an exposure event might be for individual pronghorn...."		
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 87701)	"Based on the proposed maximum application rates and exceedances of the Agency's Levels of Concern (LOCs), at the screening level there is a potential for direct adverse effects to Federally endangered and threatened (referred to hereafter as "listed") and non-listed birds (acute exposure only), listed vascular aquatic plants, and listed and non-listed terrestrial dicots from the	2	Replace "vascular plants" with "non-vascular plants."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
		proposed new use."		
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	"Therefore an analysis of drift from particles volatilized from the treated field was completed…"	7	Replace "drift from particles volatilized" with "volatilization". The use of the wording "particles" is not accurate for volatilization" occurring after deposition on soil or plants. The only time that volatilization of particles could occur from drift would be during application.
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	BAPMA salt endpoints are indicated to have been used for risk assessment for Fathead minnow acute (LC50) endpoint, Daphnia chronic (NOAEC) endpoint, green algae acute and chronic endpoints. Mysid shrimp chronic value used dicamba acid.	13 Table 7	Comment for consideration: DGA salt endpoints should be used in the assessment.
EPA-HQ-	Ecological Risk Assessment for	Avian chronic values used is indicated as	13 Table 7	Replace: Avian chronic values for the mallard duck of 800 mg a.e./kg diet with 695 mg a.e./kg diet for mallard duck that was

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
OPP-2016-0187-0005	Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	mallard duck value of 800 mg a.e./kg diet used.		actually used.
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	"LOC for any size class of mammal or bird (RQs would range from <0.01—0.34; Table 10). Residues in arthropods (as a dietary item for birds and mammals consuming insects that have consumed cotton tissues with DCSA residues) were assumed to follow the Kenaga nomogram relationship between broadleaf plants and arthropods and therefore were considered to contain 4.4 ppm which also	Pg 16	Comment for consideration: DCSA arthropod data is based on Kenega values, which are extremely conservative considering that those values are based on direct sprays, not through ingestion.

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
		would not result in any exceedances (RQ's range from 0.11—0.24)".		
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	"Pesticides were applied using XR-T-Jet 11004 nozzle which is the same nozzle proposed for the new dicamba uses on DT cotton."	31	Replace "XR-T-Jet 11004" with "TTI-11004."
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	"Using these assumptions in TerrPlant (total 2 lb ae/A application and a 0.055% runoff fraction), and the most sensitive endpoint of 0.000261 for the NOAEC for soybeans, the maximum RQ is less than the LOC of 1.0 by	34	Replace: "the most sensitive endpoint of 0.000261" with "the most sensitive endpoint of 0.0673 lb a.e./A." Runoff exposure estimates should be compared to the seedling-emergence endpoint not vegetative-vigor endpoint.

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
		a factor of at least 2 (RQs range from <0.1 to 0.48, see Appendix 4)."		
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	Table 14 Row for Mammals: "Yes (Chronic)" and "Yes[2]"	35	Replace "Yes (Chronic)" and "Yes[2]" with "No" and "No."
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	"Prior to development of glyphosate-resistant crops, there were no known cases of evolved glypohsate resistant weeds (Dyer, 1994)."	36	This sentence should be deleted. There were known cases of Glyphosate-resistant weeds in other locations prior to the introduction of glyphosate-tolerant crops (http://www.weedscience.org).
EPA-HQ-	Ecological Risk Assessment for		44	Add table notes for Appendix 2. LAFT and HAFT should be defined as Lowest Average Field Trial and Highest Average

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
OPP-2016-0187-0005	Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)			Field Trial, respectively.
EPA-HQ-OPP-2016-0187-0005	Ecological Risk Assessment for Dicamba DGA Salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA), for the Proposed Post-Emergence New Use on Dicamba-Tolerant Cotton (MON 8770 1)	Appendix 4	47-50	Analysis needed: Considering the in-field buffer, spray drift should not be considered in TerrPlant calculations.
EPA-HQ-OPP-2016-0187-007	Memorandum: Dicamba DGA: Second Addendum to the Environmental Fate and Ecological Risk Assessment for Dicamba DGA	"EFED concluded that the label should be modified to include language to maintain a 100 to 110 foot downwind buffer when applying at the 0.5 lbs a.e./A	6	Replace "restricting the droplet spectra extra-coarse and ultra-coarse" with "…restricting the nozzles to those that do not have greater drift potential than TTI11004 at 63 psi for M1691."

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	salt and its Degradate, 3,6-dichlorosalicyclic acid (DCSA) for the Section 3 New Use on Dicamba-Tolerant Soybean	application rate and with the described nozzles restricting the droplet spectra extra-coarse and ultra-coarse."		
EPA-HQ-OPP-2016-0187-0007	Dicamba DGA: Second Addendum to the Environmental Fate and Ecological Risk Assessment for Dicamba DGA salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) for the Section 3 New Use on Dicamba-Tolerant Soybean	"Appendix 2 and MRID 47899524"	14	Replace "MRID 47899524" with "MRID 48219901." MRID 48219901 is an amended version of the MRID 47899524, and contains corrected residue values that are slightly different from the values in the original report.
EPA-HQ-OPP-2016-0187-0007	Dicamba DGA: Second Addendum to the Environmental Fate and Ecological Risk Assessment for Dicamba DGA salt and its	"The empirical data from MRID 47899524 found means and maximums, respectively, of DCSA concentrations of 17.0 and 51.3 ppm, in forage 7-10 days	14	Analysis needed: Mean and Maximum DCSA residue values do not match those of MRID 48219901. Forage Mean / Max 15.8 ppm /47.9 ppm; Hay Mean / Max 30.1 ppm/ 57.1 ppm; Seed Mean / Max 0.055 ppm/ 0.411 ppm.

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Degradate, 3,6-dichlorosalicylic acid (DCSA) for the Section 3 New Use on Dicamba-Tolerant Soybean	following the last application, 32.2 and 61.1 ppm in hay 13-15 days following the last application and 0.059 and 0.440 ppm in seeds 73-98 days after the last application."		
EPA-HQ-OPP-2016-0187-0007	Dicamba DGA: Second Addendum to the Environmental Fate and Ecological Risk Assessment for Dicamba DGA salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) for the Section 3 New Use on Dicamba-Tolerant Soybean	"Using these assumptions in TerrPlant (total 2 lb ae/A application and a 0.055% runoff fraction), and the most sensitive endpoint of 0.000261 for the NOAEC for soybeans, the maximum RQ is less than the LOC of 1.0 by a factor of at least 2 (RQs range from <0.1 to 0.48, see Appendix 3)."	21	Replace "the most sensitive endpoint of 0.000261" with "the most sensitive endpoint of 0.0673 lb a.e./A." Runoff exposure estimates should be compared to the seedling-emergence endpoint not vegetative-vigor endpoint.
EPA-HQ-OPP-2016-0187-	Dicamba DGA: Second Addendum to the Environmental Fate and Ecological Risk Assessment	Herbicide interactions Section	22	Analysis needed: Synergy should include discussion of rates considered. Only rates that would be expected off field are appropriate (i.e., not field rates).

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
0007	for Dicamba DGA salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) for the Section 3 New Use on Dicamba-Tolerant Soybean			
EPA-HQ-OPP-2016-0187-0007	Dicamba DGA: Second Addendum to the Environmental Fate and Ecological Risk Assessment for Dicamba DGA salt and its Degradate, 3,6-dichlorosalicylic acid (DCSA) for the Section 3 New Use on Dicamba-Tolerant Soybean	Appendix 3	31-33	Analysis needed: Considering the in-field buffer, spray drift should not be considered in TerrPlant calculations.
EPA-HQ-OPP-2016-0187-0009	Memorandum. Dicamba and Dicamba BAPMA Salt: Human-Health Risk Assessment for Proposed Section 3	"..most highly exposed population subgroup is children ages 1-2…42% of the cPAD."	5, 37	Analysis needed: The text, while consistent with the select data presented in the summary table in 5.4.6, appears to be inconsistent with the DEEM-FCID results presented in EPA-HQ-OPP-2016-0187-0011Dietary Exposure Assessment, Attachment 6, which show population subgroup non-nursing infants at 45.4% of the cPAD.

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	New Uses on Dicamba-tolerant Cotton and Soybean Executive Summary and 5.4.4 Chronic Dietary Risk Assessment			
EPA-HQ-OPP-2016-0187-0011	Memorandum. Dicamba. Acute and Chronic Dietary Exposure Assessments of Food and Drinking Water to Support the Use of Dicamba on Dicamba-Tolerant Cotton and Soybean for Amended Section 3 Registration, and Registration of the New N,N-Bis-(3-aminopropyl) methylamine (BAPMA) Salt Formulation Executive	"…most highly exposed…children ages 1-2…42% of the cPAD." "…chronic…children 1-2 years old had the highest chronic dietary risk at 42% of the cPAD." "…chronic…Children 1-2…42% cPAD."	2 9 10	Analysis needed: The text, while consistent with the select data presented in summary Table 5 (p 10) appears to be inconsistent with the DEEM-FCID results presented in EPA-HQ-OPP-2016-0187-0011Dietary Exposure Assessment, Attachment 6, which show population subgroup non-nursing infants at 45.4% of the cPAD.

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
	Summary VII. Results/Discussion IX. Conclusions			
EPA-HQ-OPP-2016-0187-016	Proposed Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean	"This registration for dicamba is being proposed for registration for use in the states of Alabama, Arkansas, Arizona, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Mexico, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, and	23	Add: Iowa to the list of states.

Docket ID No.	Document Name & Section	Text	Page	Comment/Data Needed
		Wisconsin."		
EPA-HQ-OPP-2016-0187-016	Proposed Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean		17 and other places in document	Buffer is listed as 100 feet rather than 110 feet.
EPA-HQ-OPP-2016-0187-016	Proposed Registration of Dicamba on Dicamba-Tolerant Cotton and Soybean	"There is no evidence of susceptibility to the young following in utero exposure to dicamba acid, dicamba BAPMA or DCSA."	9	Replace with "Susceptibility to young following in utero exposure to dicamba acid, dicamba BAPMA or DCSA is unlikely."

Message

From: Scott H Jackson [scott.jackson@basf.com]
Sent: 6/3/2016 11:19:08 AM
To: Corbin, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1db182663b134e46b3fec580f8e0b5f2-Mark Corbin]
CC: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Wait, Monica [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8f850c921cbc497c82df4ed753d1c5ea-Monica Wait]; Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Jeffrey H Birk [jeffrey.birk@basf.com]
Subject: Dicamba Air Sampling study Final Report (courtesy copy)
Attachments: Final Report 2016 Air Sampling Study 2016_7005721.pdf

Hi Mark

The dicamba (Engenia formulation) study has been submitted to EPA – MRID **49937701**. I have attached a courtesy copy of the final report.

Scott
++
Scott Jackson, Ph.D.
Regulatory Technical Stewardship & Sustainability

Phone: +1 919 547-2349 Mobile: +1-919-610-1100 Fax: +1 919 547-2850 E-Mail: scott.jackson@basf.com
Postal Address: BASF Corporation, 26 Davis Drive, Research Triangle Park 27709, USA

BASF - We create chemistry

All contents of this e-mail and any attachments there to are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.
m.

FINAL REPORT

Sampling for Possible Gaseous Field Loss after Application of a Commercial Herbicide

Data Requirement

OPPTS 835.8100

Author

Scott H. Jackson, Ph.D.

Study Completion Date

June 1, 2016

Sponsor
BASF Crop Protection
26 Davis Drive
Research Triangle Park, NC 27709

Test Facility
BASF Crop Protection
26 Davis Drive
Research Triangle Park, NC 27709

All other performing facilities are listed on page 9 of this report.

Study Number

813945

BASF Registration Document Number

2016/7005721

ED_002084_00044367-00001

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality, on any basis whatsoever, is made for any information contained in this document. I acknowledge that information not designated as within the scope of FIFRA sec. 10(d)(1)(A), (B), or (C) and which pertains to a registered or previously registered pesticide is not entitled to confidential treatment and may be released to the public, subject to the provisions regarding disclosure to multinational entities under FIFRA 10(g).

Submitter: _____ _____
Jeffrey Birk, Ph.D. Date
BASF Corporation

GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

The following is a detailed description of all differences between the practices used in the study and those required by 40 CFR 160:

1. The test substance used in the field phase of this study was a commercial product obtained from commercial production. The lot numbers for each were obtained, but the individual test substances were not characterized as required under GLP or archived.
2. The Exponent modeling report appended to this study is a evaluation of data after generation and was not conducted under GLP.

The cited deviations do not affect the scientific conclusions presented in this report.

Study Director:

Scott H. Jackson, Ph.D.
BASF Crop Protection

Date 6/1/16

Sponsor:

Andrew Goetz, Ph.D.
BASF Crop Protection

Date 6-1-16

Submitter:

Jeffrey Birk, Ph.D.
BASF Crop Protection

Date 6/1/16

QUALITY ASSURANCE UNIT STATEMENT OF INSPECTIONS

Study Number:813945

Name/Number of Test Substance: Dicamba (Engenia ® Herbicide)

Type of Study: **835.8100 "Field Volatility"**

The quality assurance unit of the testing facility has inspected the protocol and the final report and reported the results of these inspections to the Study Director and to management.

The statement of Quality Assurance for the Field Summary Report (Stone Environmental) can be found on page 3 of their report appended to this final report (Appendix A).

The statement of Quality Assurance for the Analytical Report (Adpen Laboratories) can be found on page 3 of their report appended to this final report (Appendix B).

Date of Inspection	Date Reported to Study Director and Management
3/29/2016	3/29/2016
5/31/2016	5/31/2016

Signature of Quality Assurance Unit

CERTIFICATION OF AUTHENTICITY

We, the undersigned, hereby declare that this study was performed under our supervision according to the procedure described herein, and that this report provides a true and accurate record of the results obtained.

Study Director:

Scott H. Jackson, Ph.D.,
Stewardship Manager,
Regulatory Technical Stewardship
& Sustainability,
BASF Crop Protection

6/1/16
Study Completion Date

Approved By:

Andrew Goetz, Ph.D.,
Manager
Regulatory Technical Stewardship
& Sustainability,
BASF Crop Protection

6-1-16
Date

TABLE OF CONTENTS

Page

FINAL REPORT 1
STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS 2
GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT 3
QUALITY ASSURANCE UNIT STATEMENT OF INSPECTIONS 4
CERTIFICATION OF AUTHENTICITY 5
LIST OF TABLES 7
LIST OF FIGURES 7
LIST OF APPENDICES 7
STUDY INFORMATION PAGE 8
A. Study Purpose 10
B. Introduction 10
C. Experimental Design 11
D. Test System 12
1. Test Plot Layout and Instrumentation 12
2. Weather Data Collection 13
2. Sample Handling and Preparation 13
4. Analytical Methodology 13
E. Results and Discussion 14
F. Flux modeling 18
G. Conclusions 18
H. Stability in Storage 19
I. Statistics 19
J. Protocol Amendments and Deviations 19
K. Archiving 19
L. References 19
M. Appendices 21

LIST OF TABLES

Table 1. Test substance nomenclature – Engenia ® Herbicide 11
Table 2. Application summary at both sites. 14
Table 3. Summary of Meteorological Data by Sample Period. 15
Table 4. Summary of predicted chemical loss based on the Otago University model method. 16
Table 5. Summary of measured residues as total mass at the West field 17
Table 6. Summary of measured residues as total mass at the East field 17

LIST OF FIGURES

Figure 1. Generalized diagram of plot layout.. 12
Figure 2. Photo of pasture grass showing heavy dew conditions at time of application. 15
Figure 3. A 3D plot of the relationship between air temperature, relative humidity, and potential gaseous loss (%) 16
Figure 4. Estimated deposition of dicamba (lb/A) by distance from the edge of a 40 acre field 18

LIST OF APPENDICES

Appendix A – Field Summary Report 22
Appendix B - Analytical Report 118
Appendix C - Air Modeling Report 206

STUDY INFORMATION PAGE

Study Number:813945

BASF Reg. Doc. No.:	2016/7005721
Study Title:	Sampling for Possible Gaseous Field Loss after Application of a Commercial Herbicide
Test Substances:	Dicamba (Engenia® Herbicide)
Sponsor and Testing Facility:	BASF Crop Protection 26 Davis Drive Research Triangle Park, NC 27709
Study Director:	Scott H. Jackson, Ph.D. (BASF Crop Protection)
Sponsor:	Andrew Goetz, Ph.D. (BASF Crop Protection)
Study Dates	
Study Initiation Date:	March 9, 2016
Experimental Start Date:	April 11, 2016
Experimental Completion Date:	May 6, 2016
Study Completion Date:	See date of Study Director's signature on page 5

STUDY INFORMATION PAGE (continued)

List of Performing Facilities for the Field Trials

Field Investigator[a]	Facility	Facility Address
Benjamin Brayden	SEI	535 Stone Cutters Way, Montpelier, VT 05033

Analytical Facility

Principal Investigator[b]	Facility	Facility Address
Rolando Perez	ADPEN Laboratories, Inc.	11757 Central Parkway Jacksonville, FL 32224

Model Report Facility

Principal Investigator	Facility	Facility Address
Rick Reiss	Exponent	1800 Diagonal Road, Suite 500 Alexandria, VA 22314

[a]Other analytical personnel are listed in Appendix A
[b]Other analytical personnel are listed in Appendix B

A. STUDY PURPOSE

The objective of this study was to measure possible gaseous loss (flux) of dicamba after application to a cultivated field. In addition to physical field measurements, the air sampling and weather data are used to provide model predictions of potential gaseous field losses.

Data from these types of studies provide support for the registration of typical end-use pesticide products. The purpose of this report is to describe the field phase of the study concerning the test substance Engenia®, a formulation containing 49.4% dicamba herbicide at 5 lbs. a.e./gal.

B. INTRODUCTION

A field dissipation study was performed in South Georgia to measure potential gaseous field loss (flux) following application of a dicamba-containing herbicide provided by BASF. The study location was representative of warm, humid areas in a region the pesticide is intended to be used. Applications were made to two approximately 120 m x 120 m areas in two separate mixed species hay fields composed primarily of Orchard grass and Bermuda grass, one of which was mowed prior to the application. Air sampling was conducted continuously following a schedule of sampling intervals which increased progressively in time period (3 hrs, 6 hrs, 12 hrs), and time from application. High temporal resolution weather data was collected from the time of application until the last samples were collected.

While most of applied product deposits in the targeted area, some can be lost from the intended area. To maximize on target applications, Industry, pesticide applicators, and government researchers have developed and employed a variety of application strategies and technologies to reduce spray drift. Examples include low drift spray nozzles, low drift sprayers technologies, drift control chemical adjuvants, barrier structures, and hedgerow vegetation. Although these and other technologies have the potential to provide drift reduction, there is often regulatory questions about their effectiveness or performance.

Often when applied product moves off target, it can travels various distances depending on environmental factors. These off target residues may then redeposit on the ground or other surfaces such as non-target plants. The crop protection industry has generated efficacy studies which indicate the overwhelming majority of sprayed product reaches its intended target. Yet others outside of industry have argued that large quantities of applied product leave the target area as vapor or as a volatilized substance [1,2]. Sprayed material leaving the in-field target can be lost by several mechanisms. Off target loss is often put into two broad categories such as direct particle or secondary vapor loss. Various size particles are created as the spray solution passes through a nozzle under pressure, and drift can occur when small spray particles travel off target during periods of high wind. To avoid this loss mechanism, nozzles creating larger spray droplets and minimal volume fractions with diameter below 100-200 µm are preferred. Additionally spraying during lower speed wind conditions in unstable air reduces particle loss. In contrast to pre-deposition losses through drift primarily, vapor drift can occur if products volatilize or evaporate and move off the application site after their initial deposition.

The volatility of some products increases as temperatures rise above 30°C. While it is possible to control particle off target losses, there is little that can be done to minimize volatile losses of a product because volatilization is a physical property of the molecule. Normally a manufacturer's label will provide information on when it is safe to apply a product based on air temperatures, but the greatest potential for volatilization losses occur when conditions are hot and dry.

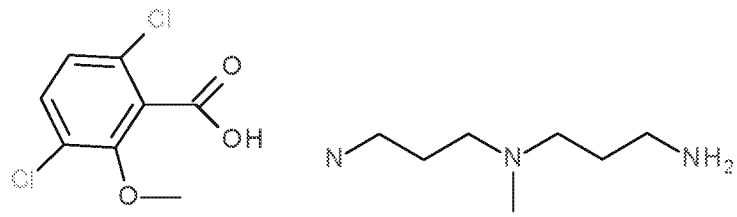
Compound	Molecular weight	Vapor Pressure (mm Hg)	Koc	Soil Half-life (Days)
Dicamba (Clarity®)	221.04	5.5×10^{-6}	60	4

(Values commonly found on the internet)

Often vapor pressure measurement are used to imply that compounds are either volatile or non-volatile[3,4] , but vapor pressure measurements are typically measured gravimetrically on metal plates after being in forced air ovens rather than on natural substrates onto which those pesticides are normally applied in agricultural settings. For example, it is known that adsorption to soil can significantly reduce volatilization [1]. Based on Henry's law, volatilization from a moist soil can be assumed to approximate volatilization from water / air interface.

Many researchers studying volatilization may in fact inadvertently also sample direct drift. Drift can be of concern especially, if such drift remains airborne for a relatively long time under stable atmospheric conditions. The goal of this study was to generate data following the OPPTS guideline 835.8100 for the dicamba containing formulation of Engenia® Herbicide.

Table 1. Test substance nomenclature – Engenia ® Herbicide

Dicamba BAPMA Salt	**Chemical Structure**
	
Common name	Dicamba
Company experimental name	Not available
IUPAC name	3,6-dichloro-o-anisic acid, BAPMA Salt
CAS name	3,6-dichloro-2-methoxybenzoic acid, BAPMA Salt
CAS No.	104040-79-1
End-use product/EP	Engenia ® Herbicide (contains 5.0 lb ae/gal),

C. EXPERIMENTAL DESIGN

Study Site Information

A study was conducted following guideline OPPTS 835.8100, Field Volatility using a planned commercial herbicide formulation of dicamba under field conditions. Sites were located in Sumter County, Georgia (near the town of Plains, GA) and two plots were established in recently swathed hay fields. The plots were separately treated with a single, broadcast foliar application of a tank mix of BAPMA salt formulation, Engenia® Herbicide, a 5.0 lb ae/gal product. The two plots were separated in distance by about 1.75 km. The applications were made to the plots using approximately 24 gallons/A of water (nominal, 20 GPA) with tractor-mounted sprayer equipped using a flat boom with 17 nozzles spaced 18 inches apart to achieve a spray swath of 26 feet. The nozzles used were those required for the label, Air Induction TTI11005 nozzles. An adjuvant was not included in the spray mixture. Applications were made at the full intended label rate of 1 lb/ac ai.

D. TEST SYSTEM

The test substance was applied to a mixed species hay crop, dominated by Bermuda grass and Orchard grass, within two test plots (approximately 120 m x 120 m) in two separate agricultural fields. The test system consisted of the following physical matrices within the two test plots and also in the 30 m vicinity of the test plots where sampling occurred for both treated and UTC (untreated control) samples: (1) the soil, (2) the vegetation, and (3) the air up to 1.0 m above the vegetation layer surface.

The USDA taxonomic soil classifications for the fields are Norfolk loamy sand and Orangeburg loamy sand, for the west and east fields, respectively. Soils in both fields are in hydrologic soil group B.

The soil and vegetation matrices were not sampled in this study. Sampling of the air matrix component of the test system was conducted using active air sampling pumps fitted with low-volume PUF/XAD sample collection tubes for semi-volatile compounds. This design was used for both treatment and UTC samples.

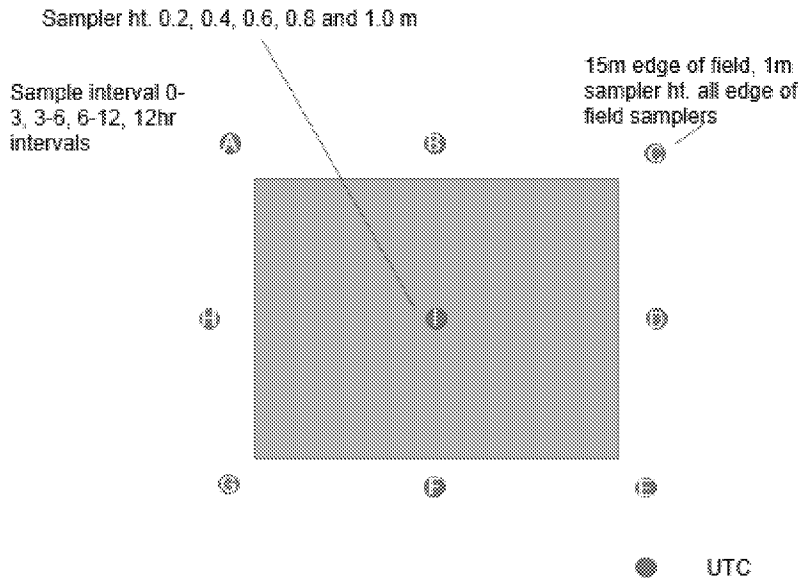


Figure 1. Generalized diagram of plot layout. Prevailing wind direction is toward the "B" perimeter sampler.

1. Test Plot Layout and Instrumentation

The test plot layouts were established the day prior to application. At site 1W, the NW and NE corners of the test plot were both approximately 21 m directly south of the road (See field summary report attached). At Site 2E, the SW corner of the plot was approximately 115 m north of the road and the SE corner of the plot was approximately 43 m north of the road. Plot corners and application swath centerline transects were marked with flags. All sampling locations were marked with flags and subsequently with metal fence post stakes to stabilized and hold the sampling stations upright.

Instrumentation consisted of weather stations, sampling masts with active air samplers, and AV sample collectors. The weather station at each plot was deployed near sampling station D prior to application. Immediately following application, the weather stations were moved into the treatment area to a location approximately 15 m east of sampling station I.

Ten 1¼ -inch diameter PVC sampling masts with horizontal arms were constructed for each of the two test plots to hold active air sampler pumps and PUF/XAD tube sampling media at the required heights above the hay vegetation layer. For each perimeter (A-H) and UTC sampling location, one sampling mast

was set up following application with PUF/XAD sample tubes suspended at a height of 1.0 m above the hay. For the central plot sampling location (I), a modified sampling mast with five active air samplers and tubes was set up so that sampling occurred at heights of 0.2 m, 0.4 m, 0.6 m, 0.8 m, and 1.0 m above the hay.

SKC Leland Legacy® active air sampler pumps (No. 100-3002, SKC Inc., Eighty Four, PA, USA) were attached to sampling masts with plastic cable ties. One pump was attached to each perimeter and UTC sampling mast and five pumps were attached to the center plot sampling masts. Plastic polytetrafluoroethylene (PTFE) tubing was used to connect pumps to SKC OVS tube holders with screw-on protective covers and collar clips (No. 224-29V, SKC Inc., Eighty Four, PA, USA). PUF/XAD sample tubes were attached to tubing on the tube holders (XAD-2 OVS quartz fiber 270/140 mg sorbent tubes, No. 226-58A, SKC Inc., Eighty Four, PA, USA;).

Application verification (AV) sample collectors were placed within the test plots prior to application. The AV sample collectors were 150 mm petri dishes fitted with 150 mm filter paper trimmed to fit inside the petri dishes. The filter paper was placed in the petri dishes to dampen the impact of the spray and reduce deflection of droplets out of the petri dish. Fifteen AV sample collectors were place in each test plot and were deployed in a line across the plot perpendicular to the direction of application. The AV sample petri dishes containing the filter paper were placed on a square foam board that was pinned to the ground with metal garden staples. Petri dish covers were removed immediately prior to application and replaced immediately afterward.

Further details on the site, including the actual plot layout, is provided in the appended field summary report.

2. Weather Data Collection

The day prior to spray application, a weather station composed of two Onset Computer Corporation Hobo® Microstation data loggers recording wind speed and wind direction, temperature, and relative humidity at three heights above the vegetation (approximately 0.5 m, 1.0 m, and 1.5 m above the top of the vegetation) were placed adjacent to sample station D at each site. The weather station at site 2E was additionally equipped with a pyranometer for measuring solar radiation. Immediately after application at each site, the weather stations were moved into the center of the plots approximately 15 m east of sample station I.

On April 11 at 5:25 pm a tipping bucket rain gauge was added to the weather station at site 1W. A tipping bucket rain gauge was added to site 2E on the same day at 5:47 pm. The tipping buckets were attached to an independent fencing stake at a height of approximately 1.0 m above the top of the vegetation, and approximately 1.0 m north of the main weather station. Rain gauges were added due to forecast precipitation throughout the evening.

Weather station data were collected and stored on a 1-minute interval at both sites for the duration of the study.

Further details on the field phase of this study can be found in Appendix "A" of this study.

3 Sample Handling and Preparation

The samples were delivered frozen and in good condition to the analytical laboratory, ADPEN Laboratories (Jacksonville, FL). Samples were driven directly to the laboratory from the field site by the principal investigator. Upon receipt, all field samples were transferred to a freezer where they remained until analysis.

4. Analytical Methodology

The analytical phase of this study was conducted to determine the residue of BAS 183 H (Dicamba) remaining after application to a cultivated field.

OVS tube samples were analyzed for residues of dicamba using Analytical Method ADPEN M1407 "Technical Procedure: Analytical Method for the Determination of Residues of BAS 183 H (Dicamba) and Imazethapyr in OVS tubes with XAD-2 sorbent by LC-MS/MS" as described in the analytical phase protocol. The limit of quantitation (LOQ) was 0.01 µg per sample for dicamba in OVS tube samples. The limit of detection (LOD) for the analytical method was 0.001 µg per sample.

Petri dish samples were analyzed for residues of dicamba using Analytical Method Meth-226 "Determination of 2,4-D Dimethylamine salt, dicamba, glyphosate and imazethapyr in/on petri dishes" as described in the analytical phase protocol (Reference 2). The limit of quantitation (LOQ) was 0.01 µg per sample for dicamba in petri dish samples. The limit of detection (LOD) for the analytical method was 0.005 µg per sample.

Mean procedural recoveries of dicamba on OVS tube samples in each analytical set were within 70–120%. Overall mean procedural recovery at all fortification levels for dicamba was 91% on OVS tubes.

Petri dish application verification samples were analyzed to verify the application of dicamba to the field. Only one set of procedural recoveries of dicamba on petri dish samples was needed for this study. The mean of the procedural recoveries of that analytical set for dicamba was 97%.

Further details on the analytical phase of the study can be found in Appendix "B" of this report.

E. RESULTS AND DISCUSSION

Applications were made with a tractor mounted hydraulic boom sprayer equipped with a 200 gallon tank and a 24 foot boom. The boom contained 17 nozzles spaced 18 inches apart, producing an effective spray swath of 25.5 feet. Turbo TeeJet Induction (TTI) 11005 nozzles from TeeJet Technologies were used for application at both sites due to label requirements. A pressure of 40 psi was selected per manufacture recommendations. Results from the GLP a calibration and application are reported below in Table 2. The applications were made within 3% of target.

Table 2. Application summary at both sites.

Site	Test Substance	Time of Application	Total Pass Time (sec)	Actual Spray Rate[1]	Target Application Rate	Actual Application Rate[1]	Percent of Target Applied
1W	Engenia®	09:19 – 09:32 am	753.14	24.7 GPA	1.0 lbs ai/A	1.03 lbs ai/A	103%
2E	Engenia®	10:23 – 10:35 am	711.55	23.3 GPA	1.0 lbs ai/A	0.97 lbs ai/A	97%

[1]Calculated speed using the swath pass times recorded in the field, the known swath distance of 120m, and the calibrated sprayer flow rate. Dew was heavy on the foliage the morning of the application at both sites.

Figure 2. Photo of pasture grass showing heavy dew conditions at time of application.

Table 3 is a summary of the meteorological conditions at both sites. From an examination of the summary it is evident that wind speed, direction air temperature and relative humidity were similar at both sites.

Table 3. Summary of Meteorological Data by Sample Period.

	Site 1W				Site 2E			
Sample Period[1]	**Average Wind Speed[2]**	**Average Wind Direction[2]**	**Maximum Temp.[2]**	**Maximum Relative Humidity[2]**	**Average Wind Speed[2]**	**Average Wind Direction[2]**	**Maximum Temp.[2]**	**Maximum Relative Humidity[2]**
0-3 Hours	5.8 mph	191°	75.9 °F	80.0%	5.9 mph	193°	77.9 °F	73.2%
3-6 Hours	6.1 mph	182°	79.1 °F	58.1%	5.6 mph	169°	79.2 °F	55.3%
6-12 Hours	3.7 mph	172°	79.2 °F	65.5%	2.9 mph	177°	78.1 °F	69.2%
12-24 Hours	1.7 mph	152°	70.1 °F	99.4%	1.5 mph	157°	68.7 °F	99.6%
24-36 Hours	1.9 mph	307°	77.7 °F	98.1%	1.9 mph	300°	76.3 °F	98.4%
36-48 Hours	0.6 mph	17°	61.5 °F	100%	0.9 mph	16°	63.0 °F	99.6%

[1]Sample periods based on sample location I-0.2 m, all other sample location have start times and collection times that are approximately ±20 min. [2]As recorded by instruments located at 1.0 m.

Some have speculated that compound gaseous loss is highly dependent on air temperature. However there are many contributing factors to compound gaseous loss. If gaseous loss and air temperature were compared at 45°F versus 80°F, air temperature could likely be the biggest driver of loss. Further, others have suggested that temperature differences from 75°F to 85°F might make the difference between gaseous loss occurring and no loss occurring. As an investigation of the relationship of environmental factors and gaseous loss, researchers at Otago University examined about 120 compounds and compared their propensity to off gas. The summary from their work was that the multiphase partitioning approach (Flux IV) could be used to assess the volatilization potential of any organic compound (not only pesticides) and could be extended to include other environmental media such as vegetation. Figure 3 is a 3D plot of the relationship between air temperature, relative humidity, and potential gaseous loss (%) based on the Otago University method. The relationship they developed indicates that as relative humidity increases, the influence of air temperature decreases. As an example, the difference in predicted 12 hour loss (%) at 78°F by changing relative humidly from 40% to 60% is about 55 fold. Similarly, changing the air temperature from 75 to 85 degrees at 60% relative humidity made about a 25

fold difference, while changing the air temperature from 75 to 85 degrees at 80% relative humidity made about a 3 fold difference in predicted 12 hour loss (%). Table 4 is a summary of sensitivity analysis calculations between air temperature, relative humidity, and potential gaseous loss (%) based on the Otago University method.

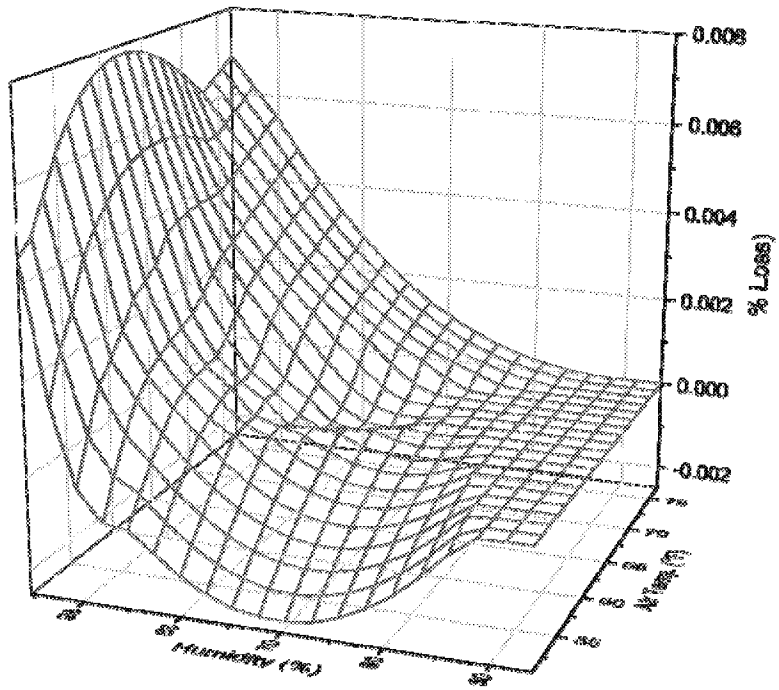


Figure 3. A 3D plot of the relationship between air temperature, relative humidity, and potential gaseous loss (%).

Table 4. Summary of predicted chemical loss based on the Otago University model method.

AT (°F)	RH (%)	12 hr % Loss	RH (%)	12 hr % Loss	RH (%)	12 hr % Loss	AT (°C)
75	40	0.00000742	60	0.0000398	80	0.0216	23.865
76	40	0.00000801	60	0.000433	80	0.0235	24.42
77	40	0.00000876	60	0.000478	80	0.0261	24.975
78	40	0.00000944	60	0.00052	80	0.0285	25.53
79	40	0.0000103	60	0.000574	80	0.0316	26.085
80	40	0.0000111	60	0.000623	80	0.0344	26.64
81	40	0.0000121	60	0.000688	80	0.0381	27.195
82	40	0.0000133	60	0.000759	80	0.0422	27.75
83	40	0.0000137	60	0.000824	80	0.0459	28.305
84	40	0.0000156	60	0.000908	80	0.0508	28.86
85	40	0.0000168	60	0.000985	80	0.0553	29.415

The presentation in Figure 2 and in Table 4 are based on the research of Davie-Martin et al. (2013) from two EST journal publications which were then turned into an Excel model tool. The model is an Excel implementation titled *Screening tools for predicting volatilization of pesticides applied to soils.*

Residue results: Tables 5 and 6 are summaries of the total residues measured at the two field locations. Air pumps were set to draw 3 L/minute for the designated sampling periods.

Table 5. Summary of measured residues as total mass collected in ug per time period at the West field.

West Field Center Height	0-3 hr Mass(ug)	3-6 hr Mass(ug)	6-12 hr Mass(ug)	12-24 hr Mass(ug)	24-36 hr Mass(ug)	36-48 hr Mass(ug)
0.2 m	0.038	0.037	0.066	0.053	< LOQ	ND
0.4 m	0.036	0.040	0.058	0.031	< LOQ	ND
0.6 m	0.029	< LOQ	0.053	0.030	ND	ND
0.8 m	< LOQ	0.016	0.018	< LOQ	ND	ND
1.0 m	0.022	0.029	0.041	0.020	ND	ND

Perimeter Sample Location	0-3 hr Mass(ug)	3-6 hr Mass(ug)	6-12 hr Mass(ug)	12-24 hr Mass(ug)	24-36 hr Mass(ug)	36-48 hr Mass(ug)
a	< LOQ	< LOQ	0.011	< LOQ	ND	ND
b	0.011	0.014	0.032	0.013	ND	ND
c	< LOQ	< LOQ	ND	< LOQ	ND	ND
d	ND	< LOQ	ND	< LOQ	ND	ND
e	ND	0.000	ND	< LOQ	ND	ND
f	ND	0.000	ND	< LOQ	ND	ND
g	ND	0.000	ND	< LOQ	ND	ND
h	< LOQ	< LOQ	< LOQ	< LOQ	ND	ND

Table 6. Summary of measured residues as total mass collected in ug per time period at the East field.

East Field Center Height	0-3 hr Mass(ug)	3-6 hr Mass(ug)	6-12 hr Mass(ug)	12-24 hr Mass(ug)	24-36 hr Mass(ug)	36-48 hr Mass(ug)
0.2 m	0.025	0.021	0.034	0.059	< LOQ	ND
0.4 m	< LOQ	< LOQ	< LOQ	< LOQ	ND	ND
0.6 m	< LOQ	0.013	0.027	0.023	< LOQ	ND
0.8 m	< LOQ	< LOQ	0.025	0.028	< LOQ	ND
1.0 m	0.012	0.012	0.015	0.021	< LOQ	ND

Perimeter Sample Location	0-3 hr Mass(ug)	3-6 hr Mass(ug)	6-12 hr Mass(ug)	12-24 hr Mass(ug)	24-36 hr Mass(ug)	36-48 hr Mass(ug)
a	< LOQ	< LOQ	0.015	< LOQ	ND	ND
b	< LOQ	ND	< LOQ	ND	ND	ND
c	ND	ND	ND	< LOQ	ND	ND
d	ND	ND	ND	< LOQ	ND	ND
e	ND	ND	ND	< LOQ	ND	ND
f	ND	ND	ND	< LOQ	ND	ND
g	ND	ND	ND	ND	ND	ND
h	ND	< LOQ	< LOQ	< LOQ	ND	ND

F. FLUX MODELING

Flux modeling was conducted by Exponent, Alexandria Virginia using two methods, the aerodynamic method Thornthwaite-Holzman aerodynamic flux equation and by the indirect method following the CDPR methodology.

Results from the Direct modeling method indicate for site 1W, the estimated fluxes ranged from 0.000054 to 0.0022 µg/m2/sec. Flux values for the first three periods (0-3, 3-6, and 6-12 hr.) were similar, ranging from 0.0012 to 0.0022 µg/m2/sec, whereas the flux was significantly lower for the last period (12-24 hr). For site 1E, the estimated fluxes ranged from 0.00017 to 0.0014 µg/m2/sec. The fluxes for the first two periods (0-3, and 3-6 hr) were significantly higher than the last two periods (6-12, and 12-24 hr).

Results from the indirect method were made using the peak flux estimate of 0.0022 µg/m2/sec (3-6 hours at Site 1W). The AERSCREEN output is shown in Appendix A (Exponent report) and the estimated dry deposition is plotted versus distance from the edge of the field in Figure 3. The 1-hour deposition peaks at 1.11x10-7 lb/A at about 90 feet from the field edge. The 1-hour deposition falls below 10^{-8} lb/A by about 120 feet.

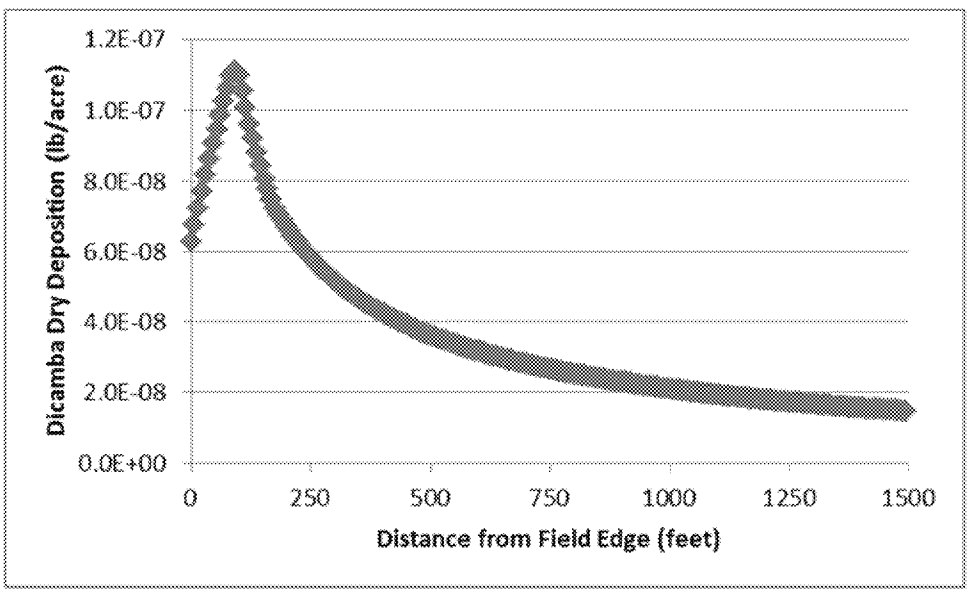


Figure 4. Estimated deposition of dicamba (lb/A) by distance from the edge of a 40 acre field

Dicamba flux estimates were made from data collected for applications in Preston, Georgia at 5 lbs a.e./gal (1 lb/ac ai). Two methods were used to estimate the flux, including the aerodynamic method and the indirect method. Due to limited offsite detects, the aerodynamic method estimates are considered more reliable. The peak flux estimate with the aerodynamic method was 0.0022 ug/m2/sec.

AERSCREEN was run to estimate downwind deposition levels for a 40 acre field. The estimated 1-hour deposition peaked at 1.11x10-7 lb/A at about 90 feet from the field edge. The 1-hour deposition fell below 10-8 lb/A by about 120 feet.

Further details on modeling can be found in Appendix C.

G. CONCLUSIONS

Two field trial were conducted in Southern Georgia under worst case application conditions (High humidity, high morning dew, warm air temperature) to determine the potential of dicamba herbicide as the Engenia® formulation to off gas or volatilize. Few residues were measured in the perimeter sampling stations and only in the down wind positions. Residues dissipated in the center sampling mast samplers with height. No residues were measured in any location 24 hours post application. Measured residue losses were attributed to "co-distillation" rather than vapor loss. At the time of application the foliage was wet such that agronomic applications would likely be delayed for efficacy reasons. However the applications were made to these wet plant surfaces, and following application there was bright sun and warm temperatures generation a high ETo of 0.15" (http://www.georgiaweather.net/ Plains, GA)).

Results from this study indicate that dicamba does not pose an edge of field gaseous loss risk, and therefore buffer restrictions beyond those required for direct spray drift are not necessary.

H. STABILITY IN STORAGE

BASF has data which indicates the stability of dicamba residues on the involved matrix for more than 5 months. The air sampling devices were stored frozen for no more than 17 days from collection to extraction for analysis in this study.

I. STATISTICS

Simple descriptive statistics were performed on the data (average, standard deviation and relative standard deviation), as considered appropriate.

Several measures were taken to ensure the quality and integrity of the study. Quality assurance inspected the field and analytical procedures for compliance with Good Laboratory Practices. The inspection dates are provided in the quality assurance unit statement. Study samples and test and reference substances were maintained in secured (i.e. locked) storage. Freezer temperatures were continuously monitored and recorded.

J. PROTOCOL AMENDMENTS AND DEVIATIONS

All protocol deviations that occurred during the conduct of this study were reported and reviewed by the Study Director. None of the changes had an impact on the validity of the study.
Change to Protocol: Adds application verification samples to the study:
Change to Protocol: Adds detail for analysis of samples: (modifies sample list)
Change to Protocol: Samples were collected, at the previously defined intervals, through 48 hours rather than the 72 hours stated in the protocol.
Change to Protocol: Three samples during the 24-36 hour sample period were not collected.
Change to Protocol: The protocol stated that the sprayed crop would be alfalfa. The crop was actually a mixed species planting mostly of orchard grass. Air modeling was not included in the protocol

K. ARCHIVING

The study protocol and amendments, raw data, original field, analytical and final reports and reference substance will be stored in the archives belonging to the test facility (BASF Crop Protection, 26 Davis Drive, Research Triangle Park, North Carolina). Exceptions: Raw data on the calibration or inspection of technical equipment used for the conduct of field and analytical part of the study at GLP compliant facilities ("facility-maintained" raw data) will be archived at the facilities where they have been generated. In no case will raw data be discarded without the consent of the sponsor.

L. REFERENCES

1. Cessna A.J., D.T. Waite, J. Bailey, L.A. Kerr, and D.V. Quiring. 2011. Desorption of Herbicides from Atmospheric Particles During High-Volume Air Samples. Atmosphere, 2, 671-687.

2. Gish, T.J., J.H. Prueger, C.S.T. Daughtry, W.P. Kustas, L.G. McKee, A. L. Russ, and J.L. Hatfield. 2011. Comparison of Field-scale Herbicide Runoff and Volatilization Losses: An Eight-Year Field Investigation. J. Environ. Qual. 40(5), 1432-1442.

3. Cliath, M.M., W.F. Spencer, W.J. Farmer, T.D. Shoup, and R. Grover. 1980. Volatilization of S-Ethyl N,N-Dipropylthiocarbamate from Water and Wet Soil during and after Flood Irrigation of an Alfalfa Field. J. Agric. Food Chem. 28,610-613.

4. Davie-Martin, C. L., K. J. Hageman, and Y. Chin. 2013. An Improved Screening Tool for Predicting Volatilization of Pesticides Applied to Soils. Environ. Sci. Technol., 47, 868-876.

5. Raina, R., P. Hall. 2010. Field Evaluation of Solid Sorbents for Ambient Air Sampling of Pesticides. Air, Soil and Water Research. 3:57-66

6. Mukerjee, S. K.D. Oliver, R.L. Seila, H.H. Jacumin Jr., C. Croghan, E.H. Daughtrey Jr., L. M. Neas, and L.A. Smith. 2009. Field comparison of passive air samplers with reference monitors for ambient volatile organic compounds and nitrogen dioxide under week-long intergrals. J. Environ. Monit., 11, 220-227.

7. Zhang, X., and F. Wania. 2012 Modeling the uptake of semivolatile organic compounds by passive air samplers: Importance of mass transfer processes within the porous sampling media.Environ. Sci. Technol. 46, 9563-9570.

8. Hayward, S., T. Gouin, and F. Wania. 2010. Comparison of four active and passive sampling techniques for pesticides in air. Environ. Sci. Technol. 44, 3410-3416.

9. Little, J.C., C.J. Weschler, W.W. Nazaroff, Z. Liu, and E.A.C. Hubal. 2012. Rapid methods to estimate potential exposure to semivolatile organic compounds in the indoor environment. Environ. Sci. Technol., 46, 11171-11178

10. Garron, C., B. Ernst, G. Julien, R. Losier, and K. Davis. 2012. Concentrations and environmental risk of chlorothalonil in air near potato fields in Prince Edward Island, Canada. Pest. Manag. Sci., 68, 92-100

11. Bui, Q.D., A.R. Womac, K.D. Howard, J.E. Mulrooney, and M.K. Amin. 1998. Evaluation of samplers for spray drift. Amer. Soc. Agricul. Eng. 98, 4101-4137.

12. Johnson, D.R., Spray Drift Task Force. 1995. Atomization droplet size spectra for spray drift formulations. Spray Drift Task Force c/o McKenna & Cuneo, 1900 K Street, N.W., Washington, D.C. 20006, USEPA MRID 43757801, 96 pg.

13. Wolf, T.M. and B.C. Caldwell. 2001. Development of a Canadian spray drift model for the determination of buffer zone distances. Expert Committee on Weeds Annual Meeting, Quebec City, QC, Nov. 26-29, 2001

14. Morshed, M., D. Omar, R.B. Mohamad, and S.B. A. Wahed. 2011. Determination of glyphosate through passive and active sampling methods in a treated field atmosphere. Afr. J. Agric. Res., 6(17), 4010-4018.

15. Holmen, B.A., J. Kasumba, A. Hiscox, J. Wang, and D. Miller. 2013. Mechanized and Natural Soil-to-Air Transfer of Trifluralin and Prometryn from a Cotton Field in Las Cruces, New Mexico. J. Agric. Food Chem. 61, 9776-9783.

16. Ferguson J. C., A. J. Hewitt, J. A. Eastin, R. J. Connell, R. L. Roten, G. R. Kruger. 2014. Developing a comprehensive Drift Reduction Technology risk assessment scheme. J. Plant Prot. Res. Vol. 54, No. 1, 85-89.

17. ADPEN Laboratories, Inc. Analytical Method Number ADPEN M1407, entitled "Technical Procedure: Analytical Method for the Determination of Residues of BAS 183 H (Dicamba) and Imazethapyr in OVS tubes with XAD-2 sorbent by LC-MS/MS" dated October 31, 2014

18. Morse Laboratories, LLC Method# Meth-226, Original, entitled "Determination of 2,4-D Dimethylamine Salt, Dicamba, Glyphosate and Imazethapyr In/On Petri Dishes," dated September 3, 2013

19. Morse Laboratories, LLC Method# Meth-224, Original, entitled "Determination of 2,4-D Dimethylamine Salt, Dicamba, Glyphosate and Imazethapyr On Rotorods," dated September 5, 2013

20. Acree, F., M. Beroza, and M.C. Bowman. 1963. Codistillation of DDT with Water. Agri. And Food Chem. Vol. 11, No. 4 July-Aug. pg 278-280.

21. Jackson, S.H. 2016. Comparison of Multiple Sampling Methods for Evaluation of Off Field Airborne Chemical Movement. BASF Registration Document Number 2015/7005614 (Unpublished)

Summary of protocol changes

Change to Protocol: Adds application verification samples to the study:
Change to Protocol: Adds detail for analysis of samples: (modifies sample list)
Change to Protocol: Samples were collected, at the previously defined intervals, through 48 hours rather than the 72 hours stated in the protocol.
Change to Protocol: Three samples during the 24-36 hour sample period were not collected.
Change to Protocol: The protocol stated that the sprayed crop would be alfalfa. The crop was actually a mixed species planting mostly of orchard grass. Air modeling was not included in the protocol

M. APPENDICES

The appendices begin on the pages that follow.

Appendix A – Field Data Report

Stone Environmental, Inc.

Sampling for Possible Gaseous Field Loss after Application of a Commercial Herbicide
Final Report – Field Phase

TEST SUBSTANCE:	Dicamba (Engenia® Herbicide)
DATA REQUIREMENT(S):	US EPA OPPTS 835.8100, Field Volatility
AUTHOR(S):	Benjamin H. Brayden Brent N. Toth Samouel J. Beguin
REPORT COMPLETION DATE:	May 22, 2016
FIELD TEST FACILITY:	Chad Harris, Research Scientist Harris Farms & Research, LLC 1691 Ben Williams Rd. Preston, GA 31824
FIELD MANAGEMENT COMPANY:	Benjamin H. Brayden Stone Environmental Inc. 535 Stone Cutters Way Montpelier, VT 05602
STONE STUDY ID:	16-043
SPONSOR:	BASF Crop Protection 26 Davis Drive Research Triangle Park, NC 27709-3528
SPONSOR STUDY ID:	813945

Total pages: 95

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

The following is a detailed description of all differences between the practices used in the study and those required by 40 CFR 160:

The lot number of the test substance was obtained but no other characterization data required by GLP's for test substances.

Weather data for the study was collected using Onset HOBO met stations. These instruments were calibrated by the manufacturer and were not recalibrated at the test site due to the complexity of the sensors. Maintenance activities, systems verifications, and operating procedures were performed in accordance with the manufacturer's operations manual.

5/22/2016

Benjamin H. Brayden
Principal Field Investigator
Stone Environmental Inc.

Date

QUALITY ASSURANCE STATEMENT

Study Title:

Sampling for Possible Gaseous Field Loss after Application of a Commercial Herbicide

Study No.: 16-043

Inspection reports have been submitted to the Study Director, Study Director's Management, Principal Investigator, and Principal Investigator's Management documenting the status of compliance with applicable departmental standard operating procedures, the study protocol, and Good Laboratory Practice regulations.

Pam Dotson, QAU for Harris Research performed the inspection for the field sampling and test substance application portion of this study and Kim Watson, QAU for Stone, performed the inspection of the final field report and determined that the reported results accurately reflect the raw data for the field portion of the study. Inspections are listed below pursuant to Good Laboratory Practice Regulations (40 CFR Part 160).

Inspection Dates	Phase Inspected	Date Reported to Study Director/ Study Director's Management and Principal Investigator/ Principal Investigator's Management
April 11-12, 2016	Field Phase, application and Sampling	April 18, 2016
May 20-22, 2016	Field Final Report	May 22, 2016

In compliance with the Good Laboratory Practice regulations, this report has been reviewed by Quality Assurance and has determined that the report reflects the field raw data generated during the conduct of this study.

Quality Assurance Unit: Kim Watson Date: 5/23/2016

Kim Watson, Quality Assurance

GENERAL INFORMATION

Contributors
The following contributed to conduct of this study and the final report in the capacities indicated:

Name:	**Role:**
BASF Crop Protection	
Scott H. Jackson	Study Director
Stone Environmental, Inc.	
Benjamin H. Brayden	Principal Field Investigator
Brent N. Toth	Sample Collection
Daniel K. Moore	Sample Collection
Samouel J. Beguin	Sample Collection
Harris Farms and Research, Inc.	
Chad Harris	Application and Site Preparation
Preston Harris	Application and Site Preparation

Study Dates

Experimental Start Date:	April 11, 2016
Experimental Termination Date:	April 13, 2016

Retention of Raw Data
As described in Section 11.0 in the protocol, all raw data (paper and electronic) will be transferred to and maintained in the archives of the sponsor. A verified copy of the field raw data package will be retained at Stone Environmental, Inc.

REPORT APPROVAL

REPORT TITLE

Sampling for Possible Gaseous Field Loss after Application of a Commercial Herbicide

This report is an accurate and complete representation of the field activities and results for the above study.

AUTHORS

5/22/2016

Benjamin H. Brayden
Principal Field Investigator
Stone Environmental Inc.

Date

ABBREVIATIONS AND SYMBOLS

Abbreviation	Definition
A	acre
a.e.	acid equivalent
ai	active ingredient
AV	application verification
BASF	BASF Crop Protection
cm	centimeter(s)
°F	degrees Fahrenheit
ft	foot, feet
gal	gallon(s)
EDT	Eastern Daylight Time
GPA	gallons per acre
gpm	gallons per minute
ha	hectare(s)
hr	hour(s)
in	inch(es)
km	kilometer(s)
lb, lbs	pound(s)
m	meter(s)
ml	milliliter(s)
min	minute(s)
mph	miles per hour
psi	pounds per square inch
PUF/XAD	polyurethane foam with XAD-2 270/140 mg quartz fiber sorbent
RH	relative humidity
sec	second
std dev	standard deviation
Stone	Stone Environmental, Inc.
SOP	Standard Operating Procedure
TTI	Turbo TeeJet Induction (® TeeJet Technologies, Spraying Systems Co.)
W	Watt(s)

TABLE OF CONTENTS

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS **2**
GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT **2**
QUALITY ASSURANCE STATEMENT **3**
GENERAL INFORMATION **4**
REPORT APPROVAL **5**
ABBREVIATIONS AND SYMBOLS **6**
TABLE OF CONTENTS **7**
1.0 Introduction **9**
2.0 Study Objective **9**
3.0 FIELD PHASE METHODS AND MATERIALS **9**
3.1 Test System 9
3.2 Test Substance Identification 10
3.3 Study Management 10
3.4 Test Sites and Test Plots 10
3.4.1 Test Site Characteristics 10
3.4.2 Test Plot Dimensions and Design 11
3.4.3 Test Plot Layout and Instrumentation 12
3.4.4 Agronomic and Pesticide History 12
3.4.5 Weather Data Collection 13
3.5 Test Substance Application 13
3.5.1 Application Equipment and Calibration 13
3.5.2 Application 14
3.6 Sampling 14
3.6.1 Sample Identification 14
3.6.2 Sample Collection, Handling, and Storage 15
3.6.3 Application Verification (AV) Samples 15
3.6.4 Sample Shipment 15
4.0 Results **16**
4.1 Weather data 16
4.2 Application 16
4.3 Sampling 16
5.0 TABLES **17**
6.0 FIGURES **20**
7.0 APPENDICES **27**

List of Tables

Table 1. Agronomic and Pesticide Use History 17
Table 2. Spray Application Calibration 17
Table 3. Spray Applications 18
Table 4. Meteorological Data by Sample Period 18
Table 5. Meteorological Conditions During Spray Application 19
Table 6. Sample Period Dates and Times 19

List of Figures

Figure 1. Diagram of Test Plot Layout (using aerial image of Site 1W; taken 4/11/2016). 20
Figure 2. Test Plot at Site 1W. 21
Figure 3. Test Plot at Site 2E. 22
Figure 4. Aerial and Ground Images of Test Site 1W. 23
Figure 5. Aerial and Ground Images of Test Site 2E. 24
Figure 6. Sampling Mast for Locations A-H and UTC. 25
Figure 7. Sampling Mast for Location I. 25
Figure 8. PUF/XAD Sample Tube. 26

List of Appendices

Appendix 1: Meteorological Data 28

1.0 INTRODUCTION

A field study was performed in south Georgia to measure potential gaseous field loss (flux) following application of a dicamba-containing herbicide provided by BASF. The study location was representative of warm, humid areas in a region the pesticide is intended to be used. Applications were made to two approximately 120 m x 120 m areas in two separate mixed species hay fields composed primarily of Bermuda grass (*Cynodon* spp.) and Orchardgrass (*Dactylis* spp.), one of which was mowed prior to the application. Air sampling was conducted continuously following a schedule of sampling intervals which increased progressively in time period length, and time from, application. High temporal resolution weather data was collected from the time of application until the last samples were collected.

2.0 STUDY OBJECTIVE

The objective of this study was to measure potential gaseous loss (flux) after an application of the test substance to a cultivated field. Air sampling data and weather data will be used to provide realistic estimates of potential gaseous vapors that could result from volatilization over time following test substance application and will be used to facilitate the development of dissipation curves.

Data from these types of studies provide support for the registration of typical end-use pesticide products. The purpose of this report is to describe the field phase of the study concerning the test substance Engenia®, a formulation containing 48.33% dicamba herbicide at 5 lbs. a.e./gal.

3.0 FIELD PHASE METHODS AND MATERIALS

3.1 Test System

The test substance was applied to a mixed species hay crop, dominated by Bermuda grass and Orchard grass, within two test plots (approximately 120 m x 120 m) in two separate agricultural fields. The test system consisted of the following physical matrices within the two test plots and also in the 30 m vicinity of the test plots where sampling occurred for both treated and UTC (untreated control) samples: (1) the soil, (2) the vegetation, and (3) the air up to 1.0 m above the vegetation layer surface.

The USDA taxonomic soil classifications for the fields are Norfolk loamy sand and Orangeburg loamy sand, for the west and east fields, respectively. Soils in both fields are in hydrologic soil group B.

The soil and vegetation matrices were not sampled in this study. Sampling of the air matrix component of the test system was conducted using active air sampling pumps fitted with low-volume PUF/XAD sample collection tubes for semi-volatiles. This design was used for both treatment and UTC samples.

3.2 Test Substance Identification

Active ingredient:	Dicamba
Tested Formulation:	Engenia® Herbicide
Formulation Type:	Not Available
Lot/Batch Number:	J-230
Date of Analysis:	Commercial lot
Analytical Study Code:	Commercial lot
Expiration Date:	Commercial lot
Code Name:	Commercial lot
Nominal Concentration	5 gallons
GLP Certified Active Concentration:	Commercial lot
Density:	Approximately 1.24 g/cm^3 at 20 °C
Storage Conditions	Ambient temperature (17.9 °C to 22.9 °C)

The active ingredient, dicamba, is an herbicide registered in the United States as a selective, control of annual and perennial grass / weeds in several crop and non-crop use patterns. The particular dicamba product tested is a water-soluble herbicide that provides postemergence and moderate residual control of annual broadleaf weeds as well as some other biennial and perennial weeds.

3.3 Study Management

BASF Crop Protection provided study directorship. Stone Environmental, Inc. managed and conducted the site selection and field investigation phases of the study. Harris Farms and Research assisted in site selection and conducted the application of the test substance to the sites.

3.4 Test Sites and Test Plots

3.4.1 Test Site Characteristics

These sites were representative of agricultural fields in which the test substance would typically be used and were of sufficient size to support the required test plot layout for the study.

The test sites were uniform with respect to soil texture and vegetation, and near uniform regarding slope – some natural undulation was present in each field between 2% and 5%. Agronomic and pesticide use history was documented for both fields in which test sites were located.

Both sites were located approximately 3 km northwest of Plains, Sumter County, Georgia and approximately 2 km north of U.S. Route 280. Both sites used the same plot layout (Figure 2) with the exception of the location of the UTC which was moved at the second site due to the location of the vehicle entry point.

The first test site was identified by the Stone designation **1W**. The field was located at 32.04985 N, -84.42413 W.

Site 1W (Figure 2) had the following characteristics:

- Located in a rectangular agricultural hay field approximately 220 m wide x 440 m long
- Gradual diminishing slope from north to south
- Mixed species hay field dominated by Bermuda grass (*Cynodon* spp.) and Orchardgrass (*Dactylis* spp.) that was mowed in the test plot zone to a height of approximately six to eight inches prior to test substance application

The second test site was identified by the Stone designation **2E**. The field was located at 32.05288 N, -84.4065 W.

Site 2E (Figure 3) had the following characteristics:

- Located in a trapezoidal agricultural hay field with the following approximate dimensions: 145 m wide at the north end, 265 m wide at the south end, 350 m long at the west end, and 290 m long at the east end
- Essentially uniform slope with the exception of a small depression at the south end near the road (outside of the test plot area)
- Unmowed mixed species hay field dominated by Bermuda grass (*Cynodon* spp.) and Orchardgrass (*Dactylis* spp.) with a height of approximately 15 to 18 inches.

3.4.2 Test Plot Dimensions and Design

The treated area at each test plot was approximately 120 m x 120 m. A single sampling station was placed at the center of the treatment area and eight sampling stations were placed around the perimeter of the treated area (Figure 1, Figure 4, and Figure 5). Each sampling location was assigned a letter code A through I. Stations A through H were placed clockwise around the perimeter beginning with A, which was located in the Northwest corner. Perimeter sampling locations were placed approximately 15 m out from the plot corners and from the midpoints on each of the four test plot sides. Station I was the sampling station at the center of the plot. Each plot also contained a control sampling station. The UTC sampling location at site 1W was approximately 52 m south of sampling location E (the southeast corner of the treated area). At site 2E, the UTC sampling location was approximately 75 m southwest of sampling location G (the southwest corner of the treated area). Plots were designed to effectively capture potential test substance flux from the treated area irrespective of wind direction.

3.4.3 Test Plot Layout and Instrumentation

The test plot layouts were established the day prior to application. At site 1W, the NW and NE corners of the test plot were both approximately 21 m directly south of the road (Figure 2). At Site 2E, the SW corner of the plot was approximately 115 m north of the road and the SE corner of the plot was approximately 43 m north of the road (Figure 3). Plot corners and application swath centerline transects were marked with flags. All sampling locations were marked with flags and subsequently with metal fence post stakes to stabilized and hold the sampling stations upright.

Instrumentation consisted of weather stations, sampling masts with active air samplers, and AV sample collectors. The weather station at each plot was deployed near sampling station D prior to application. Immediately following application, the weather stations were moved into the treatment area to a location approximately 15 m east of sampling station I.

Ten 1¼ -inch diameter PVC sampling masts with horizontal arms were constructed for each of the two test plots to hold active air sampler pumps and PUF/XAD tube sampling media at the required heights above the hay vegetation layer (Figure 6, Figure 7). For each perimeter (A-H) and UTC sampling location, one sampling mast was set up following application with PUF/XAD sample tubes suspended at a height of 1.0 m above the hay (Figure 6). For the central plot sampling location (I), a modified sampling mast with five active air samplers and tubes was set up so that sampling occurred at heights of 0.2 m, 0.4 m, 0.6 m, 0.8 m, and 1.0 m above the hay (Figure 7).

SKC Leland Legacy® active air sampler pumps (No. 100-3002, SKC Inc., Eighty Four, PA, USA) were attached to sampling masts with plastic cable ties. One pump was attached to each perimeter and UTC sampling mast and five pumps were attached to the center plot sampling masts. Plastic polytetrafluoroethylene (PTFE) tubing was used to connect pumps to SKC OVS tube holders with screw-on protective covers and collar clips (No. 224-29V, SKC Inc., Eighty Four, PA, USA). PUF/XAD sample tubes were attached to tubing on the tube holders (XAD-2 OVS quartz fiber 270/140 mg sorbent tubes, No. 226-58A, SKC Inc., Eighty Four, PA, USA; Figure 8).

Application verification (AV) sample collectors were placed within the test plots prior to application. The AV sample collectors were 150 mm petri dishes fitted with 150 mm filter paper trimmed to fit inside the petri dishes. The filter paper was placed in the petri dishes to dampen the impact of the spray and reduce deflection of droplets out of the petri dish. Fifteen AV sample collectors were place in each test plot and were deployed in a line across the plot perpendicular to the direction of application. The AV sample petri dishes containing the filter paper were placed on a square foam board that was pinned to the ground with metal garden staples. Petri dish covers were removed immediately prior to application and replaced immediately afterward.

3.4.4 Agronomic and Pesticide History

The agronomic and pesticide use history of both the test plots was documented for the three years preceding the study. Records were provided to Chad Harris of Harris Farms and

Research by the grower. Both sites received the same crop protection and amendments during the three years prior to the study (Table 1).

3.4.5 Weather Data Collection

The day prior to spray application, a weather station composed of two Onset Computer Corporation Hobo® Microstation data loggers recording wind speed and wind direction, temperature, and relative humidity at three heights above the vegetation (approximately 0.5 m, 1.0 m, and 1.5 m above the top of the vegetation) was placed adjacent to sample station D at each site. The weather station at site 2E was additionally equipped with a pyranometer for measuring solar radiation. Immediately after application at each site, the weather stations were moved into the center of the plots approximately 15 m east of sample station I.

On April 11 at 5:25 pm a tipping bucket rain gauge was added to the weather station at site 1W. A tipping bucket rain gauge was added to site 2E on the same day at 5:47 pm. The tipping buckets were attached to an independent fencing stake at a height of approximately 1.0 m above the top of the vegetation, and approximately 1.0 m north of the main weather station. Rain gauges were added due to forecast precipitation throughout the evening.

Weather station data were collected and stored on a 1-minute interval at both sites for the duration of the study.

3.5 Test Substance Application

3.5.1 Application Equipment and Calibration

The applications were made with a tractor mounted hydraulic boom sprayer equipped with a 200 gallon tank and a 24 foot boom. The boom contained 17 nozzles spaced 18 inches apart, producing an effective spray swath of 25.5 feet.

Turbo TeeJet Induction (TTI) 11005 nozzles from TeeJet Technologies were used per test substance label specifications. A pressure of 40 psi was selected based on manufacture recommendations.

The TTI11005 nozzles used for making the spray applications were installed and then calibrated/verified on April 11, 2016. Sprayer calibration/verification was performed to verify spray consistency at the required pressure and rate and to test the nozzles to ensure that none of the nozzles were plugged or defective resulting in a spray that would be inconsistent with the manufacturer's specifications. Each nozzle was tested by measuring the rate that liquid collected in a 2.5-gallon bucket and then measured in a graduated cylinder. Verification was conducted by spraying at 40 psi for 30 seconds. Nozzles were each tested three times to determine variability between nozzles and replication.

The sprayer calibration established the total boom output per minute of spray to be 6.9-GPM. Using the measured volume per minute output of the boom at 40 psi, and a calibrated sprayer vehicle speed of approximately 5.6 mph in first gear (2000 RPM), a spray rate of 24-GPA

was achieved and set as the target spray rate (Table 2). The forward speed of the sprayer tractor was verified before the treatments were applied by timing the duration required, in seconds, to drive a known distance. These tests were conducted three times over an approximate 120 m distance.

3.5.2 Application

To minimize off-target drift, the maximum wind speed (steady or gusting) was required to be ≤ 5 mph during application. Environmental conditions during application, including air temperature, wind speed and direction, air temperature, relative humidity, and cloud cover were recorded in the field notebook. The time required for each spray pass during application was also recorded.

Before the test substance tank mix was created for each application, the sprayer tank and lines were emptied and rinsed with water from Harris Farms and Research. To make the spray solutions at each site, 108-gallons (408,824 mL) of water were added to the empty tank. 0.91-gallons (3450 mL) of Engenia® were then added to the tank using a using a 1-liter graduated cylinder. The completed tank mix was then agitated by the sprayer throughout application.

All treatments were made by a licensed applicator, Chad Harris of Harris Farms and Research on April 11, 2016. The treatments were made at an application rate and spray rate of approximately 1 lb ai/A (25.6 fl oz/A) and 24-GPA, respectively (Table 3). The spray mixture was prepared in the morning of April 11 before the application was made. The sprayer speed was kept as close as possible to 5.6 mph for the entirety of the application swaths; however, the speed fluctuated slightly due to variations in the field surface. Each spray swath was approximately 120 m long by 7.77 m (25.5-ft) wide. The total sprayed area was approximately 3.56 acres.

Application passes were made north-south at site 1W (Figure 3) and northeast-southwest at site 2E, perpendicular to the forecasted wind direction. The sample locations and swaths for both sites were marked with flags the previous day. Each swath pass was timed by employees of Harris Farms and Research by following the sprayer from outside the spray area in a 4x4 vehicle.

3.6 Sampling

3.6.1 Pumps

Prior to application, all Leland Legacy pumps used for sampling were calibrated and set to sample at a rate of 3.0 L/min.

3.6.2 Sample Identification

Each PUF/XAD tube sample was uniquely identified by placing it in a resealable plastic bag with a printed adhesive label that was fixed to the inside surface of the bag. This

procedure minimized the possibility of labels being separated from the samples. Sample labels included the following information for each treated and UTC sample: Stone study ID, BASF study ID, test site ID (1W or 2E), plot sampling location ID (A, B, C, D, E, F, G, H, I, or UTC), sampling height (1.0 m for perimeter locations; 0.2 m, 0.4 m, 0.6 m, 0.8 m, or 1.0 m for center plot location) sampling time interval, and date of collection.

3.6.3 Sample Collection, Handling, and Storage

Sample collection of PUF/XAD sample tubes at the two test sites occurred at the following time intervals following test substance application for a total of six sampling events per test plot: 0-3 hr, 3-6 hr, 6-12 hr, 12-24 hr, 24-36 hr, and 36-48 hr. For each sampling event, Stone personnel collected active PUF/XAD sample tubes one location at a time and installed new PUF/XAD sample tubes at all sampling locations. Active air sampler pumps were paused prior to sample collection. New PUF/XAD sample tubes were installed immediately after samples were collected at each sampling location and active air sampler pumps were restarted. To minimize the possibility of cross contamination of samples, the UTC and perimeter samples were collected by different personnel from the in-plot samples. There were two sampling teams, one each for the in-plot and out of plot locations, respectively – each composed of two members.

For the UTC and perimeter sampling locations, the UTC sample was always collected first and stored separately from the other samples. Gloves were changed prior to collection of each sample. The sampling order for site 1W was UTC, C, D, E, F, G, H, A, B. The sampling order for site 2E was UTC, E, D, C, B, A, H, G, F. This sampling order permitted more efficient collection of perimeter location samples and ensured that air sampling could resume in a timely fashion at all locations. The five center plot (I) samples at both sites were collected by another team of Stone personnel while perimeter samples were being collected. Center plot samples were collected and new tubes installed from highest to lowest.

Samples were placed into coolers with freezer packs at the test sites for temporary storage before being transferred to secure freezers at the field test facility (Harris Farms and Research). UTC samples were handled and stored separately from other samples.

3.6.4 Application Verification (AV) Samples

A total of 15 AV samples were collected from each of the two test plots immediately following application of the test substance. All 15 of the samples for one test plot were placed in the same (required three large bags, 5 per bag) labelled, resealable, plastic bag and packed in coolers. Samples were checked into and stored in their own separate freezer at the field test facility prior to transport to the lab for analysis.

3.6.5 Sample Shipment

Following experimental termination, all PUF/XAD samples were packed in coolers with blue ice and driven from the field test facility to the analytical laboratory by the Principal Field Investigator. The UTC samples and AV samples were transported in their own coolers,

separate from each other and the treatment samples. All samples were checked in to freezers at the analytical laboratory at 10:26 PM EDT on April 13, 2016.

4.0 RESULTS

4.1 Weather data

Sample period mean wind speeds remained relatively low during the entire study, exceeding 6 mph only once during the 3-6 hour sample period at site 1W (Table 4). Wind direction was consistently out of the south/southeast from application through the 12-24 hour sample period, before changing to north/northwest for the last two sample periods (Table 4).

Temperatures on the day of application reached 79.2 °F and relative humidity ranged from 47% to 100%. The highest temperature reached during the 48 hours of sampling was 79.2 °F and relative humidity never fell below the low of 47% on the day of application.

4.2 Application

The wind speed during both applications was less than the maximum of 5 mph set for wind speed during application (Table 5) and general weather conditions were favourable.

The application rate and spray rate at each site (Site 1W - 1.03 lbs ai/A and 24.7-GPA; Site 2E - 0.97 lbs ai/A and 23.3-GPA) was within an acceptable margin of error at less than 5% for both sites (Table 3). Due to the margin of error inherent in using GPS to locate plot boundaries and spray swath center lines, as well as the target width of the treatment area (120-m) exceeding the round number of 15 spray swaths with a 7.77 m boom, an area of approximately 1-m to 2-m went unsprayed on the treatment boundary side of the first and last spray swaths at each site.

4.3 Sampling

Samples were collected within the approximate times outlined as the sample periods (Table 6). Any sample start or sample collection that occurred outside the designated sample period was due to the time it took to move between sample stations, swap out PUF/XAD tubes, or perform routine maintenance such as swapping out pump batteries.

While monitoring the pumps amid a sample period, an occasional pump was discovered to be paused due to a minor increased restriction on the pumps ability to draw air (the PUF/XAD tubes are hand packed and can vary with regard to air movement). If this occurred the pump was simply switched back on.

Samples were only collected through 48 hours rather than 72 hours due forecast air temperatures that were lower than the target temperature.

5.0 TABLES

Table 1. Agronomic and Pesticide Use History.

Approximate Date Applied[1]	2015		2014		2013	
	Product	Rate	Product	Rate	Product	Rate
May 10	Cimarron Plus	0.33 oz/A	Cimarron Plus	0.33 oz/A	Cimarron Plus	0.33 oz/A
July 1	Dimlin SC	0.5 oz/A	Dimlin SC	0.5 oz/A	Dimlin SC	0.5 oz/A
August 1	Lorsban 4E	1.5 pints/A	Lorsban 4E	1.5 pints/A	Lorsban 4E	1.5 pints/A
Various/unknown	Fertilizer 28-0-0	200 lbs/A	Fertilizer 28-0-0	200 lbs/A	Fertilizer 28-0-0	200 lbs/A

[1]Dates are approximate based on grower's common practices (weather and time dependent).

Source: Field notebook, O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\GLP\Field Notebook\Forms and Notes\Completed forms and notes.pdf; Benjamin Brayden, May 17, 2016

Table 2. Spray Application Calibration.

Site	Nozzle Type	Application Pressure	Number of Nozzles	Flow Rate Per Nozzle (gal/min)	Nozzle Std Dev (gal/min)	Target Spray Rate[1]	Target Sprayer Speed[2]
1W	TTI11005	40 PSI	17	0.41	0.003	24 GPA	5.6 mph
2E	TTI11005	40 PSI	17	0.41	0.003	24 GPA	5.6 mph

[1]Calculated speed using the average of three pass times recorded during calibration over a distance of 400-ft, the swath width, and the calibrated sprayer flow rate.

[2]Calculated speed using the average of three pass times recorded during calibration over a distance of 400-ft.

Source: Field notebook, O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\GLP\Field Notebook\Forms and Notes\Completed forms and notes.pdf; 2nd Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\GLP\Field Notebook\Tables Calcs.xlsx; Benjamin Brayden, May 17, 2016

Table 3. Spray Applications.

Site	Test Substance	Nozzle Type	Time of Application[1]	Total Pass Time (sec)	Actual Spray Rate[2]	Target Application Rate	Actual Application Rate[2]	Percent of Target Applied
1W	Engenia®	TTI11005	09:19 – 09:32 am	753.14	24.7 GPA	1.0 lbs ai/A	1.03 lbs ai/A	103%
2E	Engenia®	TTI11005	10:23 – 10:35 am	711.55	23.3 GPA	1.0 lbs ai/A	0.97 lbs ai/A	97%

[1]Application times used were recorded by the PFI and differ slightly from those recorded by the applicator.

[2]Calculated using the swath pass times recorded in the field, the known swath distance and width, and the calibrated sprayer flow rate.

Source: Field notebook, O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\GLP\Field Notebook\Forms and Notes\Completed forms and notes.pdf; Benjamin Brayden, May 17, 2016

Table 4. Meteorological Data by Sample Period.

	Site 1W				Site 2E			
Sample Period[1]	Average Wind Speed[2]	Average Wind Direction[2]	Maximum Temperature[2]	Maximum Relative Humidity[2]	Average Wind Speed[2]	Average Wind Direction[2]	Maximum Temperature[2]	Maximum Relative Humidity[2]
0-3 Hours	5.8 mph	191°	75.9 °F	80.0%	5.9 mph	193°	77.9 °F	73.2%
3-6 Hours	6.1 mph	182°	79.1 °F	58.1%	5.6 mph	169°	79.2 °F	55.3%
6-12 Hours	3.7 mph	172°	79.2 °F	65.5%	2.9 mph	177°	78.1 °F	69.2%
12-24 Hours	1.7 mph	152°	70.1 °F	99.4%	1.5 mph	157°	68.7 °F	99.6%
24-36 Hours	1.9 mph	307°	77.7 °F	98.1%	1.9 mph	300°	76.3 °F	98.4%
36-48 Hours	0.6 mph	17°	61.5 °F	100%	0.9 mph	16°	63.0 °F	99.6%

[1]Sample periods represent time since application and are based on sample location I-0.2 m; all other sample locations had collection times that are approximately ±20 min.

[2]As recorded by instruments located at 1.0 m.

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Data\Weather Data\Master Weather Data_workbook for report tables.xlsx; Benjamin Brayden, May 17, 2016

Table 5. Meteorological Conditions During Spray Application.

Site	Test Substance	Nozzle Type	Target Wind Speed	Wind Speed Range[1]	Average Wind Speed[1]	Wind Direction Range[1]	Average Wind Direction[1]
1W	Engenia® (Dicamba)	TTI11005	≤ 5 mph	0.0-4.5 mph	1.6 mph	98°-156°	130°
2E	Engenia® (Dicamba)	TTI11005	≤ 5 mph	1.5-3.7 mph	3.1 mph	113°-200°	174°

[1]As recorded by the anemometer located at a height of 1.0 m.

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Data\Weather Data\Master Weather Data_workbook for report tables.xlsx; Benjamin Brayden, May 17, 2016

Table 6. Sample *Period Dates and Times.*

	Site 1W		Site 2E	
Sample Period	**Date**	**Time[1]**	**Date**	**Time[1]**
Application[2]	**4/11/2016**	**9:32 AM**	**4/11/2016**	**10:35 AM**
0-3 hrs	4/11/2016	12:51 PM	4/11/2016	1:46 PM
3-6 hrs	4/11/2016	3:50 PM	4/11/2016	4:40 PM
6-12 hrs	4/11/2016	8:59 PM	4/11/2016	9:24 PM
12-24 hrs	4/12/2016	8:59 AM	4/12/2016	10:33 AM
24-36 hrs	4/12/2016	8:44 PM	4/12/2016	9:43 PM
36-48 hrs	4/13/2016	8:32 AM	4/13/2016	9:08 AM

[1]Times are based on sample location I-0.2 m, all other sample locations have collection times that are approximately ± 20 min.

[2]Application times used were recorded by the PFI and differ slightly from those recorded by the applicator.

Source: Field notebook, O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\GLP\Field Notebook\Forms and Notes\Completed forms and notes.pdf; Benjamin Brayden, May 17, 2016

6.0 FIGURES

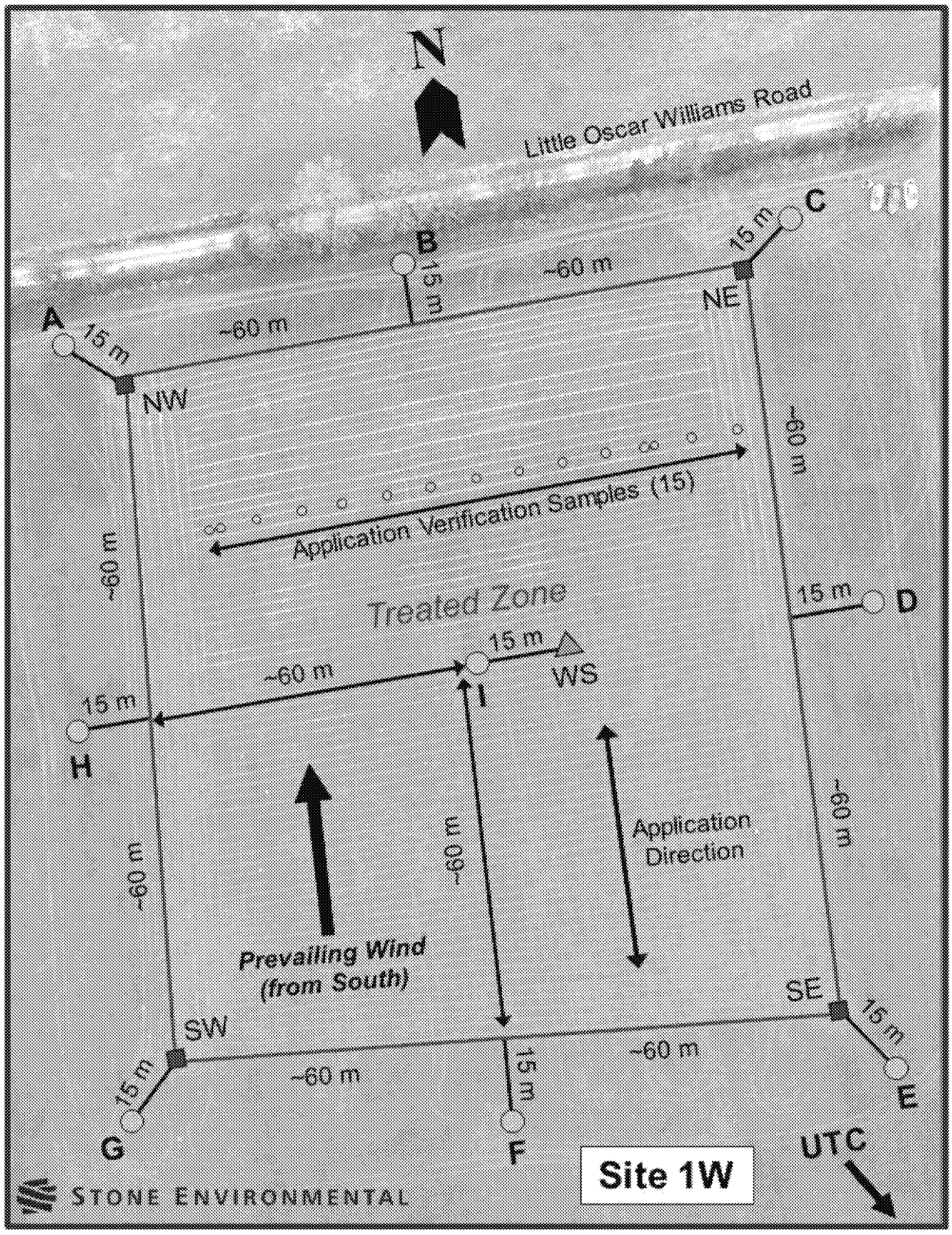


Figure 1. Diagram of Test Plot Layout (using aerial image of Site 1W; taken 4/11/2016).

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Revised Figures 16May2016\16-043_Test_Plot_1W_Aerial_Diagram_wind.png; Samouel Beguin, May 16, 2016

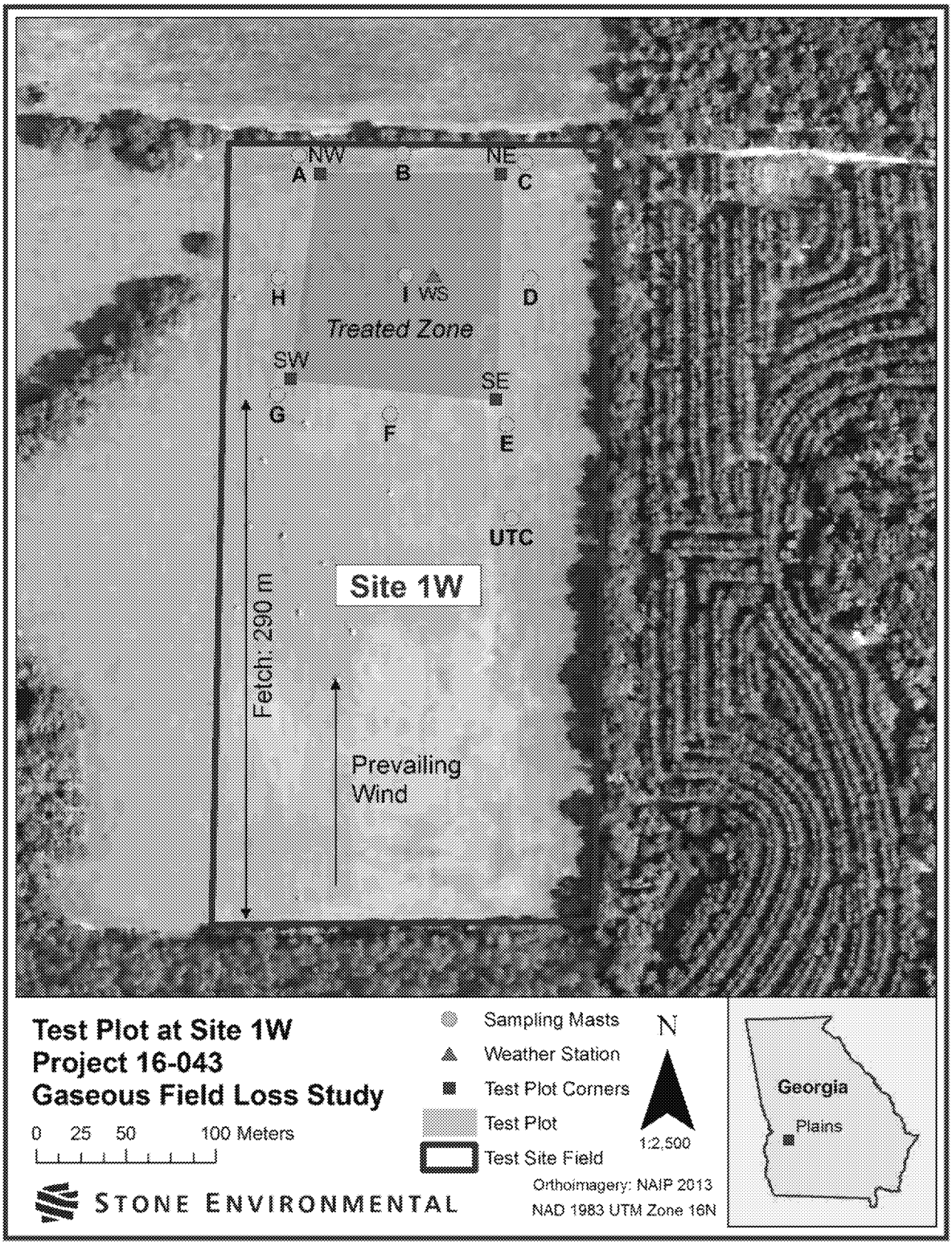


Figure 2. Test Plot at Site 1W.

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Revised Figures 16May2016\16-043_Test_Plot_1W_v2_SJB.png; Samouel Beguin, May 16, 2016

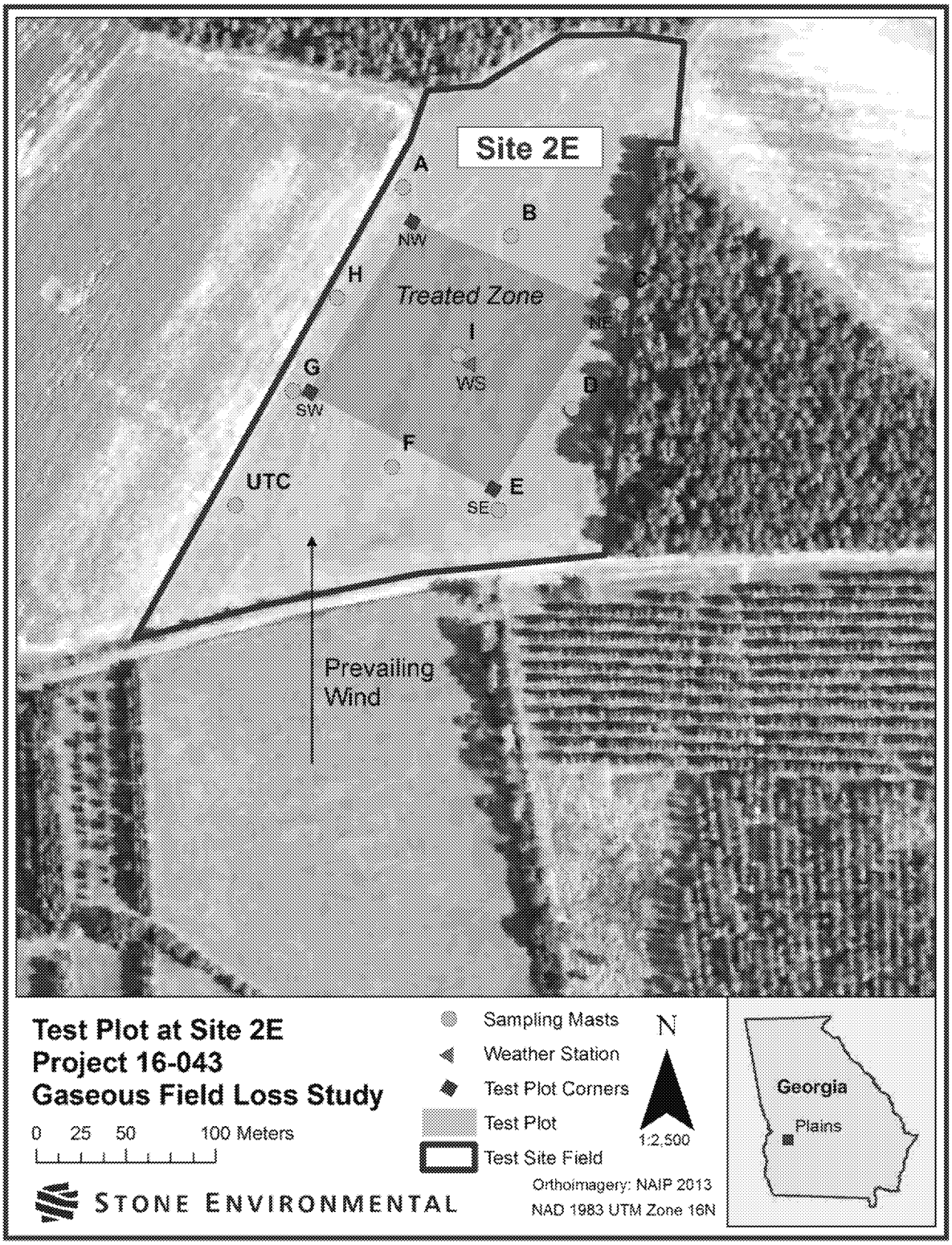


Figure 3. Test Plot at Site 2E.

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Revised Figures 16May2016\16-043_Test_Plot_2E_v2_SJB.png; Samouel Beguin, May 16, 2016

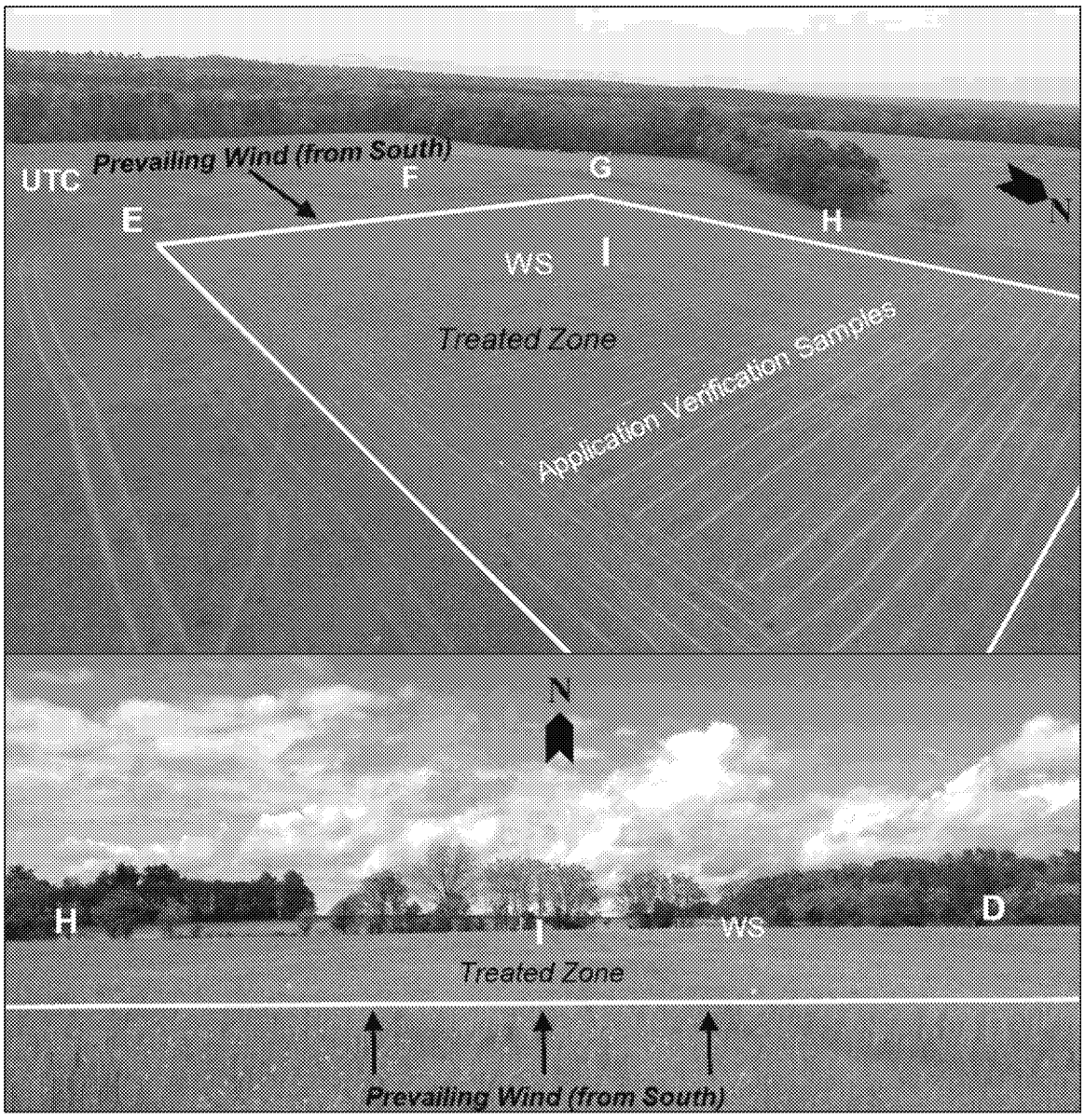


Figure 4. Aerial and Ground Images of Test Site 1W.

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Revised Figures 16May2016\1W_Above_Field.PNG; O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Revised Figures 16May2016\1W_At_Field.PNG; Samouel Beguin, May 18, 2016

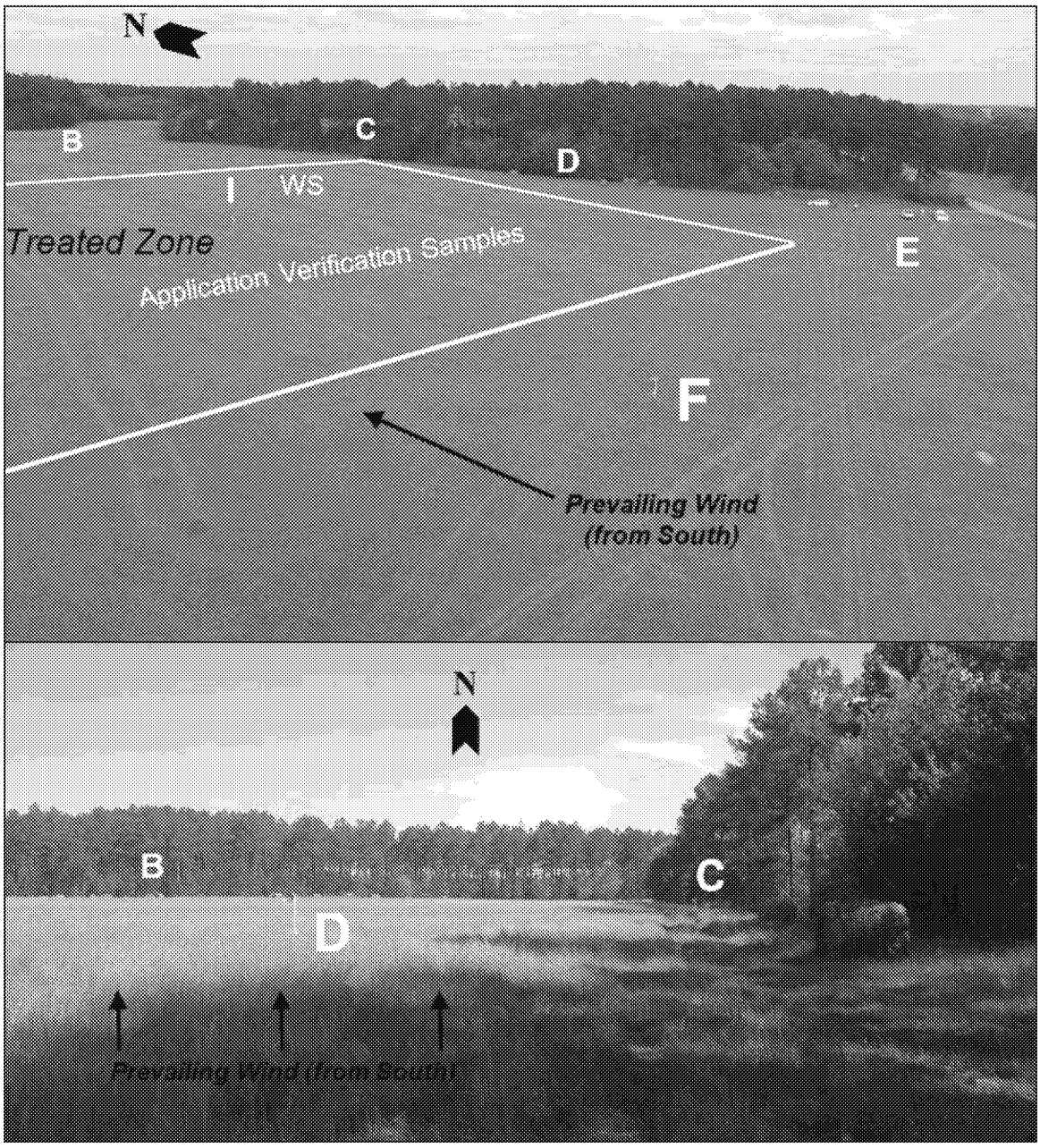


Figure 5. Aerial and Ground Images of Test Site 2E.

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Revised Figures 16May2016\2E_Above_Field.PNG; O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Revised Figures 16May2016\2E_At_Field.PNG; Samouel Beguin, May 16, 2016

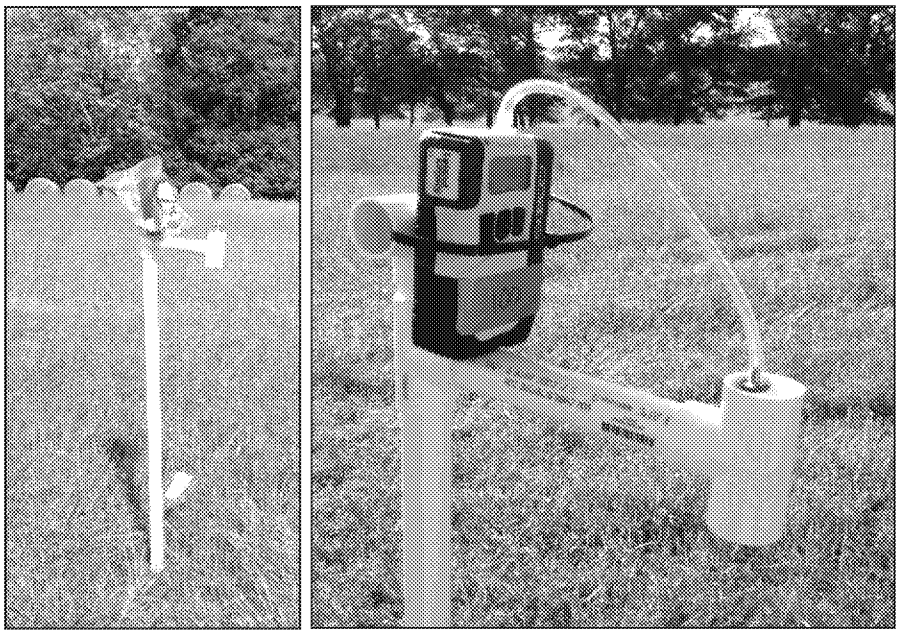


Figure 6. Sampling Mast for Locations A-H and UTC.

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Sampling Masts\Perimeter_mast.JPG; O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Sampling Masts\Perimeter_mast_close-up.JPG; Samouel Beguin, April 12, 2016

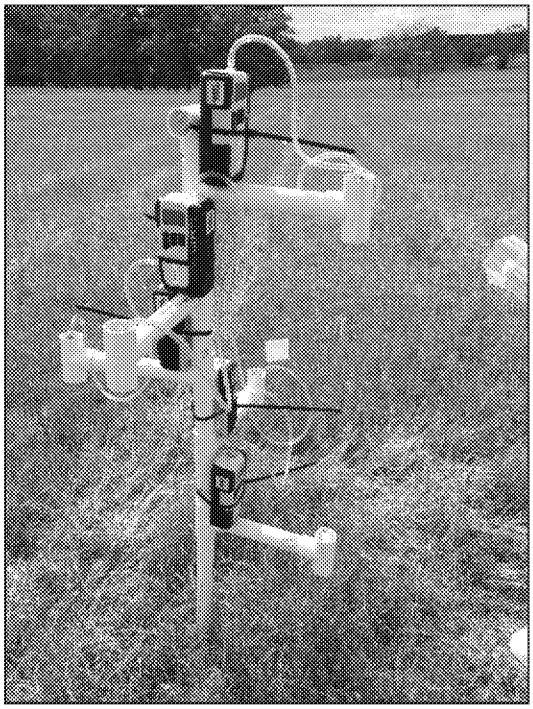


Figure 7. Sampling Mast for Location I.

Source: O:\Proj-16\AgChem\16-043 BASF Air Sampling Study\Reports\Figures\Sampling Masts\Center_plot_mast_2_DKM.JPG; Samouel Beguin, April 25, 2016

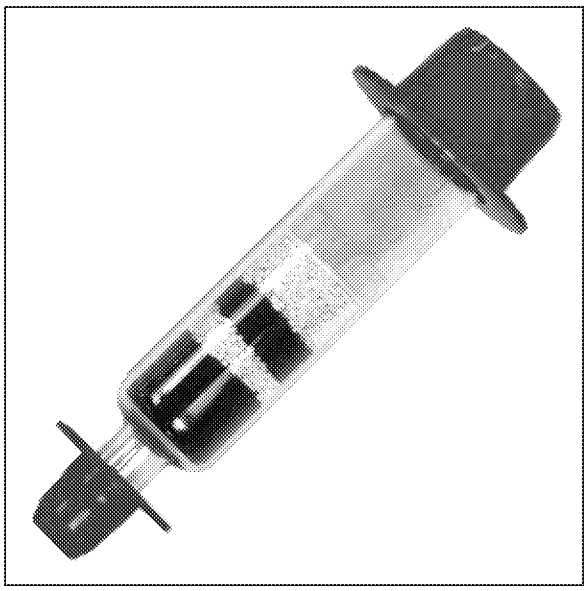


Figure 8. PUF/XAD Sample Tube.

Source: SKC Inc. Website, http://www.skcinc.com/catalog/product_info.php?cPath=22&products_id=711&osCsid=ipn9usstvnoqljb0p89c8qr0i3; Accessed April 25, 2016

7.0 APPENDICES

Site 1W

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/10/2016 19:49	151.3	0.0	64.0	39.8	161.2	0.7	63.8	41.0	233.3	0.0	63.2	48.0	NI
NS	4/10/2016 19:50	138.7	0.0	63.6	39.2	159.7	0.0	63.3	41.1	233.3	0.0	62.9	47.8	NI
NS	4/10/2016 19:51	137.3	0.0	63.4	40.4	158.3	0.7	62.8	41.7	290.9	0.0	62.5	48.2	NI
NS	4/10/2016 19:52	137.3	0.0	63.0	40.8	158.3	0.7	62.5	43.8	292.3	0.0	62.2	48.5	NI
NS	4/10/2016 19:53	137.3	0.0	62.8	41.1	158.3	0.7	62.1	42.8	292.3	0.0	61.7	48.8	NI
NS	4/10/2016 19:54	137.3	0.0	62.5	41.3	158.3	0.7	61.8	43.5	292.3	0.0	61.4	49.8	NI
NS	4/10/2016 19:55	137.3	0.0	62.2	42.2	158.3	0.7	61.5	43.9	292.3	0.0	61.0	50.7	NI
NS	4/10/2016 19:56	137.3	0.0	62.0	41.9	158.3	0.7	61.3	43.9	292.3	0.0	60.7	50.5	NI
NS	4/10/2016 19:57	137.3	0.0	61.8	42.4	158.3	0.7	61.2	43.6	292.3	0.0	60.4	51.0	NI
NS	4/10/2016 19:58	137.3	0.0	61.6	43.9	158.3	0.7	60.9	44.7	292.3	0.0	60.0	52.3	NI
NS	4/10/2016 19:59	137.3	0.0	61.3	43.9	158.3	0.7	60.6	46.0	292.3	0.0	59.7	52.9	NI
NS	4/10/2016 20:00	137.3	0.0	60.9	44.6	158.3	0.7	60.3	45.8	292.3	0.0	59.4	53.5	NI
NS	4/10/2016 20:01	137.3	0.0	60.7	44.3	158.3	0.7	60.1	45.6	292.3	0.0	59.1	54.0	NI
NS	4/10/2016 20:02	137.3	0.0	60.4	45.3	158.3	0.0	59.9	46.7	292.3	0.0	59.0	53.8	NI
NS	4/10/2016 20:03	137.3	0.0	60.2	45.1	158.3	0.7	59.6	47.9	292.3	0.0	58.9	54.3	NI
NS	4/10/2016 20:04	137.3	0.0	60.0	45.5	158.3	0.0	59.4	47.2	292.3	0.0	58.7	54.3	NI
NS	4/10/2016 20:05	137.3	0.0	59.8	46.3	158.3	0.0	59.2	47.7	292.3	0.0	58.4	54.7	NI
NS	4/10/2016 20:06	137.3	0.0	59.6	47.0	158.3	0.0	59.1	48.1	292.3	0.0	58.2	54.9	NI
NS	4/10/2016 20:07	137.3	0.0	59.4	47.5	158.3	0.7	59.0	49.2	292.3	0.0	57.9	55.7	NI
NS	4/10/2016 20:08	137.3	0.0	59.2	47.8	158.3	0.7	58.8	49.4	292.3	0.0	57.6	56.3	NI
NS	4/10/2016 20:09	137.3	0.0	59.1	48.2	158.3	0.7	58.7	49.7	292.3	0.0	57.2	57.0	NI
NS	4/10/2016 20:10	137.3	0.0	59.0	48.6	158.3	1.5	58.5	50.0	292.3	0.0	56.9	57.9	NI
NS	4/10/2016 20:11	137.3	0.0	58.8	49.2	158.3	0.7	58.3	50.5	292.3	0.0	56.7	58.1	NI
NS	4/10/2016 20:12	137.3	0.0	58.6	49.7	158.3	0.7	57.9	51.5	292.3	0.0	56.4	58.7	NI
NS	4/10/2016 20:13	137.3	0.0	58.4	49.8	158.3	0.7	57.6	51.8	292.3	0.0	56.0	59.6	NI
NS	4/10/2016 20:14	137.3	0.0	58.2	49.7	158.3	0.7	57.5	52.1	292.3	0.0	55.8	60.3	NI
NS	4/10/2016 20:15	137.3	0.0	57.9	50.7	158.3	0.0	57.1	55.1	292.3	0.0	55.5	62.5	NI
NS	4/10/2016 20:16	137.3	0.0	57.7	51.5	158.3	0.0	56.8	56.4	292.3	0.0	55.3	63.8	NI
NS	4/10/2016 20:17	137.3	0.0	57.5	52.6	158.3	0.7	56.6	57.0	292.3	0.0	55.0	65.0	NI
NS	4/10/2016 20:18	137.3	0.0	57.3	53.0	158.3	0.0	56.5	57.1	292.3	0.0	54.9	65.8	NI
NS	4/10/2016 20:19	137.3	0.0	57.2	53.3	158.3	0.0	56.5	57.5	292.3	0.0	54.6	66.9	NI
NS	4/10/2016 20:20	137.3	0.0	56.9	53.9	158.3	0.0	56.3	57.9	292.3	0.0	54.4	67.7	NI
NS	4/10/2016 20:21	137.3	0.0	56.8	55.7	158.3	0.0	56.3	58.2	292.3	0.0	54.2	67.8	NI
NS	4/10/2016 20:22	137.3	0.0	56.6	56.1	158.3	0.7	56.2	59.0	292.3	0.0	54.1	68.4	NI
NS	4/10/2016 20:23	137.3	0.0	56.6	55.9	158.3	0.7	56.1	58.5	292.3	0.0	53.9	68.4	NI
NS	4/10/2016 20:24	137.3	0.0	56.5	56.0	158.3	0.7	56.1	58.5	292.3	0.0	53.8	67.7	NI
NS	4/10/2016 20:25	137.3	0.0	56.4	55.8	158.3	0.7	56.0	57.3	292.3	0.0	53.8	66.9	NI
NS	4/10/2016 20:26	137.3	0.0	56.2	56.2	158.3	0.0	55.8	56.5	292.3	0.0	53.8	66.3	NI
NS	4/10/2016 20:27	137.3	0.0	56.1	56.2	158.3	0.0	55.6	56.5	292.3	0.0	53.8	65.5	NI
NS	4/10/2016 20:28	137.3	0.0	55.9	56.4	158.3	0.0	55.6	56.4	292.3	0.0	53.8	65.1	NI
NS	4/10/2016 20:29	137.3	0.0	55.8	56.9	158.3	0.0	55.5	56.7	292.3	0.0	53.8	65.2	NI
NS	4/10/2016 20:30	137.3	0.0	55.7	57.2	158.3	0.0	55.4	57.4	292.3	0.0	53.7	65.6	NI
NS	4/10/2016 20:31	137.3	0.0	55.6	57.8	158.3	0.0	55.3	58.4	292.3	0.0	53.7	66.1	NI
NS	4/10/2016 20:32	137.3	0.0	55.5	58.5	158.3	0.7	55.3	59.0	292.3	0.0	53.6	66.1	NI
NS	4/10/2016 20:33	137.3	0.0	55.4	58.8	158.3	0.0	55.2	59.6	292.3	0.0	53.5	66.4	NI
NS	4/10/2016 20:34	137.3	0.0	55.3	59.3	158.3	0.7	55.1	60.4	292.3	0.0	53.4	67.2	NI
NS	4/10/2016 20:35	137.3	0.0	55.2	59.5	158.3	0.7	55.0	61.0	292.3	0.0	53.2	67.8	NI
NS	4/10/2016 20:36	137.3	0.0	55.2	59.7	158.3	0.7	54.9	60.9	292.3	0.0	53.0	68.3	NI
NS	4/10/2016 20:37	137.3	0.0	55.1	59.6	158.3	0.7	54.8	60.9	292.3	0.0	52.9	68.6	NI
NS	4/10/2016 20:38	137.3	0.0	55.0	59.2	158.3	0.0	54.7	61.5	292.3	0.0	52.7	69.8	NI
NS	4/10/2016 20:39	137.3	0.0	54.8	60.0	158.3	0.0	54.5	63.9	292.3	0.0	52.5	71.0	NI
NS	4/10/2016 20:40	137.3	0.0	54.7	61.3	158.3	0.0	54.3	64.8	292.3	0.0	52.3	72.4	NI
NS	4/10/2016 20:41	137.3	0.0	54.6	62.9	158.3	0.7	54.2	65.7	292.3	0.0	52.0	74.0	NI
NS	4/10/2016 20:42	137.3	0.0	54.6	62.7	158.3	1.5	54.1	65.6	292.3	0.0	51.9	75.0	NI
NS	4/10/2016 20:43	137.3	0.0	54.4	61.8	158.3	0.7	54.1	64.4	292.3	0.0	51.7	75.4	NI
NS	4/10/2016 20:44	137.3	0.0	54.3	61.8	158.3	0.7	54.1	63.5	292.3	0.0	51.5	74.9	NI
NS	4/10/2016 20:45	137.3	0.0	54.3	61.8	158.3	0.7	54.0	63.1	292.3	0.0	51.3	74.1	NI
NS	4/10/2016 20:46	137.3	0.0	54.2	62.1	158.3	0.7	53.9	62.7	292.3	0.0	51.2	73.4	NI
NS	4/10/2016 20:47	137.3	0.0	54.0	62.1	158.3	0.7	53.6	62.5	292.3	0.0	51.1	73.2	NI
NS	4/10/2016 20:48	137.3	0.0	53.9	62.3	158.3	0.0	53.4	62.6	292.3	0.0	51.1	73.0	NI
NS	4/10/2016 20:49	137.3	0.0	53.7	63.3	158.3	0.0	53.2	63.5	292.3	0.0	50.9	73.1	NI
NS	4/10/2016 20:50	137.3	0.0	53.4	63.9	158.3	0.7	52.9	65.1	292.3	0.0	50.9	73.2	NI
NS	4/10/2016 20:51	137.3	0.0	53.0	63.7	158.3	0.0	52.6	65.7	292.3	0.0	50.8	73.4	NI
NS	4/10/2016 20:52	137.3	0.0	52.8	64.1	158.3	0.0	52.4	66.2	292.3	0.0	50.8	73.8	NI
NS	4/10/2016 20:53	137.3	0.0	52.7	63.9	158.3	0.0	52.3	66.9	292.3	0.0	50.7	73.8	NI
NS	4/10/2016 20:54	137.3	0.0	52.6	63.6	158.3	0.0	52.3	66.7	292.3	0.0	50.7	73.8	NI
NS	4/10/2016 20:55	137.3	0.0	52.5	63.7	158.3	0.0	52.3	66.2	292.3	0.0	50.6	73.4	NI
NS	4/10/2016 20:56	137.3	0.0	52.5	65.2	158.3	0.0	52.4	66.5	292.3	0.0	50.6	73.7	NI
NS	4/10/2016 20:57	137.3	0.0	52.5	65.5	158.3	0.0	52.4	66.5	292.3	0.0	50.6	73.6	NI
NS	4/10/2016 20:58	137.3	0.0	52.6	66.4	158.3	0.0	52.4	67.1	292.3	0.0	50.5	74.2	NI
NS	4/10/2016 20:59	137.3	0.0	52.5	66.4	158.3	0.0	52.3	67.9	292.3	0.0	50.4	75.2	NI
NS	4/10/2016 21:00	137.3	0.0	52.5	67.0	158.3	0.0	52.2	68.3	292.3	0.0	50.4	75.7	NI
NS	4/10/2016 21:01	137.3	0.0	52.5	67.2	158.3	0.0	52.2	68.9	292.3	0.0	50.3	76.2	NI
NS	4/10/2016 21:02	137.3	0.0	52.4	67.2	158.3	0.7	52.1	69.0	292.3	0.0	50.1	76.8	NI
NS	4/10/2016 21:03	137.3	0.0	52.4	67.2	158.3	0.7	52.0	69.1	292.3	0.0	50.0	76.9	NI
NS	4/10/2016 21:04	137.3	0.0	52.3	67.4	158.3	0.0	51.9	68.5	292.3	0.0	50.0	76.9	NI
NS	4/10/2016 21:05	137.3	0.0	52.3	67.9	158.3	0.0	51.9	68.0	292.3	0.0	49.9	76.7	NI
NS	4/10/2016 21:06	137.3	0.0	52.2	68.0	158.3	0.0	51.9	67.9	292.3	0.0	49.8	76.7	NI
NS	4/10/2016 21:07	137.3	0.0	52.2	68.4	158.3	0.0	51.8	68.9	292.3	0.0	49.8	76.7	NI
NS	4/10/2016 21:08	137.3	0.0	52.1	68.6	158.3	0.0	51.9	69.3	292.3	0.0	49.8	76.8	NI
NS	4/10/2016 21:09	137.3	0.0	52.1	69.8	158.3	0.0	51.8	69.9	292.3	0.0	49.7	77.0	NI
NS	4/10/2016 21:10	137.3	0.0	52.2	70.1	158.3	0.0	51.8	70.5	292.3	0.0	49.6	77.1	NI
NS	4/10/2016 21:11	137.3	0.0	52.4	70.8	158.3	0.0	51.9	71.7	292.3	0.0	49.6	77.3	NI
NS	4/10/2016 21:12	LOGGING STOPPED FOR MAINTENANCE				158.3	0.0	51.9	70.6	292.3	0.0	49.6	77.4	NI
NS	4/10/2016 21:13	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				158.3	0.0	51.8	69.8	292.3	0.0	49.5	78.1	NI
NS	4/10/2016 21:14	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				158.3	0.0	51.6	69.6	292.3	0.0	49.4	78.1	NI
NS	4/10/2016 21:15	134.5	0.0	52.5	69.9	158.3	0.0	51.6	69.6	292.3	0.0	49.6	78.5	NI
NS	4/10/2016 21:16	134.5	0.0	52.6	70.4	158.3	0.7	51.9	70.7	292.3	0.0	49.7	78.2	NI
NS	4/10/2016 21:17	134.5	0.0	52.6	70.6	LOGGING STOPPED FOR MAINTENANCE								NI
NS	4/10/2016 21:18	134.5	0.0	52.7	70.2	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX								NI
NS	4/10/2016 21:19	134.5	0.0	52.5	69.8	158.3	0.7	51.3	70.4	292.3	0.0	49.4	78.2	NI
NS	4/10/2016 21:20	134.5	0.0	52.5	70.7	158.3	0.7	51.7	71.6	292.3	0.0	49.6	79.0	NI
NS	4/10/2016 21:21	133.1	0.0	52.7	71.0	158.3	0.0	51.9	71.1	293.7	0.0	49.8	78.6	NI
NS	4/10/2016 21:22	131.7	0.0	52.8	70.5	158.3	0.0	51.9	70.5	293.7	0.0	50.0	78.6	NI
NS	4/10/2016 21:23	130.3	0.0	52.7	70.6	158.3	0.0	51.9	70.8	293.7	0.0	50.0	78.6	NI
NS	4/10/2016 21:24	130.3	0.0	52.5	70.6	158.3	0.0	51.8	70.7	293.7	0.0	50.2	78.3	NI
NS	4/10/2016 21:25	130.3	0.0	52.2	71.0	158.3	0.0	51.6	71.0	293.7	0.0	50.3	78.2	NI
NS	4/10/2016 21:26	130.3	0.0	51.9	71.9	158.3	0.0	51.5	71.6	293.7	0.0	50.4	78.3	NI
NS	4/10/2016 21:27	130.3	0.0	51.7	72.1	158.3	0.0	51.3	71.9	293.7	0.0	50.3	78.5	NI
NS	4/10/2016 21:28	130.3	0.0	51.4	72.3	158.3	0.0	51.1	72.5	293.7	0.0	50.2	78.9	NI
NS	4/10/2016 21:29	130.3	0.0	51.1	73.2	158.3	0.0	50.9	73.4	293.7	0.0	50.1	78.9	NI
NS	4/10/2016 21:30	130.3	0.0	50.9	73.9	158.3	0.0	50.6	73.9	293.7	0.0	50.0	78.9	NI
NS	4/10/2016 21:31	130.3	0.0	50.6	74.3	158.3	0.0	50.3	74.5	293.7	0.0	49.9	79.1	NI
NS	4/10/2016 21:32	130.3	0.0	50.3	73.8	158.3	0.0	50.0	74.7	293.7	0.0	49.7	79.3	NI
NS	4/10/2016 21:33	130.3	0.0	50.0	73.8	158.3	0.0	49.8	75.0	293.7	0.0	49.6	79.6	NI
NS	4/10/2016 21:34	130.3	0.0	49.8	74.5	158.3	0.0	49.6	75.0	293.7	0.0	49.5	80.1	NI
NS	4/10/2016 21:35	130.3	0.0	49.6	74.9	158.3	0.0	49.5	75.0	293.7	0.0	49.3	79.7	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/10/2016 21:36	130.3	0.0	49.5	74.9	158.3	0.0	49.3	75.2	293.7	0.0	49.2	80.1	NI
NS	4/10/2016 21:37	130.3	0.0	49.3	75.3	158.3	0.0	49.2	75.7	293.7	0.0	49.2	80.5	NI
NS	4/10/2016 21:38	130.3	0.0	49.2	75.5	158.3	0.0	49.1	75.7	293.7	0.0	49.1	80.3	NI
NS	4/10/2016 21:39	130.3	0.0	49.2	76.0	158.3	0.0	49.1	77.7	293.7	0.0	49.1	80.6	NI
NS	4/10/2016 21:40	130.3	0.0	49.2	77.0	158.3	0.0	49.2	77.9	293.7	0.0	49.0	80.8	NI
NS	4/10/2016 21:41	130.3	0.0	49.3	77.2	158.3	0.0	49.2	79.1	293.7	0.0	48.9	81.1	NI
NS	4/10/2016 21:42	130.3	0.0	49.4	77.5	158.3	0.0	49.3	79.5	293.7	0.0	48.7	81.5	NI
NS	4/10/2016 21:43	130.3	0.0	49.4	78.2	158.3	0.0	49.4	79.5	293.7	0.0	48.6	82.1	NI
NS	4/10/2016 21:44	130.3	0.0	49.4	78.8	158.3	0.0	49.4	79.5	293.7	0.0	48.5	82.4	NI
NS	4/10/2016 21:45	130.3	0.0	49.4	78.5	158.3	0.0	49.3	79.4	293.7	0.0	48.5	82.8	NI
NS	4/10/2016 21:46	130.3	0.0	49.3	78.5	158.3	0.0	49.2	79.7	293.7	0.0	48.5	83.0	NI
NS	4/10/2016 21:47	130.3	0.0	49.3	78.8	158.3	0.0	49.2	79.7	293.7	0.0	48.5	83.0	NI
NS	4/10/2016 21:48	130.3	0.0	49.3	78.3	158.3	0.0	49.2	80.1	293.7	0.0	48.5	83.2	NI
NS	4/10/2016 21:49	130.3	0.0	49.2	78.1	158.3	0.0	49.2	79.8	293.7	0.0	48.4	83.2	NI
NS	4/10/2016 21:50	130.3	0.0	49.2	78.3	158.3	0.0	49.2	80.4	293.7	0.0	48.5	83.3	NI
NS	4/10/2016 21:51	130.3	0.0	49.2	78.8	158.3	0.0	49.2	80.3	293.7	0.0	48.4	83.3	NI
NS	4/10/2016 21:52	130.3	0.0	49.1	78.9	158.3	0.0	49.1	79.2	293.7	0.0	48.3	82.4	NI
NS	4/10/2016 21:53	130.3	0.0	49.0	78.5	158.3	0.0	48.9	79.1	293.7	0.0	48.1	82.9	NI
NS	4/10/2016 21:54	130.3	0.0	48.9	78.7	158.3	0.0	48.8	79.3	293.7	0.0	48.0	83.3	NI
NS	4/10/2016 21:55	130.3	0.0	48.8	79.2	158.3	0.0	48.8	80.3	293.7	0.0	47.9	84.2	NI
NS	4/10/2016 21:56	130.3	0.0	48.8	80.5	158.3	0.0	48.8	81.4	293.7	0.0	47.7	84.7	NI
NS	4/10/2016 21:57	130.3	0.0	48.9	81.0	158.3	0.0	48.8	82.1	293.7	0.0	47.6	84.9	NI
NS	4/10/2016 21:58	130.3	0.0	48.9	80.4	158.3	0.0	48.8	82.3	293.7	0.0	47.6	85.0	NI
NS	4/10/2016 21:59	130.3	0.0	48.9	80.0	158.3	0.0	48.8	82.7	293.7	0.0	47.5	85.6	NI
NS	4/10/2016 22:00	130.3	0.0	48.8	79.9	158.3	0.0	48.8	82.7	293.7	0.0	47.5	85.9	NI
NS	4/10/2016 22:01	130.3	0.0	48.8	79.8	158.3	0.0	48.9	82.8	293.7	0.0	47.4	86.2	NI
NS	4/10/2016 22:02	130.3	0.0	48.8	79.8	158.3	0.0	48.9	82.8	293.7	0.0	47.3	86.0	NI
NS	4/10/2016 22:03	130.3	0.0	48.8	79.8	158.3	0.0	49.0	82.6	293.7	0.0	47.3	86.4	NI
NS	4/10/2016 22:04	130.3	0.0	48.8	79.7	158.3	0.0	49.0	83.0	293.7	0.0	47.3	86.4	NI
NS	4/10/2016 22:05	130.3	0.0	48.8	79.9	158.3	0.0	49.1	83.2	293.7	0.0	47.3	86.9	NI
NS	4/10/2016 22:06	130.3	0.0	48.9	80.3	158.3	0.0	49.1	83.2	293.7	0.0	47.2	87.0	NI
NS	4/10/2016 22:07	130.3	0.0	48.9	80.1	158.3	0.0	49.1	82.8	293.7	0.0	47.2	87.4	NI
NS	4/10/2016 22:08	130.3	0.0	48.9	79.9	158.3	0.0	49.0	82.9	293.7	0.0	47.2	87.3	NI
NS	4/10/2016 22:09	130.3	0.0	48.9	80.1	158.3	0.7	48.9	83.3	293.7	0.0	47.1	87.2	NI
NS	4/10/2016 22:10	130.3	0.0	48.9	80.3	158.3	0.7	48.7	83.9	293.7	0.0	46.9	87.3	NI
NS	4/10/2016 22:11	130.3	0.0	48.9	81.3	158.3	0.7	48.7	84.3	293.7	0.0	46.9	87.8	NI
NS	4/10/2016 22:12	130.3	0.0	49.0	82.0	158.3	0.0	48.8	84.0	293.7	0.0	46.8	87.9	NI
NS	4/10/2016 22:13	130.3	0.0	49.1	82.3	158.3	0.0	48.9	83.9	293.7	0.0	46.8	88.0	NI
NS	4/10/2016 22:14	130.3	0.0	49.1	82.5	158.3	0.0	48.9	83.7	293.7	0.0	46.9	88.2	NI
NS	4/10/2016 22:15	130.3	0.0	49.0	82.7	158.3	0.0	48.8	83.8	293.7	0.0	46.9	88.1	NI
NS	4/10/2016 22:16	130.3	0.0	49.0	82.6	158.3	0.7	48.7	83.9	293.7	0.0	46.8	88.0	NI
NS	4/10/2016 22:17	130.3	0.0	49.0	82.8	158.3	0.7	48.5	84.0	293.7	0.0	46.8	87.9	NI
NS	4/10/2016 22:18	130.3	0.0	48.9	82.9	158.3	0.7	48.5	83.7	293.7	0.0	46.7	87.8	NI
NS	4/10/2016 22:19	130.3	0.0	48.8	83.2	158.3	0.7	48.4	83.2	293.7	0.0	46.6	88.0	NI
NS	4/10/2016 22:20	130.3	0.0	48.7	83.3	158.3	0.7	48.3	83.6	293.7	0.0	46.5	88.0	NI
NS	4/10/2016 22:21	130.3	0.0	48.6	83.4	158.3	0.0	48.2	83.5	293.7	0.0	46.5	88.1	NI
NS	4/10/2016 22:22	130.3	0.0	48.5	83.7	158.3	0.7	48.1	84.0	293.7	0.0	46.4	88.1	NI
NS	4/10/2016 22:23	130.3	0.0	48.5	83.9	158.3	0.7	48.1	83.6	293.7	0.0	46.4	88.3	NI
NS	4/10/2016 22:24	130.3	0.0	48.4	84.0	158.3	0.0	48.0	84.2	293.7	0.0	46.4	88.6	NI
NS	4/10/2016 22:25	130.3	0.0	48.4	84.1	158.3	0.0	48.0	84.6	293.7	0.0	46.4	88.5	NI
NS	4/10/2016 22:26	130.3	0.0	48.3	84.4	158.3	0.7	48.1	85.2	293.7	0.0	46.3	88.6	NI
NS	4/10/2016 22:27	130.3	0.0	48.3	84.5	158.3	0.7	48.0	85.1	293.7	0.0	46.3	88.4	NI
NS	4/10/2016 22:28	130.3	0.0	48.3	84.6	158.3	0.7	48.0	85.5	293.7	0.0	46.4	88.9	NI
NS	4/10/2016 22:29	130.3	0.0	48.3	84.6	158.3	0.0	48.0	85.1	293.7	0.0	46.4	88.9	NI
NS	4/10/2016 22:30	130.3	0.0	48.0	84.7	158.3	0.0	47.7	84.8	293.7	0.0	46.4	88.6	NI
NS	4/10/2016 22:31	130.3	0.0	47.9	85.1	158.3	0.0	47.5	84.4	293.7	0.0	46.3	88.5	NI
NS	4/10/2016 22:32	130.3	0.0	47.8	84.2	158.3	0.0	47.3	84.2	293.7	0.0	46.3	88.6	NI
NS	4/10/2016 22:33	130.3	0.0	47.6	84.2	158.3	0.0	47.1	84.4	293.7	0.0	46.2	88.3	NI
NS	4/10/2016 22:34	130.3	0.0	47.4	84.7	158.3	0.0	47.0	85.0	293.7	0.0	46.0	88.2	NI
NS	4/10/2016 22:35	130.3	0.0	47.4	85.9	158.3	0.0	47.0	86.4	293.7	0.0	45.9	88.8	NI
NS	4/10/2016 22:36	130.3	0.0	47.5	86.5	158.3	0.7	47.2	87.4	293.7	0.0	45.9	89.2	NI
NS	4/10/2016 22:37	130.3	0.0	47.6	86.6	158.3	0.7	47.3	87.6	293.7	0.0	45.9	89.4	NI
NS	4/10/2016 22:38	130.3	0.0	47.6	86.6	158.3	0.0	47.4	87.2	293.7	0.0	45.9	89.6	NI
NS	4/10/2016 22:39	130.3	0.0	47.6	85.9	158.3	0.0	47.4	86.6	293.7	0.0	45.9	89.5	NI
NS	4/10/2016 22:40	130.3	0.0	47.6	85.3	158.3	0.0	47.3	86.5	293.7	0.0	45.8	89.5	NI
NS	4/10/2016 22:41	130.3	0.0	47.5	86.3	158.3	0.7	47.4	87.3	293.7	0.0	45.7	89.7	NI
NS	4/10/2016 22:42	130.3	0.0	47.6	86.9	158.3	1.5	47.3	87.3	293.7	0.0	45.5	89.4	NI
NS	4/10/2016 22:43	130.3	0.0	47.6	86.2	158.3	0.0	47.2	86.4	293.7	0.0	45.5	90.0	NI
NS	4/10/2016 22:44	130.3	0.0	47.5	86.5	158.3	0.0	47.0	86.1	293.7	0.0	45.4	89.5	NI
NS	4/10/2016 22:45	130.3	0.0	47.5	86.0	158.3	0.0	46.8	86.4	293.7	0.0	45.2	89.7	NI
NS	4/10/2016 22:46	130.3	0.0	47.3	85.6	158.3	0.0	46.6	87.6	293.7	0.0	45.0	89.7	NI
NS	4/10/2016 22:47	130.3	0.0	47.1	85.7	158.3	0.0	46.5	88.5	293.7	0.0	45.1	90.5	NI
NS	4/10/2016 22:48	130.3	0.0	47.0	86.3	158.3	0.0	46.5	88.5	293.7	0.0	45.1	90.2	NI
NS	4/10/2016 22:49	130.3	0.0	47.1	87.6	158.3	0.0	46.7	88.9	293.7	0.0	45.1	90.5	NI
NS	4/10/2016 22:50	130.3	0.0	47.1	88.0	158.3	0.0	46.8	88.1	293.7	0.0	45.0	90.3	NI
NS	4/10/2016 22:51	130.3	0.0	47.2	87.7	158.3	0.0	46.7	88.0	293.7	0.0	45.0	90.5	NI
NS	4/10/2016 22:52	130.3	0.0	47.2	87.6	158.3	0.0	46.6	87.4	293.7	0.0	45.0	90.3	NI
NS	4/10/2016 22:53	130.3	0.0	47.2	87.7	158.3	0.0	46.6	87.2	293.7	0.0	45.0	90.2	NI
NS	4/10/2016 22:54	130.3	0.0	47.2	87.8	158.3	0.0	46.5	87.4	293.7	0.0	44.9	90.1	NI
NS	4/10/2016 22:55	130.3	0.0	47.1	87.2	158.3	0.0	46.6	87.7	293.7	0.0	44.9	90.0	NI
NS	4/10/2016 22:56	130.3	0.0	47.1	87.0	158.3	0.0	46.7	87.8	293.7	0.0	44.9	89.7	NI
NS	4/10/2016 22:57	130.3	0.0	47.1	88.1	158.3	0.0	46.6	87.8	293.7	0.0	44.7	89.9	NI
NS	4/10/2016 22:58	130.3	0.0	47.2	88.2	158.3	0.0	46.7	87.8	293.7	0.0	44.7	90.2	NI
NS	4/10/2016 22:59	130.3	0.0	47.1	88.1	158.3	0.0	46.7	88.4	293.7	0.0	44.8	90.8	NI
NS	4/10/2016 23:00	130.3	0.0	47.1	88.4	158.3	0.0	46.7	88.9	293.7	0.0	44.8	91.2	NI
NS	4/10/2016 23:01	130.3	0.0	47.1	88.4	158.3	0.0	46.6	88.9	293.7	0.0	44.8	91.2	NI
NS	4/10/2016 23:02	130.3	0.0	46.9	88.5	158.3	0.0	46.4	88.5	293.7	0.0	44.8	90.8	NI
NS	4/10/2016 23:03	130.3	0.0	46.8	88.9	158.3	0.0	46.3	89.4	293.7	0.0	44.6	90.7	NI
NS	4/10/2016 23:04	130.3	0.0	46.8	89.2	158.3	0.0	46.2	90.1	293.7	0.0	44.6	91.0	NI
NS	4/10/2016 23:05	130.3	0.0	46.8	89.2	158.3	0.0	46.0	89.4	293.7	0.0	44.5	90.9	NI
NS	4/10/2016 23:06	130.3	0.0	46.7	88.9	158.3	0.0	45.9	89.1	293.7	0.0	44.5	91.3	NI
NS	4/10/2016 23:07	130.3	0.0	46.5	88.3	158.3	0.0	45.8	88.9	293.7	0.0	44.4	91.3	NI
NS	4/10/2016 23:08	130.3	0.0	46.4	88.1	158.3	0.0	45.7	88.8	293.7	0.0	44.4	91.1	NI
NS	4/10/2016 23:09	130.3	0.0	46.3	88.3	158.3	0.0	45.6	89.1	293.7	0.0	44.4	91.5	NI
NS	4/10/2016 23:10	130.3	0.0	46.2	88.1	158.3	0.0	45.6	89.1	293.7	0.0	44.4	91.3	NI
NS	4/10/2016 23:11	130.3	0.0	46.0	88.3	158.3	0.0	45.5	89.3	293.7	0.0	44.4	90.9	NI
NS	4/10/2016 23:12	130.3	0.0	45.9	88.7	158.3	0.0	45.5	89.3	293.7	0.0	44.3	90.9	NI
NS	4/10/2016 23:13	130.3	0.0	45.9	90.1	158.3	0.0	45.4	90.1	293.7	0.0	44.3	91.1	NI
NS	4/10/2016 23:14	130.3	0.0	46.1	91.2	158.3	0.0	45.7	91.4	293.7	0.0	44.2	91.2	NI
NS	4/10/2016 23:15	130.3	0.0	46.3	91.2	158.3	0.0	46.0	92.0	293.7	0.0	44.3	91.6	NI
NS	4/10/2016 23:16	130.3	0.0	46.5	91.1	158.3	0.0	46.1	91.7	293.7	0.0	44.4	91.8	NI
NS	4/10/2016 23:17	130.3	0.0	46.5	90.1	158.3	0.0	46.0	90.6	293.7	0.0	44.3	91.8	NI
NS	4/10/2016 23:18	130.3	0.0	46.4	89.4	158.3	0.0	46.0	90.3	293.7	0.0	44.3	91.9	NI
NS	4/10/2016 23:19	130.3	0.0	46.4	90.7	158.3	0.0	46.1	91.5	293.7	0.0	44.3	92.0	NI
NS	4/10/2016 23:20	130.3	0.0	46.5	91.0	158.3	0.0	46.2	91.7	293.7	0.0	44.2	92.0	NI
NS	4/10/2016 23:21	130.3	0.0	46.6	91.0	158.3	0.0	46.3	91.6	293.7	0.0	44.3	92.3	NI
NS	4/10/2016 23:22	130.3	0.0	46.7	91.0	158.3	0.0	46.4	91.7	293.7	0.0	44.4	92.7	NI
NS	4/10/2016 23:23	130.3	0.0	46.7	91.0	158.3	0.0	46.4	91.6	293.7	0.0	44.6	92.8	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/10/2016 23:24	130.3	0.6	46.7	91.0	158.3	0.0	46.3	91.3	293.7	0.0	44.7	92.7	NI
NS	4/10/2016 23:25	130.3	0.0	46.7	90.8	158.3	0.0	46.4	91.6	293.7	0.0	44.8	93.0	NI
NS	4/10/2016 23:26	130.3	0.0	46.6	90.7	158.3	0.0	46.4	91.7	293.7	0.0	44.9	93.1	NI
NS	4/10/2016 23:27	130.3	0.0	46.6	90.9	158.3	0.0	46.4	91.6	293.7	0.0	44.9	92.8	NI
NS	4/10/2016 23:28	130.3	0.0	46.6	90.8	158.3	0.0	46.4	91.5	293.7	0.0	45.0	92.7	NI
NS	4/10/2016 23:29	130.3	0.0	46.5	91.0	158.3	0.0	46.4	91.7	293.7	0.0	45.0	92.9	NI
NS	4/10/2016 23:30	130.3	0.0	46.5	91.1	158.3	0.0	46.4	91.5	293.7	0.0	45.0	92.8	NI
NS	4/10/2016 23:31	130.3	0.0	46.5	91.0	158.3	0.0	46.4	91.2	293.7	0.0	45.0	92.7	NI
NS	4/10/2016 23:32	130.3	0.0	46.4	90.8	158.3	0.0	46.3	90.8	293.7	0.0	45.0	92.6	NI
NS	4/10/2016 23:33	130.3	0.0	46.3	90.7	158.3	0.0	46.3	90.8	293.7	0.0	45.0	92.6	NI
NS	4/10/2016 23:34	130.3	0.0	46.3	91.2	158.3	0.0	46.3	91.1	293.7	0.0	45.1	92.8	NI
NS	4/10/2016 23:35	130.3	0.0	46.3	91.7	158.3	0.0	46.3	91.4	293.7	0.0	45.2	92.8	NI
NS	4/10/2016 23:36	130.3	0.0	46.4	91.8	158.3	0.0	46.3	91.7	293.7	0.0	45.1	92.6	NI
NS	4/10/2016 23:37	130.3	0.0	46.4	91.8	158.3	0.0	46.4	91.3	293.7	0.0	45.0	92.6	NI
NS	4/10/2016 23:38	130.3	0.0	46.4	91.8	158.3	0.0	46.4	91.5	293.7	0.0	45.0	92.7	NI
NS	4/10/2016 23:39	130.3	0.0	46.5	91.7	158.3	0.0	46.4	91.5	293.7	0.0	45.0	92.7	NI
NS	4/10/2016 23:40	130.3	0.6	46.5	91.7	158.3	0.0	46.4	91.8	293.7	0.0	45.0	92.8	NI
NS	4/10/2016 23:41	130.3	0.6	46.6	91.8	158.3	0.0	46.4	92.0	293.7	0.0	45.0	92.8	NI
NS	4/10/2016 23:42	130.3	0.0	46.6	91.8	158.3	0.0	46.4	91.5	293.7	0.0	45.1	92.9	NI
NS	4/10/2016 23:43	130.3	0.0	46.6	91.7	158.3	0.0	46.4	91.1	293.7	0.0	45.1	93.0	NI
NS	4/10/2016 23:44	130.3	0.0	46.5	91.7	158.3	0.0	46.4	91.1	293.7	0.0	45.2	93.1	NI
NS	4/10/2016 23:45	130.3	0.0	46.5	91.8	158.3	0.0	46.5	91.3	293.7	0.0	45.3	93.1	NI
NS	4/10/2016 23:46	130.3	0.0	46.6	91.8	158.3	0.0	46.5	91.6	293.7	0.0	45.4	93.2	NI
NS	4/10/2016 23:47	130.3	0.0	46.6	91.8	158.3	0.0	46.5	91.6	293.7	0.0	45.4	92.9	NI
NS	4/10/2016 23:48	130.3	0.0	46.6	91.7	158.3	0.0	46.5	91.8	293.7	0.0	45.3	92.9	NI
NS	4/10/2016 23:49	130.3	0.0	46.6	91.5	158.3	0.7	46.3	91.2	293.7	0.0	45.2	92.8	NI
NS	4/10/2016 23:50	130.3	0.0	46.4	91.8	158.3	0.7	46.2	91.2	293.7	0.0	45.0	92.6	NI
NS	4/10/2016 23:51	130.3	0.0	46.3	91.4	158.3	0.0	46.0	91.8	293.7	0.0	45.0	92.8	NI
NS	4/10/2016 23:52	130.3	0.0	46.2	92.0	158.3	0.0	45.9	91.4	293.7	0.0	44.9	92.7	NI
NS	4/10/2016 23:53	130.3	0.0	46.1	91.3	158.3	0.0	45.7	91.6	293.7	0.0	44.9	92.6	NI
NS	4/10/2016 23:54	130.3	0.0	45.9	91.3	158.3	0.0	45.6	91.5	293.7	0.0	44.8	92.5	NI
NS	4/10/2016 23:55	130.3	0.0	45.9	91.5	158.3	0.0	45.6	91.7	293.7	0.0	44.7	92.6	NI
NS	4/10/2016 23:56	130.3	0.0	46.0	92.0	158.3	0.0	45.9	93.0	293.7	0.0	44.8	93.4	NI
NS	4/10/2016 23:57	130.3	0.0	46.8	92.3	158.3	0.7	46.2	92.6	293.7	0.0	44.9	93.1	NI
NS	4/10/2016 23:58	130.3	0.0	46.8	91.6	158.3	0.7	46.3	92.0	293.7	0.0	44.9	93.0	NI
NS	4/10/2016 23:59	130.3	0.0	46.8	91.0	158.3	0.0	46.3	91.6	293.7	0.0	44.9	92.9	NI
NS	4/11/2016 0:00	130.3	0.0	46.7	91.0	158.3	0.0	46.2	91.9	293.7	0.0	44.9	93.0	NI
NS	4/11/2016 0:01	130.3	0.0	46.7	91.1	158.3	0.0	46.3	91.7	293.7	0.0	44.8	92.8	NI
NS	4/11/2016 0:02	130.3	0.0	46.7	91.0	158.3	0.0	46.3	92.3	293.7	0.0	44.8	92.9	NI
NS	4/11/2016 0:03	130.3	0.0	46.6	91.3	158.3	0.0	46.3	92.0	293.7	0.0	44.7	92.7	NI
NS	4/11/2016 0:04	130.3	0.0	46.6	91.4	158.3	0.0	46.3	91.9	293.7	0.0	44.8	93.3	NI
NS	4/11/2016 0:05	130.3	0.0	46.6	91.0	158.3	0.0	46.3	91.6	293.7	0.0	44.8	93.0	NI
NS	4/11/2016 0:06	130.3	0.0	46.7	91.7	158.3	0.0	46.3	92.5	293.7	0.0	44.8	93.2	NI
NS	4/11/2016 0:07	130.3	0.0	46.8	91.9	158.3	0.7	46.5	92.5	293.7	0.0	44.8	93.3	NI
NS	4/11/2016 0:08	130.3	0.0	46.9	91.9	158.3	0.7	46.5	92.2	293.7	0.0	44.8	93.1	NI
NS	4/11/2016 0:09	130.3	0.0	47.2	92.0	158.3	0.7	46.8	92.5	293.7	0.0	44.9	93.4	NI
NS	4/11/2016 0:10	130.3	0.0	47.7	91.0	158.3	0.7	46.9	92.3	293.7	0.0	44.9	93.5	NI
NS	4/11/2016 0:11	130.3	0.0	47.6	90.6	158.3	0.7	46.8	91.6	293.7	0.0	44.9	93.3	NI
NS	4/11/2016 0:12	130.3	0.0	47.6	90.7	158.3	0.0	46.9	91.9	293.7	0.0	45.0	93.6	NI
NS	4/11/2016 0:13	130.3	0.0	47.5	91.1	158.3	0.7	46.9	91.8	293.7	0.0	45.1	93.5	NI
NS	4/11/2016 0:14	130.3	0.0	47.5	90.8	158.3	0.7	46.9	91.8	293.7	0.0	45.2	93.6	NI
NS	4/11/2016 0:15	130.3	0.0	47.4	91.2	158.3	0.7	46.9	91.8	293.7	0.0	45.3	93.7	NI
NS	4/11/2016 0:16	130.3	0.0	47.6	91.4	158.3	0.7	47.0	91.5	293.7	0.0	45.3	93.7	NI
NS	4/11/2016 0:17	130.3	0.0	47.6	91.1	158.3	0.7	47.0	92.1	293.7	0.0	45.4	93.6	NI
NS	4/11/2016 0:18	130.3	0.0	47.9	91.4	158.3	0.7	47.2	92.4	293.7	0.0	45.4	93.6	NI
NS	4/11/2016 0:19	130.3	0.0	48.2	90.7	158.3	0.7	47.3	92.1	293.7	0.0	45.4	93.7	NI
NS	4/11/2016 0:20	130.3	0.0	48.2	90.3	158.3	0.7	47.3	92.0	293.7	0.0	45.4	93.7	NI
NS	4/11/2016 0:21	130.3	0.0	48.2	90.4	158.3	0.7	47.4	92.0	293.7	0.0	45.5	93.7	NI
NS	4/11/2016 0:22	130.3	0.0	48.2	90.5	158.3	0.0	47.5	91.7	293.7	0.0	45.6	93.7	NI
NS	4/11/2016 0:23	130.3	0.0	48.2	90.5	158.3	0.0	47.6	91.9	293.7	0.0	45.7	93.8	NI
NS	4/11/2016 0:24	130.3	0.0	48.3	90.5	158.3	0.0	47.7	91.9	293.7	0.0	45.8	93.9	NI
NS	4/11/2016 0:25	130.3	0.0	48.4	90.3	158.3	0.0	47.8	91.7	293.7	0.0	45.8	93.9	NI
NS	4/11/2016 0:26	130.3	0.0	48.5	90.2	158.3	0.0	47.9	91.3	293.7	0.0	45.9	93.9	NI
NS	4/11/2016 0:27	130.3	0.0	48.5	90.0	158.3	0.0	47.9	91.3	293.7	0.0	46.0	94.0	NI
NS	4/11/2016 0:28	130.3	0.0	48.5	90.2	158.3	0.0	47.9	91.2	293.7	0.0	46.0	93.9	NI
NS	4/11/2016 0:29	130.3	0.0	48.5	90.2	158.3	0.0	48.0	91.5	293.7	0.0	46.1	93.8	NI
NS	4/11/2016 0:30	130.3	0.0	48.5	90.1	158.3	0.0	47.9	91.3	293.7	0.0	46.0	93.6	NI
NS	4/11/2016 0:31	130.3	0.0	48.7	90.0	158.3	0.0	47.9	91.1	293.7	0.0	46.0	93.6	NI
NS	4/11/2016 0:32	130.3	0.0	48.7	90.1	158.3	0.0	48.0	91.7	293.7	0.0	46.2	94.1	NI
NS	4/11/2016 0:33	130.3	0.0	49.2	90.2	158.3	0.0	48.3	91.5	293.7	0.0	46.2	93.8	NI
NS	4/11/2016 0:34	130.3	0.0	49.2	89.5	158.3	0.0	48.4	91.3	293.7	0.0	46.3	93.8	NI
NS	4/11/2016 0:35	130.3	0.0	49.2	89.1	158.3	0.0	48.4	91.1	293.7	0.0	46.3	93.8	NI
NS	4/11/2016 0:36	130.3	0.0	49.2	89.2	158.3	0.0	48.5	91.3	293.7	0.0	46.5	94.1	NI
NS	4/11/2016 0:37	130.3	0.0	49.2	89.1	158.3	0.0	48.5	90.7	293.7	0.0	46.5	93.8	NI
NS	4/11/2016 0:38	130.3	0.0	49.5	89.6	158.3	0.0	48.6	90.8	293.7	0.0	46.5	93.7	NI
NS	4/11/2016 0:39	130.3	0.0	49.5	89.0	158.3	0.0	48.6	91.0	293.7	0.0	46.5	93.8	NI
NS	4/11/2016 0:40	130.3	0.0	49.4	88.9	158.3	0.0	48.7	90.8	296.5	0.0	46.6	93.7	NI
NS	4/11/2016 0:41	130.3	0.0	49.6	88.8	158.3	0.0	48.7	90.3	302.1	0.0	46.6	93.6	NI
NS	4/11/2016 0:42	131.7	0.0	49.8	89.1	158.3	0.0	49.0	90.9	302.1	0.0	46.7	93.8	NI
NS	4/11/2016 0:43	123.2	0.0	50.0	88.6	148.5	0.7	49.3	91.0	275.5	0.0	46.9	93.9	NI
NS	4/11/2016 0:44	117.6	0.6	50.7	88.5	134.5	1.5	50.1	91.3	191.2	0.7	47.4	94.4	NI
NS	4/11/2016 0:45	151.3	1.7	51.6	87.4	147.1	1.5	51.0	90.1	317.6	0.7	48.1	94.7	NI
NS	4/11/2016 0:46	120.4	0.0	51.9	86.4	123.2	0.7	51.1	88.4	175.2	0.0	48.5	94.3	NI
NS	4/11/2016 0:47	116.2	0.0	51.6	85.7	123.2	0.0	51.0	88.1	175.2	0.0	48.5	93.8	NI
NS	4/11/2016 0:48	120.4	0.6	51.8	86.7	133.1	1.5	51.4	88.5	166.8	0.7	48.7	93.8	NI
NS	4/11/2016 0:49	124.7	0.6	52.2	85.1	128.9	1.5	51.4	87.6	147.1	0.7	48.9	93.5	NI
NS	4/11/2016 0:50	123.2	0.0	52.3	85.5	134.5	1.5	51.7	87.6	147.1	0.0	49.2	93.4	NI
NS	4/11/2016 0:51	123.2	1.1	52.3	85.9	113.4	2.2	51.9	87.7	116.2	1.5	49.4	93.4	NI
NS	4/11/2016 0:52	110.6	0.0	52.4	84.8	131.7	0.7	51.6	86.9	103.6	0.7	49.4	92.7	NI
NS	4/11/2016 0:53	140.1	0.0	52.2	84.6	158.3	0.0	51.4	86.6	109.2	0.0	49.4	92.4	NI
NS	4/11/2016 0:54	140.1	0.0	52.0	85.1	158.3	0.7	51.4	87.3	110.6	0.0	49.4	92.4	NI
NS	4/11/2016 0:55	156.9	0.0	52.1	85.5	158.3	0.7	51.5	87.3	114.8	0.0	49.5	92.5	NI
NS	4/11/2016 0:56	159.7	0.0	52.2	85.4	158.3	0.0	51.6	87.6	114.8	0.0	49.5	92.4	NI
NS	4/11/2016 0:57	165.4	1.1	52.6	85.5	171.0	1.5	52.2	87.7	159.7	0.7	49.8	92.8	NI
NS	4/11/2016 0:58	168.2	0.0	52.7	85.0	169.6	0.7	52.5	87.4	165.4	0.7	50.0	92.7	NI
NS	4/11/2016 0:59	164.0	0.0	52.6	84.3	133.1	1.5	52.6	87.1	149.9	0.7	50.1	92.4	NI
NS	4/11/2016 1:00	86.7	0.0	53.0	85.3	98.0	0.0	52.6	88.8	123.2	0.0	50.2	92.3	NI
NS	4/11/2016 1:01	86.7	0.0	53.1	84.6	98.0	0.7	52.7	88.6	123.2	0.0	50.3	92.5	NI
NS	4/11/2016 1:02	95.2	0.0	53.2	84.2	100.8	0.7	52.8	86.4	123.2	0.7	50.5	92.4	NI
NS	4/11/2016 1:03	102.2	0.0	53.3	84.1	103.6	1.5	52.9	86.0	172.4	0.7	50.5	91.8	NI
NS	4/11/2016 1:04	127.5	1.7	53.5	84.9	128.9	1.5	53.3	86.5	149.9	0.7	51.0	92.2	NI
NS	4/11/2016 1:05	138.7	0.0	53.9	84.3	131.7	1.5	53.6	86.1	131.7	0.7	51.2	92.2	NI
NS	4/11/2016 1:06	99.4	0.6	54.1	83.6	107.8	0.7	53.6	85.3	113.4	0.7	51.4	91.5	NI
NS	4/11/2016 1:07	109.2	0.0	53.9	83.2	131.7	0.7	53.4	85.3	121.8	0.7	51.3	91.2	NI
NS	4/11/2016 1:08	131.7	0.6	53.7	83.2	123.2	1.5	53.3	85.5	128.9	0.7	51.4	91.1	NI
NS	4/11/2016 1:09	119.0	1.1	54.1	84.8	112.0	2.2	53.9	86.2	109.2	1.5	51.9	91.7	NI
NS	4/11/2016 1:10	110.6	1.1	54.2	83.8	133.1	1.5	53.7	85.8	119.0	0.7	51.9	91.1	NI
NS	4/11/2016 1:11	151.3	0.0	54.2	84.2	147.1	0.7	53.8	85.4	134.5	0.0	51.9	90.9	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/11/2016 1:12	149.9	0.0	54.2	84.2	147.1	0.0	53.7	85.5	134.5	0.0	51.9	90.8	NI
NS	4/11/2016 1:13	130.3	0.0	54.2	84.7	113.4	1.5	53.9	86.2	133.1	0.7	52.0	91.2	NI
NS	4/11/2016 1:14	112.0	0.6	54.4	84.9	109.2	0.7	54.2	86.2	128.9	0.7	52.3	91.3	NI
NS	4/11/2016 1:15	131.7	1.1	54.6	84.5	151.3	1.5	54.2	85.6	172.4	0.7	52.3	90.8	NI
NS	4/11/2016 1:16	134.5	0.6	54.4	83.7	165.4	0.7	54.0	85.9	194.0	0.7	52.3	90.5	NI
NS	4/11/2016 1:17	130.3	1.1	54.4	84.6	120.4	1.5	54.2	86.0	175.2	0.7	52.5	90.8	NI
NS	4/11/2016 1:18	123.2	0.6	54.6	84.8	137.3	1.5	54.3	86.1	154.1	0.7	52.7	90.8	NI
NS	4/11/2016 1:19	126.1	0.0	54.5	83.9	128.9	0.7	54.0	85.4	136.7	0.7	52.6	90.1	NI
NS	4/11/2016 1:20	119.0	0.0	54.2	84.8	109.2	0.7	54.1	86.3	106.4	0.0	52.6	90.5	NI
NS	4/11/2016 1:21	106.4	0.6	54.5	85.7	116.2	1.5	54.2	86.0	119.0	0.7	52.8	90.3	NI
NS	4/11/2016 1:22	103.6	0.6	54.5	85.8	121.8	1.5	54.4	86.6	120.4	0.7	52.9	90.5	NI
NS	4/11/2016 1:23	110.6	0.0	54.5	84.4	130.3	0.7	54.0	85.2	121.8	0.7	52.8	89.9	NI
NS	4/11/2016 1:24	110.6	0.0	54.0	84.3	130.3	0.0	53.6	85.3	121.8	0.0	52.6	89.5	NI
NS	4/11/2016 1:25	110.6	0.0	53.8	86.2	123.2	0.7	53.6	86.4	121.8	0.0	52.6	90.3	NI
NS	4/11/2016 1:26	113.4	0.6	54.1	87.0	128.9	1.5	53.9	87.2	121.8	0.7	52.8	90.6	NI
NS	4/11/2016 1:27	114.8	0.0	54.3	86.7	133.1	0.7	54.0	87.6	123.2	0.7	52.8	90.5	NI
NS	4/11/2016 1:28	109.2	0.0	54.3	86.3	127.5	0.7	53.9	87.1	123.2	0.0	52.8	90.1	NI
NS	4/11/2016 1:29	116.2	1.1	54.4	86.7	116.2	1.5	54.1	87.2	128.9	0.7	52.9	90.5	NI
NS	4/11/2016 1:30	119.0	0.0	54.4	86.3	107.8	0.7	54.2	87.2	131.7	0.7	52.9	90.5	NI
NS	4/11/2016 1:31	116.2	0.0	54.4	85.9	107.8	0.7	54.0	86.8	133.1	0.0	52.9	90.3	NI
NS	4/11/2016 1:32	120.4	0.0	54.3	86.3	117.6	0.7	54.1	87.1	137.3	0.7	52.9	90.4	NI
NS	4/11/2016 1:33	120.4	0.6	54.5	86.9	119.0	1.5	54.3	87.4	134.5	0.7	53.0	90.5	NI
NS	4/11/2016 1:34	107.8	0.6	54.5	86.2	131.7	0.7	54.2	87.4	130.3	0.7	53.0	90.3	NI
NS	4/11/2016 1:35	71.3	0.6	54.5	86.6	124.7	1.5	54.3	87.5	124.7	0.7	53.1	90.4	NI
NS	4/11/2016 1:36	123.2	0.0	54.5	86.0	127.5	0.0	54.2	86.8	124.7	0.0	53.1	90.1	NI
NS	4/11/2016 1:37	123.2	0.6	54.3	86.7	130.3	1.5	54.2	87.2	127.5	0.7	53.1	90.3	NI
NS	4/11/2016 1:38	114.8	0.0	54.4	86.6	130.3	0.0	54.2	87.1	128.9	0.0	53.2	90.2	NI
NS	4/11/2016 1:39	109.2	0.0	54.3	86.6	120.4	1.5	54.2	87.2	126.1	0.7	53.2	90.2	NI
NS	4/11/2016 1:40	113.4	1.1	54.5	86.6	120.4	1.5	54.2	87.4	135.9	0.7	53.3	90.1	NI
NS	4/11/2016 1:41	116.2	0.6	54.3	86.5	78.3	1.5	54.1	87.3	74.1	0.7	53.3	89.8	NI
NS	4/11/2016 1:42	107.8	0.0	54.1	86.5	78.3	0.7	54.0	87.3	74.1	0.0	53.2	89.8	NI
NS	4/11/2016 1:43	100.8	0.6	54.2	87.3	95.2	1.5	54.1	87.8	91.0	1.5	53.3	90.2	NI
NS	4/11/2016 1:44	98.0	0.6	54.3	86.9	127.5	0.7	54.1	87.6	110.6	0.7	53.3	89.8	NI
NS	4/11/2016 1:45	137.3	1.1	54.2	87.1	135.9	1.5	54.1	87.6	119.0	0.7	53.3	89.7	NI
NS	4/11/2016 1:46	161.2	0.6	54.3	87.0	181.4	1.5	54.1	87.7	172.4	0.7	53.3	89.8	NI
NS	4/11/2016 1:47	154.1	0.0	54.2	86.6	168.2	0.7	54.0	87.4	169.6	0.0	53.3	89.5	NI
NS	4/11/2016 1:48	154.1	0.0	54.0	86.8	164.0	0.0	53.8	87.8	168.2	0.0	53.2	89.4	NI
NS	4/11/2016 1:49	82.5	0.0	53.9	87.4	123.2	0.7	53.7	87.9	161.2	0.7	53.1	89.5	NI
NS	4/11/2016 1:50	74.1	0.0	53.8	87.8	128.9	0.7	53.7	88.3	156.9	0.7	53.1	89.9	NI
NS	4/11/2016 1:51	96.6	0.0	53.8	87.5	147.1	0.7	53.7	88.4	156.9	0.7	53.1	89.8	NI
NS	4/11/2016 1:52	107.8	0.6	53.8	87.9	112.0	0.7	53.7	88.2	149.9	0.7	53.1	89.8	NI
NS	4/11/2016 1:53	102.2	0.0	53.8	88.1	103.6	1.5	53.6	88.1	133.1	0.7	53.0	89.8	NI
NS	4/11/2016 1:54	100.8	0.0	53.6	87.7	117.6	1.5	53.5	88.5	130.3	0.7	53.0	89.8	NI
NS	4/11/2016 1:55	120.4	1.1	53.7	88.3	130.3	2.2	53.7	89.0	141.5	1.5	53.0	90.2	NI
NS	4/11/2016 1:56	110.6	1.7	54.0	88.3	109.2	1.5	53.9	88.7	113.4	1.5	53.2	90.2	NI
NS	4/11/2016 1:57	98.0	0.0	54.0	88.1	106.4	0.7	53.9	88.4	107.8	0.7	53.3	90.2	NI
NS	4/11/2016 1:58	120.4	0.6	54.0	88.1	144.3	1.5	53.9	88.6	137.3	0.7	53.3	90.0	NI
NS	4/11/2016 1:59	142.9	0.6	54.0	87.8	130.3	1.5	53.8	88.6	137.3	1.5	53.3	89.8	NI
NS	4/11/2016 2:00	102.2	2.3	54.1	88.5	107.8	2.2	54.1	88.8	107.8	2.2	53.4	90.3	NI
NS	4/11/2016 2:01	131.7	0.0	54.1	87.8	119.0	0.7	54.0	88.5	126.1	0.7	53.4	89.8	NI
NS	4/11/2016 2:02	124.7	0.6	54.1	88.4	109.2	1.5	54.0	88.6	124.7	0.7	53.5	90.0	NI
NS	4/11/2016 2:03	109.2	0.0	54.1	88.4	100.8	0.7	54.0	88.6	121.8	0.0	53.4	89.9	NI
NS	4/11/2016 2:04	105.0	0.0	54.0	88.0	100.8	0.0	53.8	88.5	121.8	0.0	53.4	89.8	NI
NS	4/11/2016 2:05	119.0	0.6	53.8	88.6	114.8	1.5	53.7	88.7	117.6	0.7	53.3	89.9	NI
NS	4/11/2016 2:06	106.4	0.0	53.6	88.3	103.6	0.7	53.5	88.7	112.0	0.0	53.2	89.8	NI
NS	4/11/2016 2:07	113.4	0.6	53.6	89.1	105.0	0.7	53.5	89.3	112.0	0.7	53.1	90.1	NI
NS	4/11/2016 2:08	121.8	0.6	53.6	89.4	113.4	0.7	53.5	89.6	112.0	0.7	53.0	90.1	NI
NS	4/11/2016 2:09	112.0	0.6	53.6	89.7	134.5	1.5	53.6	90.1	152.7	0.7	53.1	90.5	NI
NS	4/11/2016 2:10	127.5	1.1	53.7	89.7	127.5	2.2	53.6	89.8	126.1	1.5	53.1	90.5	NI
NS	4/11/2016 2:11	98.0	0.6	53.6	89.7	113.4	0.7	53.5	89.7	119.0	0.7	53.1	90.4	NI
NS	4/11/2016 2:12	98.0	0.0	53.6	89.3	112.0	0.7	53.5	90.2	119.0	0.7	53.1	90.8	NI
NS	4/11/2016 2:13	91.0	0.0	53.6	89.8	98.0	0.7	53.5	90.2	107.8	0.0	53.1	90.6	NI
NS	4/11/2016 2:14	110.6	0.0	53.6	89.7	117.6	0.7	53.4	90.2	112.0	0.7	53.1	90.7	NI
NS	4/11/2016 2:15	109.2	0.0	53.5	89.8	106.4	0.7	53.3	89.9	113.4	0.7	53.0	90.5	NI
NS	4/11/2016 2:16	105.0	0.0	53.3	89.4	103.6	0.0	53.2	89.9	113.4	0.0	52.9	90.5	NI
NS	4/11/2016 2:17	120.4	1.1	53.4	90.5	126.1	1.5	53.3	90.7	140.1	0.7	53.0	90.9	NI
NS	4/11/2016 2:18	123.2	0.0	53.3	90.0	107.8	0.0	53.3	90.6	138.7	0.0	52.9	90.8	NI
NS	4/11/2016 2:19	96.6	0.6	53.4	90.7	71.3	0.7	53.3	90.6	113.4	0.7	52.9	90.9	NI
NS	4/11/2016 2:20	88.1	0.0	53.3	90.4	86.7	0.7	53.2	90.8	113.4	0.7	52.9	91.1	NI
NS	4/11/2016 2:21	113.4	1.1	53.3	90.7	113.4	2.2	53.3	91.4	121.8	1.5	52.9	91.2	NI
NS	4/11/2016 2:22	81.1	0.6	53.3	90.9	69.9	0.7	53.3	91.1	82.5	0.7	52.9	91.2	NI
NS	4/11/2016 2:23	81.1	0.0	53.3	90.5	71.3	0.0	53.2	90.7	83.9	0.0	52.9	91.1	NI
NS	4/11/2016 2:24	81.1	0.0	53.2	90.7	79.7	0.7	53.1	91.2	92.4	0.7	52.9	91.1	NI
NS	4/11/2016 2:25	88.1	0.0	53.1	90.7	100.8	0.7	53.0	91.1	119.0	0.0	52.8	91.1	NI
NS	4/11/2016 2:26	88.1	0.0	53.1	91.3	100.8	0.7	53.1	91.2	119.0	0.7	52.8	91.2	NI
NS	4/11/2016 2:27	88.1	0.0	53.1	91.2	100.8	0.0	53.0	91.3	119.0	0.0	52.8	91.4	NI
NS	4/11/2016 2:28	92.4	0.0	53.0	91.0	116.2	0.7	53.0	91.7	120.4	0.7	52.8	91.4	NI
NS	4/11/2016 2:29	121.8	0.6	53.0	91.3	135.9	0.7	52.9	91.9	120.4	0.7	52.7	91.4	NI
NS	4/11/2016 2:30	120.4	0.0	53.1	91.7	137.3	0.7	53.1	92.3	133.1	0.7	52.8	91.8	NI
NS	4/11/2016 2:31	93.8	0.0	53.2	91.6	86.7	0.7	53.1	91.7	203.9	0.7	52.8	91.8	NI
NS	4/11/2016 2:32	93.8	0.6	53.1	91.6	119.0	1.5	53.3	92.3	185.6	0.7	52.8	92.0	NI
NS	4/11/2016 2:33	141.5	0.6	53.3	91.6	135.9	0.7	53.2	91.9	164.0	0.7	52.8	91.7	NI
NS	4/11/2016 2:34	147.1	0.0	53.2	91.4	133.1	0.7	53.1	91.7	147.1	0.7	52.7	91.6	NI
NS	4/11/2016 2:35	130.3	1.1	53.1	91.9	138.7	1.5	53.0	92.2	124.7	1.5	52.7	91.9	NI
NS	4/11/2016 2:36	138.7	0.0	53.1	92.0	144.3	0.7	53.0	92.4	133.1	0.7	52.6	91.9	NI
NS	4/11/2016 2:37	138.7	0.0	53.0	92.3	144.3	0.0	52.9	92.4	133.1	0.0	52.6	92.1	NI
NS	4/11/2016 2:38	138.7	0.0	53.0	92.2	144.3	0.7	52.9	92.7	133.1	0.7	52.6	92.1	NI
NS	4/11/2016 2:39	135.9	0.0	53.0	92.4	135.9	0.7	52.9	93.1	133.1	0.7	52.6	92.2	NI
NS	4/11/2016 2:40	134.5	0.0	53.0	92.4	134.5	0.7	52.9	93.1	133.1	0.0	52.6	92.3	NI
NS	4/11/2016 2:41	123.2	0.6	53.0	92.6	110.6	1.5	52.9	93.0	117.6	0.7	52.6	92.3	NI
NS	4/11/2016 2:42	130.3	1.7	53.1	92.6	135.9	1.5	53.0	93.2	131.7	1.5	52.5	92.4	NI
NS	4/11/2016 2:43	134.5	0.0	53.0	92.4	135.9	0.0	52.9	92.5	138.7	0.0	52.5	92.3	NI
NS	4/11/2016 2:44	134.5	0.0	52.9	92.2	133.1	0.7	52.8	92.9	138.7	0.0	52.5	92.6	NI
NS	4/11/2016 2:45	131.7	0.6	52.9	92.7	134.5	1.5	53.0	93.6	140.1	0.7	52.5	92.9	NI
NS	4/11/2016 2:46	124.7	1.7	53.2	93.3	126.9	2.2	53.2	93.8	120.4	2.2	52.7	93.2	NI
NS	4/11/2016 2:47	134.5	0.6	53.3	93.0	135.9	1.5	53.2	93.2	126.1	0.7	52.7	92.9	NI
NS	4/11/2016 2:48	112.0	0.6	53.2	93.0	119.0	1.5	53.2	93.3	112.0	0.7	52.8	93.0	NI
NS	4/11/2016 2:49	109.2	0.6	53.4	93.3	126.1	1.5	53.4	93.3	133.1	0.7	52.9	93.0	NI
NS	4/11/2016 2:50	96.6	1.1	53.4	93.0	107.8	1.5	53.4	93.5	107.8	1.5	52.9	93.1	NI
NS	4/11/2016 2:51	119.0	1.1	53.5	93.0	124.7	2.2	53.4	93.2	119.0	1.5	53.0	92.9	NI
NS	4/11/2016 2:52	103.6	2.3	53.6	93.3	96.6	2.2	53.6	93.2	91.0	1.5	53.1	93.2	NI
NS	4/11/2016 2:53	126.1	0.6	53.6	92.9	144.3	2.2	53.6	93.3	138.7	1.5	53.1	93.0	NI
NS	4/11/2016 2:54	138.7	1.1	53.6	92.8	121.8	0.7	53.5	92.9	149.9	0.7	53.1	92.8	NI
NS	4/11/2016 2:55	109.2	0.6	53.5	93.0	107.8	1.5	53.4	93.0	126.1	0.7	53.0	92.7	NI
NS	4/11/2016 2:56	96.6	0.0	53.5	93.1	95.2	1.5	53.4	93.2	109.2	0.7	53.0	92.9	NI
NS	4/11/2016 2:57	82.5	0.6	53.4	93.2	109.2	1.5	53.3	93.3	83.9	0.7	53.0	92.8	NI
NS	4/11/2016 2:58	166.8	0.6	53.4	93.1	149.9	1.5	53.3	93.5	105.0	0.7	52.9	92.9	NI
NS	4/11/2016 2:59	140.1	0.6	53.3	93.3	121.8	1.5	53.3	93.6	151.3	0.7	53.0	93.0	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/11/2016 3:00	131.7	0.6	53.3	93.2	330.2	0.7	53.3	93.8	191.2	0.7	52.9	92.9	NI
NS	4/11/2016 3:01	131.7	0.0	53.3	93.3	326.0	0.7	53.2	93.8	191.2	0.0	52.9	92.9	NI
NS	4/11/2016 3:02	126.1	0.0	53.3	93.3	144.3	0.7	53.2	93.8	191.2	0.7	52.9	93.1	NI
NS	4/11/2016 3:03	116.2	0.0	53.2	93.4	137.3	0.7	53.1	93.8	168.2	0.7	52.8	93.1	NI
NS	4/11/2016 3:04	119.0	0.0	53.1	93.3	137.3	0.0	53.1	93.8	168.2	0.0	52.8	93.1	NI
NS	4/11/2016 3:05	112.0	0.6	53.2	93.8	113.4	1.5	53.2	94.0	105.0	0.7	52.9	93.3	NI
NS	4/11/2016 3:06	128.9	0.6	53.3	93.6	140.1	1.5	53.2	94.0	140.1	0.7	52.9	93.2	NI
NS	4/11/2016 3:07	141.5	0.0	53.3	93.7	128.9	0.7	53.2	94.1	147.1	0.7	52.9	93.2	NI
NS	4/11/2016 3:08	91.0	1.1	53.3	94.2	98.0	2.2	53.3	94.1	110.6	0.7	52.9	93.4	NI
NS	4/11/2016 3:09	83.9	0.0	53.3	93.9	100.8	0.0	53.2	94.1	105.0	0.0	52.9	93.2	NI
NS	4/11/2016 3:10	91.0	0.0	53.3	93.7	121.8	0.7	53.2	94.0	105.0	0.7	52.8	93.2	NI
NS	4/11/2016 3:11	128.9	0.6	53.3	93.9	119.0	0.7	53.1	94.0	105.0	0.0	52.8	93.3	NI
NS	4/11/2016 3:12	113.4	0.0	53.2	94.2	116.2	1.5	53.1	94.0	105.0	0.7	52.8	93.4	NI
NS	4/11/2016 3:13	117.6	1.1	53.2	94.0	119.0	2.2	53.3	94.2	112.0	1.5	52.9	93.6	NI
NS	4/11/2016 3:14	116.2	1.1	53.3	94.1	127.5	0.7	53.2	94.1	127.5	0.7	52.9	93.5	NI
NS	4/11/2016 3:15	105.0	0.0	53.2	93.9	113.4	0.7	53.2	94.2	105.0	0.7	52.8	93.4	NI
NS	4/11/2016 3:16	81.1	0.0	53.1	93.8	105.0	0.0	53.1	93.9	89.6	0.0	52.8	93.4	NI
NS	4/11/2016 3:17	98.0	0.0	53.1	94.4	112.0	1.5	53.2	94.2	98.0	0.7	52.8	93.7	NI
NS	4/11/2016 3:18	92.4	1.1	53.3	94.7	107.8	2.2	53.3	94.5	107.8	1.5	52.9	93.8	NI
NS	4/11/2016 3:19	142.9	1.7	53.3	94.3	133.1	2.2	53.3	94.5	9.5	1.5	52.9	93.7	NI
NS	4/11/2016 3:20	106.4	1.1	53.3	94.2	110.6	1.5	53.2	94.1	88.1	0.7	52.9	93.7	NI
NS	4/11/2016 3:21	133.1	0.6	53.2	94.3	119.0	1.5	53.3	94.5	116.2	0.7	52.9	93.7	NI
NS	4/11/2016 3:22	133.1	0.0	53.2	94.0	123.2	0.0	53.2	94.2	117.6	0.0	52.9	93.5	NI
NS	4/11/2016 3:23	133.1	0.0	53.2	94.5	123.2	0.7	53.1	94.5	117.6	0.7	52.8	93.5	NI
NS	4/11/2016 3:24	133.1	0.0	53.1	94.2	123.2	0.7	53.1	94.5	117.6	0.0	52.8	93.6	NI
NS	4/11/2016 3:25	131.7	0.0	53.1	94.5	123.2	0.7	53.0	94.4	117.6	0.7	52.8	93.7	NI
NS	4/11/2016 3:26	131.7	0.0	53.0	94.4	124.7	0.7	53.0	94.6	117.6	0.0	52.7	93.6	NI
NS	4/11/2016 3:27	133.1	0.0	52.9	94.0	124.7	0.0	52.9	94.5	117.6	0.0	52.7	93.6	NI
NS	4/11/2016 3:28	138.7	0.0	52.9	94.5	130.3	0.0	52.9	94.8	137.3	0.0	52.7	93.9	NI
NS	4/11/2016 3:29	141.5	0.0	52.9	94.2	130.3	0.0	52.8	94.6	137.3	0.0	52.6	93.8	NI
NS	4/11/2016 3:30	141.5	0.0	52.8	94.2	130.3	0.7	52.8	95.1	137.3	0.0	52.6	93.9	NI
NS	4/11/2016 3:31	141.5	0.0	52.7	94.2	128.9	0.0	52.6	94.7	137.3	0.0	52.5	93.7	NI
NS	4/11/2016 3:32	140.1	0.0	52.7	94.7	119.0	0.0	52.6	94.9	137.3	0.0	52.5	93.8	NI
NS	4/11/2016 3:33	140.1	0.0	52.8	94.8	142.9	0.7	52.7	95.2	137.3	0.7	52.5	93.9	NI
NS	4/11/2016 3:34	141.5	0.0	52.7	94.7	148.5	0.7	52.7	95.3	138.7	0.7	52.4	93.6	NI
NS	4/11/2016 3:35	141.5	0.0	52.7	95.0	148.5	0.7	52.6	95.5	138.7	0.0	52.4	93.9	NI
NS	4/11/2016 3:36	141.5	0.0	52.7	95.2	144.3	0.0	52.7	95.4	138.7	0.0	52.4	93.9	NI
NS	4/11/2016 3:37	141.5	0.0	52.6	94.7	144.3	0.7	52.6	95.4	138.7	0.0	52.4	93.9	NI
NS	4/11/2016 3:38	141.5	0.0	52.6	94.8	142.9	0.7	52.6	95.4	138.7	0.0	52.4	93.9	NI
NS	4/11/2016 3:39	82.5	0.0	52.7	95.5	78.3	0.7	52.7	95.9	71.3	0.7	52.4	94.3	NI
NS	4/11/2016 3:40	55.9	0.0	52.6	95.3	78.3	0.0	52.6	95.5	68.5	0.0	52.4	94.1	NI
NS	4/11/2016 3:41	55.9	0.0	52.7	95.6	78.3	0.7	52.6	95.4	68.5	0.7	52.4	94.1	NI
NS	4/11/2016 3:42	55.9	0.0	52.6	95.2	78.3	0.0	52.6	95.5	68.5	0.0	52.3	93.8	NI
NS	4/11/2016 3:43	81.1	0.0	52.6	95.5	117.6	0.7	52.5	95.5	71.3	0.0	52.2	93.9	NI
NS	4/11/2016 3:44	95.2	0.0	52.5	95.1	119.0	0.0	52.4	95.4	71.3	0.0	52.1	93.8	NI
NS	4/11/2016 3:45	95.2	0.0	52.4	94.9	119.0	0.0	52.3	95.2	71.3	0.0	52.1	93.8	NI
NS	4/11/2016 3:46	95.2	0.0	52.3	95.1	119.0	0.0	52.3	95.6	71.3	0.0	52.0	93.9	NI
NS	4/11/2016 3:47	95.2	0.0	52.3	95.1	119.0	0.0	52.2	95.9	71.3	0.0	51.9	93.8	NI
NS	4/11/2016 3:48	95.2	0.0	52.3	95.8	119.0	0.0	52.2	95.6	71.3	0.0	51.9	93.9	NI
NS	4/11/2016 3:49	95.2	0.0	52.2	95.3	119.0	0.0	52.2	95.8	71.3	0.0	51.9	94.1	NI
NS	4/11/2016 3:50	95.2	0.0	52.3	95.8	119.0	0.7	52.2	95.8	71.3	0.0	51.8	94.0	NI
NS	4/11/2016 3:51	95.2	0.0	52.2	95.4	119.0	0.0	52.0	95.7	71.3	0.0	51.7	93.8	NI
NS	4/11/2016 3:52	95.2	0.0	52.2	95.7	119.0	0.0	52.1	95.9	71.3	0.0	51.7	94.2	NI
NS	4/11/2016 3:53	95.2	0.0	52.1	95.6	119.0	0.0	51.9	95.9	71.3	0.0	51.6	94.0	NI
NS	4/11/2016 3:54	95.2	0.0	51.9	95.3	119.0	0.0	51.8	95.6	71.3	0.0	51.5	93.7	NI
NS	4/11/2016 3:55	95.2	0.0	51.9	95.8	119.0	0.7	51.7	95.8	71.3	0.0	51.4	94.0	NI
NS	4/11/2016 3:56	95.2	0.0	51.8	95.5	119.0	0.0	51.7	96.1	71.3	0.0	51.4	94.4	NI
NS	4/11/2016 3:57	95.2	0.0	51.9	96.0	119.0	0.0	51.7	96.3	75.5	0.0	51.4	94.4	NI
NS	4/11/2016 3:58	95.2	0.0	51.9	96.3	119.0	0.0	51.8	96.3	75.5	0.0	51.4	94.3	NI
NS	4/11/2016 3:59	95.2	0.0	51.8	96.0	119.0	0.0	51.6	96.3	75.5	0.0	51.3	94.2	NI
NS	4/11/2016 4:00	95.2	0.0	51.7	95.9	119.0	0.0	51.5	96.3	75.5	0.0	51.2	94.2	NI
NS	4/11/2016 4:01	95.2	0.0	51.6	96.0	119.0	0.0	51.6	96.4	75.5	0.0	51.2	94.4	NI
NS	4/11/2016 4:02	95.2	0.0	51.7	96.3	119.0	0.7	51.7	96.8	75.5	0.7	51.2	94.7	NI
NS	4/11/2016 4:03	95.2	0.0	51.7	96.5	119.0	0.7	51.7	96.8	78.3	0.7	51.3	94.7	NI
NS	4/11/2016 4:04	93.8	0.0	51.8	96.8	117.6	0.7	51.8	96.8	81.1	0.7	51.3	94.7	NI
NS	4/11/2016 4:05	60.1	0.0	51.9	96.5	117.6	0.0	51.8	96.9	81.1	0.0	51.3	94.8	NI
NS	4/11/2016 4:06	60.1	0.0	51.8	96.4	117.6	0.0	51.8	96.8	82.5	0.0	51.3	94.7	NI
NS	4/11/2016 4:07	60.1	0.0	51.8	96.3	117.6	0.7	51.6	96.8	89.6	0.7	51.3	94.7	NI
NS	4/11/2016 4:08	60.1	0.0	51.6	96.1	117.6	0.0	51.6	96.7	89.6	0.0	51.2	94.7	NI
NS	4/11/2016 4:09	61.5	0.0	51.8	96.8	117.6	0.0	51.7	96.9	89.6	0.0	51.2	94.9	NI
NS	4/11/2016 4:10	61.5	0.0	51.9	96.9	116.2	0.7	51.9	97.0	89.6	0.7	51.4	95.2	NI
NS	4/11/2016 4:11	64.3	0.0	52.0	97.0	114.8	0.0	51.9	97.0	89.6	0.0	51.5	95.1	NI
NS	4/11/2016 4:12	64.3	0.0	51.9	96.7	114.8	0.0	51.9	96.8	89.6	0.0	51.5	94.9	NI
NS	4/11/2016 4:13	64.3	0.0	52.0	96.9	114.8	0.0	51.9	96.9	89.6	0.0	51.6	95.3	NI
NS	4/11/2016 4:14	68.5	0.0	52.0	96.7	116.2	0.7	51.9	96.8	89.6	0.0	51.5	95.0	NI
NS	4/11/2016 4:15	74.1	0.0	51.9	96.6	117.6	0.7	51.8	96.8	89.6	0.0	51.5	95.0	NI
NS	4/11/2016 4:16	76.9	0.0	51.9	96.5	117.6	0.7	51.9	96.8	89.6	0.0	51.5	95.0	NI
NS	4/11/2016 4:17	76.9	0.0	51.9	96.8	117.6	0.0	51.9	96.8	89.6	0.0	51.5	95.0	NI
NS	4/11/2016 4:18	76.9	0.0	51.9	96.7	117.6	0.7	52.0	97.1	89.6	0.0	51.5	95.1	NI
NS	4/11/2016 4:19	76.9	0.0	52.1	97.0	117.6	0.0	52.0	97.1	89.6	0.0	51.6	95.1	NI
NS	4/11/2016 4:20	76.9	0.0	52.0	96.8	117.6	0.7	52.0	97.0	89.6	0.0	51.6	95.0	NI
NS	4/11/2016 4:21	76.9	0.0	52.0	96.8	117.6	0.7	52.1	97.2	89.6	0.0	51.6	95.1	NI
NS	4/11/2016 4:22	76.9	0.0	52.1	96.8	117.6	0.7	52.0	97.1	89.6	0.0	51.5	95.0	NI
NS	4/11/2016 4:23	76.9	0.0	52.1	96.9	117.6	0.0	51.9	97.0	89.6	0.0	51.5	95.0	NI
NS	4/11/2016 4:24	76.9	0.0	52.0	96.5	117.6	0.0	51.8	96.8	89.6	0.0	51.5	94.9	NI
NS	4/11/2016 4:25	76.9	0.0	51.9	96.3	117.6	0.0	51.8	96.9	89.6	0.0	51.4	94.8	NI
NS	4/11/2016 4:26	76.9	0.0	51.9	96.6	117.6	0.0	51.8	97.1	89.6	0.0	51.3	94.7	NI
NS	4/11/2016 4:27	79.7	0.0	51.9	96.8	116.2	1.5	51.9	97.2	116.2	0.7	51.3	95.0	NI
NS	4/11/2016 4:28	106.4	0.0	52.1	97.0	120.4	0.7	52.0	97.3	121.8	0.0	51.4	95.2	NI
NS	4/11/2016 4:29	110.6	0.0	52.2	97.0	121.8	0.0	52.0	97.3	121.8	0.0	51.5	95.2	NI
NS	4/11/2016 4:30	110.6	0.0	52.0	96.9	121.8	0.7	51.9	97.1	121.8	0.0	51.4	95.0	NI
NS	4/11/2016 4:31	110.6	0.0	52.0	96.9	127.5	0.7	51.9	97.2	121.8	0.0	51.4	95.2	NI
NS	4/11/2016 4:32	110.6	0.0	51.9	96.7	127.5	0.0	51.7	96.9	121.8	0.0	51.4	95.0	NI
NS	4/11/2016 4:33	110.6	0.0	51.7	96.5	127.5	0.0	51.5	96.9	121.8	0.0	51.2	94.8	NI
NS	4/11/2016 4:34	110.6	0.0	51.8	96.9	127.5	0.7	51.8	97.4	121.8	0.7	51.2	95.1	NI
NS	4/11/2016 4:35	110.6	0.0	52.0	96.9	127.5	0.0	51.8	97.6	121.8	0.0	51.2	95.1	NI
NS	4/11/2016 4:36	110.6	0.0	51.9	96.9	120.4	0.7	51.8	97.7	114.8	0.7	51.2	95.2	NI
NS	4/11/2016 4:37	109.2	0.0	51.9	97.0	109.2	0.0	51.7	97.6	105.0	0.0	51.1	95.1	NI
NS	4/11/2016 4:38	109.2	0.0	51.9	97.3	110.6	0.7	51.6	97.4	106.4	0.0	51.1	95.2	NI
NS	4/11/2016 4:39	110.6	0.0	51.7	96.9	110.6	0.7	51.5	97.4	109.2	0.0	51.1	95.1	NI
NS	4/11/2016 4:40	110.6	0.0	51.8	96.9	110.6	0.0	51.5	97.4	109.2	0.0	51.0	95.0	NI
NS	4/11/2016 4:41	110.6	0.0	51.7	96.8	110.6	0.7	51.5	97.4	109.2	0.0	51.0	95.0	NI
NS	4/11/2016 4:42	114.8	0.0	51.5	96.8	119.0	1.5	51.5	97.4	112.0	0.0	50.9	95.1	NI
NS	4/11/2016 4:43	133.1	0.6	51.6	97.0	131.7	0.7	51.5	97.7	116.2	0.0	51.0	95.2	NI
NS	4/11/2016 4:44	133.1	0.0	51.6	97.2	131.7	0.0	51.5	97.6	116.2	0.0	51.0	95.3	NI
NS	4/11/2016 4:45	133.1	0.0	51.7	97.3	131.7	0.0	51.5	97.5	116.2	0.0	51.0	95.2	NI
NS	4/11/2016 4:46	133.1	0.0	51.9	97.6	131.7	0.7	51.7	97.7	116.2	0.7	51.2	95.6	NI
NS	4/11/2016 4:47	133.1	0.0	51.9	97.4	131.7	0.0	51.6	97.6	116.2	0.0	51.1	95.3	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/11/2016 4:48	133.1	0.0	51.8	97.1	131.7	0.0	51.5	97.6	116.2	0.0	51.1	95.4	NI
NS	4/11/2016 4:49	133.1	0.0	51.6	96.9	131.7	0.0	51.4	97.2	116.2	0.0	51.0	95.3	NI
NS	4/11/2016 4:50	133.1	0.0	51.4	96.6	131.7	0.0	51.2	97.2	116.2	0.0	50.9	95.1	NI
NS	4/11/2016 4:51	133.1	0.0	51.4	96.7	131.7	0.0	51.2	97.2	116.2	0.0	50.8	95.2	NI
NS	4/11/2016 4:52	133.1	0.0	51.3	96.9	131.7	0.0	51.2	97.3	116.2	0.0	50.7	95.3	NI
NS	4/11/2016 4:53	133.1	0.0	51.5	97.4	131.7	0.0	51.3	97.4	116.2	0.0	50.7	95.4	NI
NS	4/11/2016 4:54	133.1	0.0	51.4	97.2	131.7	0.0	51.1	97.2	116.2	0.0	50.5	95.1	NI
NS	4/11/2016 4:55	133.1	0.0	51.2	96.9	131.7	0.0	50.8	97.0	116.2	0.0	50.4	95.1	NI
NS	4/11/2016 4:56	133.1	0.0	51.0	97.0	131.7	0.0	50.7	97.4	116.2	0.0	50.1	94.7	NI
NS	4/11/2016 4:57	133.1	0.0	51.1	97.2	131.7	0.0	50.8	97.6	116.2	0.0	50.0	94.6	NI
NS	4/11/2016 4:58	133.1	0.0	51.0	97.2	131.7	0.0	50.8	98.0	116.2	0.0	49.8	94.8	NI
NS	4/11/2016 4:59	133.1	0.0	51.0	97.1	131.7	0.0	50.6	98.1	116.2	0.0	49.7	94.8	NI
NS	4/11/2016 5:00	133.1	0.0	50.9	97.1	131.7	0.0	50.5	98.1	116.2	0.0	49.5	94.7	NI
NS	4/11/2016 5:01	133.1	0.0	51.0	97.1	131.7	0.0	50.6	98.2	116.2	0.0	49.3	94.8	NI
NS	4/11/2016 5:02	133.1	0.0	50.9	97.3	131.7	0.0	50.7	98.5	116.2	0.0	49.3	95.2	NI
NS	4/11/2016 5:03	133.1	0.0	51.0	97.3	131.7	0.0	50.8	98.6	116.2	0.0	49.2	95.2	NI
NS	4/11/2016 5:04	133.1	0.0	50.9	97.2	131.7	0.0	50.8	98.5	116.2	0.0	49.1	94.9	NI
NS	4/11/2016 5:05	133.1	0.0	50.9	97.1	131.7	0.0	50.6	98.4	116.2	0.0	48.9	94.8	NI
NS	4/11/2016 5:06	133.1	0.0	50.8	97.1	131.7	0.7	50.4	98.4	116.2	0.0	48.8	95.1	NI
NS	4/11/2016 5:07	133.1	0.0	50.8	97.4	131.7	0.7	50.2	98.4	116.2	0.0	48.6	95.1	NI
NS	4/11/2016 5:08	133.1	0.0	50.7	97.6	131.7	0.7	49.8	98.1	116.2	0.7	48.5	95.0	NI
NS	4/11/2016 5:09	133.1	0.0	50.6	97.6	131.7	0.0	49.9	98.4	116.2	0.0	48.3	95.2	NI
NS	4/11/2016 5:10	133.1	0.0	50.6	97.8	131.7	0.7	49.9	98.6	116.2	0.0	48.2	95.3	NI
NS	4/11/2016 5:11	133.1	0.0	50.4	97.8	131.7	0.0	49.7	98.6	116.2	0.0	48.1	95.4	NI
NS	4/11/2016 5:12	133.1	0.0	50.2	97.8	131.7	0.0	49.6	98.6	116.2	0.0	48.0	95.5	NI
NS	4/11/2016 5:13	133.1	0.0	50.1	97.8	131.7	0.0	49.6	98.5	116.2	0.0	48.0	95.5	NI
NS	4/11/2016 5:14	133.1	0.0	50.0	97.9	131.7	0.0	49.5	98.4	116.2	0.0	48.0	95.5	NI
NS	4/11/2016 5:15	133.1	0.0	50.0	97.8	131.7	0.0	49.6	98.5	116.2	0.0	48.0	95.8	NI
NS	4/11/2016 5:16	133.1	0.0	49.9	97.9	131.7	0.0	49.6	98.5	116.2	0.0	48.0	95.8	NI
NS	4/11/2016 5:17	133.1	0.0	49.9	97.8	131.7	0.0	49.5	98.5	116.2	0.0	48.0	95.8	NI
NS	4/11/2016 5:18	133.1	0.0	49.8	97.7	131.7	0.0	49.4	98.6	116.2	0.0	47.9	95.5	NI
NS	4/11/2016 5:19	133.1	0.0	49.7	97.7	131.7	0.0	49.4	98.6	116.2	0.0	47.8	95.7	NI
NS	4/11/2016 5:20	133.1	0.0	49.8	97.8	131.7	0.0	49.5	98.8	116.2	0.0	47.7	95.7	NI
NS	4/11/2016 5:21	133.1	0.0	49.8	97.9	131.7	0.0	49.4	98.7	116.2	0.0	47.6	95.7	NI
NS	4/11/2016 5:22	133.1	0.0	49.2	97.5	131.7	0.0	48.7	98.6	116.2	0.0	47.3	94.9	NI
NS	4/11/2016 5:23	133.1	0.0	48.9	97.2	131.7	0.0	48.2	98.5	116.2	0.0	47.1	95.0	NI
NS	4/11/2016 5:24	133.1	0.0	48.9	97.6	131.7	0.0	48.1	98.5	116.2	0.0	46.9	95.2	NI
NS	4/11/2016 5:25	133.1	0.0	48.7	97.7	131.7	0.0	48.1	98.5	116.2	0.0	46.9	95.8	NI
NS	4/11/2016 5:26	133.1	0.0	48.7	97.8	131.7	0.0	48.2	98.5	116.2	0.0	46.9	95.9	NI
NS	4/11/2016 5:27	133.1	0.0	48.8	97.7	131.7	0.0	48.3	98.7	116.2	0.0	46.9	95.9	NI
NS	4/11/2016 5:28	133.1	0.0	48.8	97.8	131.7	0.0	48.3	98.7	116.2	0.0	46.9	95.8	NI
NS	4/11/2016 5:29	133.1	0.0	48.9	98.0	131.7	0.0	48.5	98.6	116.2	0.0	46.8	95.8	NI
NS	4/11/2016 5:30	133.1	0.0	48.9	98.1	131.7	0.0	48.5	98.7	116.2	0.0	46.8	95.9	NI
NS	4/11/2016 5:31	133.1	0.0	48.8	98.1	131.7	0.0	48.5	98.6	116.2	0.0	46.8	95.9	NI
NS	4/11/2016 5:32	133.1	0.0	48.7	98.0	131.7	0.0	48.5	98.7	116.2	0.0	46.7	96.0	NI
NS	4/11/2016 5:33	133.1	0.0	48.7	97.8	131.7	0.0	48.6	98.6	116.2	0.0	46.8	96.3	NI
NS	4/11/2016 5:34	133.1	0.0	48.7	97.8	131.7	0.0	48.5	98.7	116.2	0.0	46.8	96.2	NI
NS	4/11/2016 5:35	133.1	0.0	48.7	97.8	131.7	0.0	48.5	98.9	116.2	0.0	46.7	96.0	NI
NS	4/11/2016 5:36	133.1	0.0	48.6	97.7	131.7	0.0	48.2	98.7	116.2	0.0	46.6	96.0	NI
NS	4/11/2016 5:37	133.1	0.0	48.7	97.9	131.7	0.0	48.4	98.9	116.2	0.0	46.6	96.0	NI
NS	4/11/2016 5:38	133.1	0.0	48.6	98.2	131.7	0.0	48.4	99.0	116.2	0.0	46.5	96.1	NI
NS	4/11/2016 5:39	133.1	0.0	48.6	98.2	131.7	0.0	48.4	99.1	116.2	0.0	46.5	96.2	NI
NS	4/11/2016 5:40	133.1	0.0	48.5	98.2	131.7	0.0	48.4	99.1	116.2	0.0	46.5	96.2	NI
NS	4/11/2016 5:41	133.1	0.0	48.4	98.2	131.7	0.0	48.4	99.1	116.2	0.0	46.5	96.2	NI
NS	4/11/2016 5:42	133.1	0.0	48.4	98.3	131.7	0.0	48.3	99.0	116.2	0.0	46.5	96.2	NI
NS	4/11/2016 5:43	133.1	0.0	48.4	98.5	131.7	0.0	48.2	98.9	116.2	0.0	46.5	96.3	NI
NS	4/11/2016 5:44	133.1	0.0	48.5	98.6	131.7	0.0	48.0	98.9	116.2	0.0	46.4	96.3	NI
NS	4/11/2016 5:45	133.1	0.0	48.5	98.8	131.7	0.0	48.0	99.0	116.2	0.0	46.4	96.2	NI
NS	4/11/2016 5:46	133.1	0.0	48.6	98.9	131.7	0.0	48.0	99.1	116.2	0.0	46.3	96.2	NI
NS	4/11/2016 5:47	133.1	0.0	48.6	98.9	131.7	0.0	48.0	99.0	116.2	0.0	46.2	96.1	NI
NS	4/11/2016 5:48	133.1	0.0	48.5	98.8	131.7	0.0	47.8	99.0	116.2	0.0	46.2	96.0	NI
NS	4/11/2016 5:49	133.1	0.0	48.3	98.8	131.7	0.0	47.7	99.0	116.2	0.0	46.1	96.2	NI
NS	4/11/2016 5:50	133.1	0.0	48.3	98.7	131.7	0.0	47.8	99.1	116.2	0.0	46.1	96.1	NI
NS	4/11/2016 5:51	133.1	0.0	48.3	98.6	131.7	0.0	47.9	99.2	116.2	0.0	45.9	96.0	NI
NS	4/11/2016 5:52	133.1	0.0	48.4	98.8	131.7	0.0	48.0	99.3	116.2	0.0	45.8	96.0	NI
NS	4/11/2016 5:53	133.1	0.0	48.4	98.8	131.7	0.0	47.9	99.3	116.2	0.0	45.8	96.0	NI
NS	4/11/2016 5:54	133.1	0.0	48.3	98.8	131.7	0.0	47.9	99.2	116.2	0.0	45.7	96.1	NI
NS	4/11/2016 5:55	133.1	0.0	48.2	98.9	131.7	0.0	47.9	99.2	116.2	0.0	45.7	96.2	NI
NS	4/11/2016 5:56	133.1	0.0	48.1	98.9	131.7	0.0	47.8	99.1	116.2	0.0	45.7	96.2	NI
NS	4/11/2016 5:57	133.1	0.0	48.0	99.0	131.7	0.0	47.8	99.0	116.2	0.0	45.7	96.2	NI
NS	4/11/2016 5:58	133.1	0.0	48.0	99.0	131.7	0.0	47.8	99.0	116.2	0.0	45.7	96.3	NI
NS	4/11/2016 5:59	133.1	0.0	48.0	99.0	131.7	0.0	47.8	99.0	116.2	0.0	45.7	96.2	NI
NS	4/11/2016 6:00	133.1	0.0	48.0	99.0	131.7	0.0	47.8	99.1	116.2	0.0	45.8	96.5	NI
NS	4/11/2016 6:01	133.1	0.0	48.0	99.1	131.7	0.7	47.9	99.2	116.2	0.0	45.9	96.6	NI
NS	4/11/2016 6:02	133.1	0.0	48.0	99.2	131.7	0.7	47.8	99.2	116.2	0.0	45.9	96.4	NI
NS	4/11/2016 6:03	133.1	0.0	48.0	99.3	131.7	0.7	47.8	99.2	116.2	0.0	45.8	96.4	NI
NS	4/11/2016 6:04	133.1	0.0	48.0	99.3	131.7	0.7	47.9	99.3	116.2	0.0	45.9	96.5	NI
NS	4/11/2016 6:05	133.1	0.0	48.0	99.2	131.7	0.0	47.9	99.3	116.2	0.0	45.9	96.6	NI
NS	4/11/2016 6:06	133.1	0.0	48.0	99.3	131.7	0.0	47.9	99.3	116.2	0.0	45.9	96.6	NI
NS	4/11/2016 6:07	133.1	0.0	48.0	99.3	131.7	0.0	47.6	99.2	116.2	0.0	45.8	96.4	NI
NS	4/11/2016 6:08	133.1	0.0	47.8	99.1	131.7	0.0	47.6	99.2	116.2	0.0	45.7	96.4	NI
NS	4/11/2016 6:09	133.1	0.0	47.8	99.1	131.7	0.0	47.6	99.3	116.2	0.0	45.6	96.3	NI
NS	4/11/2016 6:10	133.1	0.0	47.7	99.0	131.7	0.0	47.6	99.4	116.2	0.0	45.6	96.3	NI
NS	4/11/2016 6:11	133.1	0.0	47.5	98.9	131.7	0.0	47.5	99.4	116.2	0.0	45.8	96.7	NI
NS	4/11/2016 6:12	133.1	0.0	47.7	99.0	131.7	0.0	47.6	99.5	116.2	0.0	45.8	96.8	NI
NS	4/11/2016 6:13	133.1	0.0	47.8	99.1	131.7	0.0	47.7	99.4	116.2	0.0	45.8	96.6	NI
NS	4/11/2016 6:14	133.1	0.0	47.8	99.1	131.7	0.0	47.7	99.4	116.2	0.0	45.9	96.9	NI
NS	4/11/2016 6:15	133.1	0.0	47.9	99.1	131.7	0.0	47.7	99.5	116.2	0.0	45.9	96.9	NI
NS	4/11/2016 6:16	133.1	0.0	47.7	99.0	131.7	0.7	47.5	99.4	116.2	0.0	45.7	96.6	NI
NS	4/11/2016 6:17	133.1	0.0	47.8	99.1	131.7	0.0	47.5	99.5	116.2	0.0	45.7	96.7	NI
NS	4/11/2016 6:18	133.1	0.0	47.9	99.2	131.7	0.0	47.5	99.5	116.2	0.0	45.6	96.5	NI
NS	4/11/2016 6:19	133.1	0.0	47.7	99.2	131.7	0.0	47.4	99.4	116.2	0.0	45.5	96.5	NI
NS	4/11/2016 6:20	133.1	0.0	47.6	99.1	131.7	0.0	47.2	99.5	116.2	0.0	45.4	96.1	NI
NS	4/11/2016 6:21	133.1	0.0	47.3	99.0	131.7	0.0	46.8	99.3	116.2	0.0	45.3	96.3	NI
NS	4/11/2016 6:22	133.1	0.0	47.1	98.8	131.7	0.0	46.6	99.3	116.2	0.0	45.1	96.3	NI
NS	4/11/2016 6:23	133.1	0.0	46.9	98.8	131.7	0.0	46.4	99.2	116.2	0.0	44.9	96.3	NI
NS	4/11/2016 6:24	133.1	0.0	46.8	98.8	131.7	0.0	46.4	99.1	116.2	0.0	44.9	96.2	NI
NS	4/11/2016 6:25	133.1	0.0	46.8	98.8	131.7	0.0	46.5	99.2	116.2	0.0	44.9	96.4	NI
NS	4/11/2016 6:26	133.1	0.0	46.8	98.8	131.7	0.0	46.5	99.2	116.2	0.0	44.8	96.2	NI
NS	4/11/2016 6:27	133.1	0.0	46.7	98.8	131.7	0.0	46.5	99.2	116.2	0.0	44.7	96.2	NI
NS	4/11/2016 6:28	133.1	0.0	46.7	98.8	131.7	0.0	46.4	99.2	116.2	0.0	44.7	96.2	NI
NS	4/11/2016 6:29	133.1	0.0	46.6	98.7	131.7	0.0	46.4	99.2	116.2	0.0	44.5	96.2	NI
NS	4/11/2016 6:30	133.1	0.0	46.6	98.7	131.7	0.0	46.3	99.3	116.2	0.0	44.4	96.2	NI
NS	4/11/2016 6:31	133.1	0.0	46.6	98.7	131.7	0.0	46.2	99.2	116.2	0.0	44.4	96.4	NI
NS	4/11/2016 6:32	133.1	0.0	46.6	98.7	131.7	0.0	46.2	99.3	116.2	0.0	44.2	96.1	NI
NS	4/11/2016 6:33	133.1	0.0	46.7	99.0	131.7	0.0	46.2	99.2	116.2	0.0	44.2	96.4	NI
NS	4/11/2016 6:34	133.1	0.0	46.8	99.1	131.7	0.0	46.2	99.3	116.2	0.0	44.1	96.3	NI
NS	4/11/2016 6:35	133.1	0.0	46.7	99.0	131.7	0.0	46.2	99.3	116.2	0.0	44.1	96.4	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/11/2016 6:36	133.1	0.0	46.7	99.1	131.7	0.0	46.3	99.2	116.2	0.0	44.1	96.3	NI
NS	4/11/2016 6:37	133.1	0.0	46.7	99.0	131.7	0.0	46.2	99.2	116.2	0.0	44.0	96.3	NI
NS	4/11/2016 6:38	133.1	0.0	46.6	98.8	131.7	0.0	46.1	99.2	116.2	0.0	44.0	96.5	NI
NS	4/11/2016 6:39	133.1	0.0	46.5	98.8	131.7	0.0	46.2	99.2	116.2	0.0	44.1	96.6	NI
NS	4/11/2016 6:40	133.1	0.0	46.5	98.7	131.7	0.0	46.2	99.1	116.2	0.0	44.0	96.4	NI
NS	4/11/2016 6:41	133.1	0.0	46.4	98.8	131.7	0.0	46.2	99.1	116.2	0.0	44.0	96.4	NI
NS	4/11/2016 6:42	133.1	0.0	46.4	98.7	131.7	0.0	46.1	99.1	116.2	0.0	44.0	96.3	NI
NS	4/11/2016 6:43	133.1	0.0	46.3	98.7	131.7	0.0	46.1	99.1	116.2	0.0	43.9	96.4	NI
NS	4/11/2016 6:44	133.1	0.0	46.3	98.8	131.7	0.0	46.0	99.1	116.2	0.0	43.8	96.4	NI
NS	4/11/2016 6:45	133.1	0.0	46.2	98.7	131.7	0.0	45.9	99.2	116.2	0.0	43.8	96.5	NI
NS	4/11/2016 6:46	133.1	0.0	46.2	98.8	131.7	0.7	46.0	99.2	116.2	0.0	44.0	97.0	NI
NS	4/11/2016 6:47	133.1	0.0	46.2	99.0	131.7	0.0	45.8	99.1	116.2	0.0	44.0	96.8	NI
NS	4/11/2016 6:48	133.1	0.0	45.8	98.9	131.7	0.0	45.4	99.2	116.2	0.0	44.1	97.0	NI
NS	4/11/2016 6:49	133.1	0.0	45.8	98.9	131.7	0.0	45.4	99.0	116.2	0.0	44.3	97.3	NI
NS	4/11/2016 6:50	133.1	0.0	45.8	99.1	131.7	0.0	45.4	99.3	116.2	0.0	44.3	97.1	NI
NS	4/11/2016 6:51	133.1	0.0	45.9	99.3	131.7	0.0	45.5	99.3	116.2	0.0	44.2	97.1	NI
NS	4/11/2016 6:52	133.1	0.0	45.7	99.3	131.7	0.0	45.4	99.3	116.2	0.0	44.1	96.9	NI
NS	4/11/2016 6:53	133.1	0.0	45.6	99.0	131.7	0.0	45.5	99.3	116.2	0.0	44.3	97.2	NI
NS	4/11/2016 6:54	133.1	0.0	45.7	99.2	131.7	0.0	45.4	99.4	116.2	0.0	44.3	97.2	NI
NS	4/11/2016 6:55	133.1	0.0	45.5	99.1	131.7	0.0	45.3	99.3	116.2	0.0	44.4	97.1	NI
NS	4/11/2016 6:56	133.1	0.0	45.6	99.0	131.7	0.0	45.4	99.5	116.2	0.0	44.3	97.1	NI
NS	4/11/2016 6:57	133.1	0.0	46.1	99.2	131.7	0.0	45.8	99.6	116.2	0.0	44.5	97.6	NI
NS	4/11/2016 6:58	133.1	0.0	46.3	99.5	131.7	0.7	45.8	99.5	116.2	0.0	44.4	97.3	NI
NS	4/11/2016 6:59	133.1	0.0	46.3	99.3	131.7	0.0	45.9	99.5	116.2	0.0	44.6	97.6	NI
NS	4/11/2016 7:00	133.1	0.0	46.2	99.4	131.7	0.0	45.9	99.5	116.2	0.0	44.5	97.3	NI
NS	4/11/2016 7:01	133.1	0.0	46.2	99.3	131.7	0.0	46.1	99.6	116.2	0.0	44.8	97.7	NI
NS	4/11/2016 7:02	133.1	0.0	46.6	99.4	131.7	0.0	46.1	99.6	116.2	0.0	44.7	97.6	NI
NS	4/11/2016 7:03	133.1	0.0	46.3	99.3	131.7	0.0	45.9	99.6	116.2	0.0	44.6	97.3	NI
NS	4/11/2016 7:04	133.1	0.0	46.5	99.3	131.7	0.0	46.2	99.7	116.2	0.0	44.6	97.3	NI
NS	4/11/2016 7:05	133.1	0.0	46.4	99.1	131.7	0.0	46.0	99.6	116.2	0.0	44.5	97.2	NI
NS	4/11/2016 7:06	133.1	0.0	46.2	99.0	131.7	0.0	46.3	99.7	116.2	0.0	44.6	97.3	NI
NS	4/11/2016 7:07	133.1	0.0	46.4	99.2	131.7	0.0	46.3	99.7	116.2	0.0	44.7	97.5	NI
NS	4/11/2016 7:08	133.1	0.0	46.2	99.0	131.7	0.0	45.9	99.6	116.2	0.0	44.6	97.2	NI
NS	4/11/2016 7:09	133.1	0.0	45.9	98.8	131.7	0.0	45.8	99.6	116.2	0.0	44.6	97.2	NI
NS	4/11/2016 7:10	133.1	0.0	45.9	98.9	131.7	0.0	45.7	99.6	116.2	0.0	44.4	97.1	NI
NS	4/11/2016 7:11	133.1	0.0	45.9	99.0	131.7	0.0	45.7	99.6	116.2	0.0	44.4	97.1	NI
NS	4/11/2016 7:12	133.1	0.0	45.9	99.1	131.7	0.0	45.8	99.6	116.2	0.0	44.4	97.1	NI
NS	4/11/2016 7:13	133.1	0.0	46.0	99.1	131.7	0.0	45.8	99.6	116.2	0.0	44.4	97.1	NI
NS	4/11/2016 7:14	133.1	0.0	46.0	99.1	131.7	0.0	45.9	99.6	116.2	0.0	44.4	97.1	NI
NS	4/11/2016 7:15	133.1	0.0	46.1	99.1	131.7	0.0	45.8	99.6	116.2	0.0	44.3	97.1	NI
NS	4/11/2016 7:16	133.1	0.0	46.1	99.2	131.7	0.0	45.9	99.6	116.2	0.0	44.3	97.1	NI
NS	4/11/2016 7:17	133.1	0.0	46.2	99.2	131.7	0.0	45.9	99.7	116.2	0.0	44.2	97.1	NI
NS	4/11/2016 7:18	133.1	0.0	46.3	99.3	131.7	0.0	46.1	99.7	116.2	0.0	44.2	97.1	NI
NS	4/11/2016 7:19	133.1	0.0	46.3	99.3	131.7	0.0	46.1	99.8	116.2	0.0	44.2	97.1	NI
NS	4/11/2016 7:20	133.1	0.0	46.4	99.3	131.7	0.7	46.2	99.8	116.2	0.0	44.3	97.3	NI
NS	4/11/2016 7:21	133.1	0.0	46.5	99.5	131.7	0.0	46.3	99.9	116.2	0.0	44.4	97.3	NI
NS	4/11/2016 7:22	133.1	0.0	46.5	99.4	131.7	0.0	46.2	99.8	116.2	0.0	44.4	97.3	NI
NS	4/11/2016 7:23	133.1	0.0	46.5	99.5	131.7	0.0	46.3	99.8	116.2	0.0	44.4	97.2	NI
NS	4/11/2016 7:24	133.1	0.0	46.5	99.6	131.7	0.0	46.3	99.7	116.2	0.0	44.4	97.2	NI
NS	4/11/2016 7:25	133.1	0.0	46.4	99.5	131.7	0.0	46.2	99.7	116.2	0.0	44.5	97.3	NI
NS	4/11/2016 7:26	133.1	0.0	46.5	99.7	131.7	0.0	46.2	99.7	116.2	0.0	44.5	97.3	NI
NS	4/11/2016 7:27	133.1	0.0	46.5	99.7	131.7	0.0	46.2	99.6	116.2	0.0	44.6	97.3	NI
NS	4/11/2016 7:28	133.1	0.0	46.4	99.6	131.7	0.0	46.0	99.6	116.2	0.0	44.5	97.2	NI
NS	4/11/2016 7:29	133.1	0.0	46.4	99.5	131.7	0.0	46.0	99.5	116.2	0.0	44.6	97.2	NI
NS	4/11/2016 7:30	133.1	0.0	46.3	99.5	131.7	0.0	46.0	99.5	116.2	0.0	44.7	97.2	NI
NS	4/11/2016 7:31	133.1	0.0	46.3	99.5	131.7	0.0	46.0	99.4	116.2	0.0	44.7	97.3	NI
NS	4/11/2016 7:32	133.1	0.0	46.3	99.3	131.7	0.0	46.1	99.5	116.2	0.0	44.8	97.5	NI
NS	4/11/2016 7:33	133.1	0.0	46.4	99.4	131.7	0.7	46.2	99.6	116.2	0.0	44.9	97.4	NI
NS	4/11/2016 7:34	133.1	0.0	46.4	99.5	131.7	0.0	46.2	99.6	116.2	0.0	44.9	97.4	NI
NS	4/11/2016 7:35	133.1	0.0	46.4	99.4	131.7	0.0	46.3	99.6	116.2	0.0	44.9	97.4	NI
NS	4/11/2016 7:36	133.1	0.0	46.5	99.5	131.7	0.0	46.3	99.7	116.2	0.0	45.0	97.5	NI
NS	4/11/2016 7:37	133.1	0.0	46.6	99.5	131.7	0.0	46.5	99.7	116.2	0.0	45.1	97.5	NI
NS	4/11/2016 7:38	133.1	0.0	46.7	99.5	131.7	0.0	46.6	99.8	116.2	0.0	45.2	97.7	NI
NS	4/11/2016 7:39	133.1	0.0	47.0	99.5	131.7	0.0	46.8	99.7	116.2	0.0	45.3	97.7	NI
NS	4/11/2016 7:40	133.1	0.0	47.3	99.6	131.7	0.7	46.8	99.8	116.2	0.7	45.4	97.6	NI
NS	4/11/2016 7:41	133.1	0.0	47.1	99.3	131.7	0.0	46.8	99.7	116.2	0.0	45.4	97.5	NI
NS	4/11/2016 7:42	133.1	0.0	47.1	99.4	131.7	0.0	46.8	99.6	116.2	0.0	45.4	97.5	NI
NS	4/11/2016 7:43	133.1	0.0	46.9	99.3	131.7	0.0	46.7	99.5	116.2	0.0	45.4	97.4	NI
NS	4/11/2016 7:44	133.1	0.0	47.0	99.3	131.7	0.0	47.1	99.8	116.2	0.0	45.8	98.0	NI
NS	4/11/2016 7:45	131.7	0.0	47.5	99.5	131.7	0.7	47.2	99.8	116.2	0.0	45.9	97.8	NI
NS	4/11/2016 7:46	131.7	0.0	47.2	99.5	131.7	0.0	47.2	99.8	116.2	0.0	46.0	97.8	NI
NS	4/11/2016 7:47	131.7	0.0	47.7	99.6	131.7	0.0	47.6	99.9	116.2	0.0	46.1	97.8	NI
NS	4/11/2016 7:48	131.7	0.0	48.0	99.7	131.7	0.0	47.7	99.9	116.2	0.0	46.3	97.8	NI
NS	4/11/2016 7:49	131.7	0.0	48.1	99.8	131.7	0.0	47.9	99.9	116.2	0.0	46.3	97.8	NI
NS	4/11/2016 7:50	131.7	0.0	48.0	99.7	131.7	0.7	47.7	99.7	116.2	0.7	46.4	97.8	NI
NS	4/11/2016 7:51	131.7	0.0	48.0	99.5	131.7	0.0	47.9	99.8	116.2	0.0	46.6	97.8	NI
NS	4/11/2016 7:52	131.7	0.0	48.6	99.8	131.7	0.7	48.0	99.8	116.2	0.0	46.8	97.9	NI
NS	4/11/2016 7:53	131.7	0.0	48.5	99.8	131.7	0.0	48.0	99.9	116.2	0.0	46.9	98.0	NI
NS	4/11/2016 7:54	131.7	0.0	48.8	99.8	131.7	0.0	48.4	99.9	116.2	0.0	47.1	98.0	NI
NS	4/11/2016 7:55	131.7	0.0	48.9	99.7	131.7	0.0	48.7	99.9	116.2	0.0	47.3	97.9	NI
NS	4/11/2016 7:56	131.7	0.0	48.9	99.6	131.7	0.7	48.6	99.8	116.2	0.7	47.3	98.0	NI
NS	4/11/2016 7:57	131.7	0.0	48.8	99.7	131.7	0.0	48.6	99.8	116.2	0.0	47.5	98.0	NI
NS	4/11/2016 7:58	131.7	0.0	49.0	99.6	131.7	0.0	48.9	99.9	116.2	0.0	47.6	98.0	NI
NS	4/11/2016 7:59	131.7	0.0	49.3	99.6	131.7	0.0	49.1	99.9	116.2	0.0	47.9	98.0	NI
NS	4/11/2016 8:00	116.2	0.0	49.2	99.4	81.1	1.5	49.3	100.0	95.2	0.7	48.2	98.2	NI
NS	4/11/2016 8:01	48.8	1.1	49.7	99.7	99.4	1.5	49.7	100.0	83.9	0.7	48.7	98.3	NI
NS	4/11/2016 8:02	75.5	0.0	50.1	99.9	112.0	0.7	50.0	100.0	88.1	0.7	49.0	98.2	NI
NS	4/11/2016 8:03	75.5	0.0	50.2	99.9	112.0	0.0	50.0	100.0	88.1	0.0	49.1	98.0	NI
NS	4/11/2016 8:04	75.5	0.0	49.9	99.8	112.0	0.0	49.6	99.7	88.1	0.0	49.1	98.0	NI
NS	4/11/2016 8:05	75.5	0.0	49.6	99.6	112.0	0.0	49.5	99.6	88.1	0.0	49.1	97.8	NI
NS	4/11/2016 8:06	75.5	0.0	49.5	99.5	112.0	0.0	49.6	99.6	88.1	0.0	49.1	97.8	NI
NS	4/11/2016 8:07	75.5	0.0	49.8	99.6	112.0	0.0	49.7	99.8	88.1	0.0	49.2	97.9	NI
NS	4/11/2016 8:08	75.5	0.0	49.8	99.5	112.0	0.0	49.7	99.7	88.1	0.0	49.2	97.8	NI
NS	4/11/2016 8:09	75.5	0.0	50.0	99.6	112.0	0.0	50.0	99.8	88.1	0.0	49.2	98.1	NI
NS	4/11/2016 8:10	75.5	0.0	50.4	99.6	112.0	0.0	50.1	99.7	88.1	0.0	49.3	97.9	NI
NS	4/11/2016 8:11	75.5	0.0	50.3	99.5	112.0	0.0	50.1	99.7	88.1	0.0	49.3	97.9	NI
NS	4/11/2016 8:12	75.5	0.0	50.4	99.4	112.0	0.0	50.3	99.7	88.1	0.0	49.4	98.0	NI
NS	4/11/2016 8:13	75.5	0.0	50.8	99.6	95.2	0.7	50.7	99.8	86.7	0.7	49.8	98.1	NI
NS	4/11/2016 8:14	75.5	0.6	51.1	99.7	81.1	1.5	51.1	99.9	91.0	0.7	50.3	98.2	NI
NS	4/11/2016 8:15	39.0	1.1	51.3	99.8	40.4	1.5	51.3	99.9	53.1	1.5	50.6	98.2	NI
NS	4/11/2016 8:16	30.6	0.0	51.4	99.6	55.9	0.7	51.3	99.8	47.4	0.7	50.8	98.1	NI
NS	4/11/2016 8:17	112.0	0.6	51.5	99.5	112.0	1.5	51.5	99.8	48.8	0.7	51.0	98.1	NI
NS	4/11/2016 8:18	92.4	0.0	51.9	99.4	86.1	0.7	51.6	99.8	60.1	0.7	51.1	98.0	NI
NS	4/11/2016 8:19	92.4	0.0	51.9	99.0	91.0	0.0	51.7	99.7	61.5	0.0	51.1	97.9	NI
NS	4/11/2016 8:20	92.4	0.0	52.3	98.9	91.0	0.7	52.1	99.6	61.5	0.0	51.2	97.9	NI
NS	4/11/2016 8:21	92.4	0.0	52.6	98.6	91.0	0.7	52.3	99.6	61.5	0.0	51.4	98.0	NI
NS	4/11/2016 8:22	92.4	0.0	52.9	98.4	91.0	0.0	52.8	99.4	55.9	0.0	51.5	98.0	NI
NS	4/11/2016 8:23	92.4	0.0	53.1	98.2	98.0	0.0	53.1	99.3	55.9	0.0	51.9	98.1	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/11/2016 8:24	112.0	0.0	53.3	97.8	110.6	1.5	53.2	98.9	86.7	0.7	52.2	98.1	NI
NS	4/11/2016 8:25	117.6	0.0	53.5	97.4	96.6	0.0	53.4	98.6	86.7	0.0	52.4	98.0	NI
NS	4/11/2016 8:26	117.6	0.0	53.9	97.2	96.6	0.0	53.5	98.3	86.7	0.0	52.7	98.0	NI
NS	4/11/2016 8:27	117.6	0.0	54.0	96.5	96.6	0.0	53.8	98.1	86.7	0.0	52.9	97.9	NI
NS	4/11/2016 8:28	117.6	0.0	54.2	96.5	96.6	0.0	54.2	98.0	86.7	0.0	53.1	98.0	NI
NS	4/11/2016 8:29	117.6	0.0	54.6	96.4	96.6	0.0	54.5	96.0	86.7	0.0	53.6	98.1	NI
NS	4/11/2016 8:30	103.6	0.0	54.6	95.3	92.4	1.5	54.3	96.6	86.7	0.7	53.8	97.9	NI
NS	4/11/2016 8:31	48.8	0.0	54.4	95.3	86.7	0.7	54.4	96.7	91.0	0.7	53.9	97.9	NI
NS	4/11/2016 8:32	50.2	0.6	54.3	95.0	71.3	0.7	54.6	96.5	72.7	0.7	53.9	97.9	NI
NS	4/11/2016 8:33	88.1	0.0	54.5	95.0	128.9	1.5	54.8	96.2	109.2	0.7	54.0	97.8	NI
NS	4/11/2016 8:34	74.1	0.0	54.6	94.9	50.2	0.7	54.8	95.8	83.9	0.7	54.0	97.6	NI
NS	4/11/2016 8:35	65.7	0.6	54.6	94.5	85.3	1.5	54.9	95.5	88.1	1.5	54.0	97.6	NI
NS	4/11/2016 8:36	86.7	1.7	54.7	94.5	107.8	1.5	55.0	95.6	105.0	1.5	54.0	97.5	NI
NS	4/11/2016 8:37	98.0	0.0	55.0	94.6	88.1	0.7	55.2	95.5	98.0	0.7	54.1	97.5	NI
NS	4/11/2016 8:38	82.5	0.0	55.3	94.9	69.9	0.0	55.6	95.7	86.7	0.0	54.3	97.6	NI
NS	4/11/2016 8:39	82.5	0.0	55.6	94.9	99.4	1.5	55.8	95.7	99.4	0.7	54.7	97.7	NI
NS	4/11/2016 8:40	119.0	0.6	55.8	94.1	130.3	0.7	55.9	94.5	128.9	0.7	54.7	97.5	NI
NS	4/11/2016 8:41	36.2	1.1	55.7	93.8	61.5	1.5	55.9	94.4	128.9	0.7	54.7	97.2	NI
NS	4/11/2016 8:42	25.0	0.0	55.9	93.9	88.1	1.5	56.0	94.7	128.9	0.7	55.0	97.5	NI
NS	4/11/2016 8:43	27.8	0.0	56.0	93.4	91.0	1.5	56.2	93.9	121.8	0.7	55.0	97.0	NI
NS	4/11/2016 8:44	81.1	0.6	56.1	93.1	82.5	1.5	56.3	93.9	113.4	0.7	55.1	97.0	NI
NS	4/11/2016 8:45	57.3	0.6	56.2	93.2	72.7	1.5	56.5	94.2	103.6	0.7	55.2	97.0	NI
NS	4/11/2016 8:46	57.3	0.0	56.4	93.5	81.1	0.7	56.7	94.1	102.2	0.0	55.4	96.9	NI
NS	4/11/2016 8:47	57.3	0.0	56.6	92.4	82.5	0.7	56.9	93.0	102.2	0.7	55.5	96.9	NI
NS	4/11/2016 8:48	30.6	0.6	56.7	92.7	64.3	0.7	57.0	93.8	102.2	0.7	55.6	96.8	NI
NS	4/11/2016 8:49	60.1	1.1	56.9	91.8	62.5	1.5	57.1	93.0	96.6	0.7	55.7	96.4	NI
NS	4/11/2016 8:50	79.7	0.0	57.0	92.3	120.4	1.5	57.2	92.8	105.0	0.7	55.9	96.4	NI
NS	4/11/2016 8:51	121.8	0.6	57.1	92.7	138.7	0.7	57.3	93.3	124.7	0.7	56.1	96.4	NI
NS	4/11/2016 8:52	127.5	0.6	57.3	92.6	141.5	1.5	57.5	92.6	133.1	0.7	56.3	96.2	NI
NS	4/11/2016 8:53	130.3	0.6	57.4	91.6	112.0	1.5	57.6	92.1	126.1	0.7	56.3	95.7	NI
NS	4/11/2016 8:54	61.5	0.6	57.5	91.8	75.5	0.7	57.8	92.4	119.0	0.7	56.5	95.8	NI
NS	4/11/2016 8:55	46.0	0.0	57.8	91.8	96.6	0.7	58.1	92.6	119.0	0.0	56.7	96.0	NI
NS	4/11/2016 8:56	47.4	0.0	58.0	91.9	161.2	0.7	58.3	91.9	120.4	0.7	56.9	95.8	NI
NS	4/11/2016 8:57	100.8	1.7	58.0	90.8	144.3	3.0	58.1	91.1	138.7	1.5	56.9	95.2	NI
NS	4/11/2016 8:58	100.8	3.4	57.7	90.6	83.9	3.0	57.9	90.9	79.7	2.2	57.0	94.5	NI
NS	4/11/2016 8:59	117.6	1.7	57.6	90.7	165.4	2.2	58.0	91.2	166.8	1.5	57.1	94.3	NI
NS	4/11/2016 9:00	93.8	0.6	57.9	91.5	127.5	1.5	58.2	91.4	173.8	0.7	57.2	94.6	NI
NS	4/11/2016 9:01	96.6	1.1	58.1	90.7	89.6	1.5	58.4	91.1	109.2	0.7	57.3	94.0	NI
NS	4/11/2016 9:02	102.2	0.6	58.3	91.1	133.1	1.5	58.6	90.6	135.9	0.7	57.5	94.2	NI
NS	4/11/2016 9:03	158.3	1.1	58.5	90.2	156.9	2.2	58.7	90.4	172.4	1.5	57.7	93.9	NI
NS	4/11/2016 9:04	71.3	1.7	58.5	89.9	55.9	2.2	58.8	89.7	68.5	1.5	57.8	93.1	NI
NS	4/11/2016 9:05	65.7	1.1	58.6	90.4	67.1	1.5	58.9	90.7	76.9	0.7	58.0	93.7	NI
NS	4/11/2016 9:06	96.6	1.7	58.7	88.8	112.0	3.0	58.9	89.4	102.2	2.2	58.1	92.0	NI
NS	4/11/2016 9:07	81.1	2.8	58.5	89.1	79.7	3.0	58.9	89.7	69.9	2.2	58.2	92.3	NI
NS	4/11/2016 9:08	116.2	0.6	58.7	90.5	171.0	1.5	59.1	90.6	110.6	0.7	58.4	92.9	NI
NS	4/11/2016 9:09	140.1	1.1	58.9	89.1	159.7	1.5	59.2	89.1	147.1	1.5	58.5	91.9	NI
NS	4/11/2016 9:10	175.2	0.0	59.1	89.4	162.6	0.7	59.5	89.5	161.2	0.7	58.6	91.9	NI
NS	4/11/2016 9:11	141.5	0.0	59.5	90.1	128.9	1.5	59.9	89.4	135.9	0.7	58.8	92.1	NI
NS	4/11/2016 9:12	81.1	2.8	59.3	87.4	71.3	3.0	59.6	87.8	64.3	3.0	58.8	90.0	NI
NS	4/11/2016 9:13	68.5	0.6	59.3	89.3	103.6	1.5	59.7	89.5	78.3	0.7	58.9	91.4	NI
NS	4/11/2016 9:14	99.4	2.3	59.4	87.8	75.5	3.0	59.6	87.4	91.0	2.2	58.9	89.7	NI
NS	4/11/2016 9:15	47.4	2.3	59.1	87.4	47.4	2.2	59.5	87.8	47.4	1.5	59.0	90.0	NI
NS	4/11/2016 9:16	57.3	0.6	59.3	88.0	121.8	2.2	59.7	88.9	106.4	1.5	59.2	90.8	NI
NS	4/11/2016 9:17	184.2	4.5	59.4	88.2	168.2	3.0	59.7	88.4	166.8	2.2	59.4	90.2	NI
NS	4/11/2016 9:18	127.5	1.7	59.4	88.2	137.3	2.2	59.8	88.4	140.1	1.5	59.5	90.2	NI
Application	4/11/2016 9:19	127.5	1.1	59.5	88.5	142.9	0.7	60.0	88.4	142.9	0.7	59.6	89.8	NI
Application	4/11/2016 9:20	127.5	0.0	59.7	87.8	142.9	0.0	60.3	88.2	142.9	0.0	59.7	90.2	NI
Application	4/11/2016 9:21	126.1	0.0	60.1	87.6	140.1	0.7	60.6	87.6	142.9	0.0	59.8	89.5	NI
Application	4/11/2016 9:22	126.1	0.0	60.4	87.3	141.5	1.5	60.9	87.9	140.1	0.7	60.1	90.2	NI
Application	4/11/2016 9:23	123.2	3.9	60.2	85.6	123.2	4.5	60.5	86.3	119.0	3.0	60.2	87.9	NI
Application	4/11/2016 9:24	131.7	2.8	60.0	86.5	130.3	2.2	60.4	87.0	135.9	1.5	60.2	88.4	NI
Application	4/11/2016 9:25	102.2	1.7	60.0	86.6	98.0	1.5	60.5	87.2	86.7	1.5	60.3	88.4	NI
Application	4/11/2016 9:26	91.0	0.6	60.3	87.5	127.5	0.7	60.8	88.0	103.6	0.7	60.4	88.9	NI
Application	4/11/2016 9:27	92.4	0.0	60.6	87.9	130.3	0.7	61.2	88.1	103.6	0.7	60.6	89.6	NI
Application	4/11/2016 9:28	76.9	0.6	60.7	86.1	98.0	2.2	61.0	86.8	100.8	1.5	60.7	88.5	NI
Application	4/11/2016 9:29	109.2	1.7	60.6	85.8	134.5	2.2	60.7	86.2	133.1	1.5	60.7	87.2	NI
Application	4/11/2016 9:30	141.5	1.7	60.3	86.2	155.5	1.5	60.7	86.5	155.5	0.7	60.6	87.5	NI
Application	4/11/2016 9:31	144.3	1.1	60.3	85.8	123.2	2.2	60.6	85.9	128.9	1.5	60.7	87.4	NI
Application	4/11/2016 9:32	133.1	0.6	60.3	86.4	130.3	1.5	60.7	86.1	123.2	0.7	60.7	87.2	NI
NS	4/11/2016 9:33	145.7	0.6	60.6	87.1	154.1	0.7	61.1	88.1	137.3	0.0	60.9	88.6	NI
NS	4/11/2016 9:34	147.1	0.6	60.9	86.5	149.9	1.5	61.2	85.7	138.7	0.7	61.0	87.1	NI
NS	4/11/2016 9:35	147.1	0.6	61.1	86.4	151.3	0.7	61.5	86.3	142.9	0.7	61.1	87.2	NI
NS	4/11/2016 9:36	151.3	0.0	61.3	86.5	151.3	0.7	61.8	86.4	142.9	0.7	61.3	87.9	NI
NS	4/11/2016 9:37	159.7	0.6	61.7	86.6	166.8	1.5	62.1	85.2	144.3	0.7	61.6	87.6	NI
NS	4/11/2016 9:38	175.2	2.8	61.9	85.7	181.4	3.7	62.4	84.8	175.2	2.2	61.9	87.0	NI
NS	4/11/2016 9:39	159.7	2.3	62.1	84.6	161.2	1.5	62.5	84.8	165.4	1.5	62.1	86.3	NI
NS	4/11/2016 9:40	156.9	1.1	62.3	84.8	152.7	0.7	62.9	85.2	152.7	0.7	62.4	86.7	NI
NS	4/11/2016 9:41	151.3	0.6	62.6	84.4	168.2	1.5	63.3	84.2	169.6	0.7	62.6	85.6	NI
NS	4/11/2016 9:42	182.8	3.4	62.8	83.4	185.6	4.5	63.1	83.2	189.8	3.0	62.8	85.0	NI
NS	4/11/2016 9:43	173.8	4.5	62.7	83.1	187.0	3.0	63.2	83.0	187.0	2.2	63.0	84.7	NI
NS	4/11/2016 9:44	173.8	2.8	62.8	83.6	198.3	2.2	63.5	83.5	192.6	1.5	63.2	85.2	NI
NS	4/11/2016 9:45	175.2	1.7	63.3	84.0	180.0	3.0	63.9	81.5	202.5	1.5	63.5	84.1	NI
NS	4/11/2016 9:46	184.2	5.6	63.1	82.2	182.8	5.2	63.4	81.2	185.6	3.7	63.6	83.1	NI
NS	4/11/2016 9:47	166.8	4.5	62.9	82.6	175.2	3.7	63.4	81.1	181.4	2.2	63.6	82.8	NI
NS	4/11/2016 9:48	196.8	3.9	62.9	82.4	202.5	3.0	63.6	81.1	210.9	2.2	63.8	82.8	NI
NS	4/11/2016 9:49	198.3	1.7	63.1	81.6	195.4	1.5	63.8	81.9	198.3	0.7	63.9	82.5	NI
NS	4/11/2016 9:50	196.8	0.0	63.6	82.5	195.4	1.5	64.4	81.9	198.3	0.7	64.2	83.3	NI
NS	4/11/2016 9:51	192.6	2.3	64.1	82.2	181.4	2.2	64.8	82.0	191.2	1.5	64.5	83.8	NI
NS	4/11/2016 9:52	155.5	2.6	64.3	81.2	155.5	3.0	65.0	80.7	149.9	1.5	64.8	82.3	NI
NS	4/11/2016 9:53	141.5	1.7	64.4	79.9	142.9	2.2	65.2	81.3	154.1	1.5	65.0	82.6	NI
NS	4/11/2016 9:54	181.4	3.4	64.5	80.2	173.8	3.0	64.9	78.4	196.8	2.2	65.1	79.8	NI
0-3	4/11/2016 9:55	171.0	3.4	64.4	80.2	196.8	3.7	64.9	79.9	192.6	2.2	65.1	81.0	NI
0-3	4/11/2016 9:56	189.8	5.1	64.1	79.3	189.8	4.5	64.6	79.1	196.8	3.0	65.2	80.1	NI
0-3	4/11/2016 9:57	166.8	4.5	64.0	79.4	156.9	3.7	64.5	78.4	152.7	3.0	65.1	78.9	NI
0-3	4/11/2016 9:58	148.5	3.4	63.9	79.1	110.6	3.0	64.4	79.0	107.8	3.0	65.0	80.2	NI
0-3	4/11/2016 9:59	107.8	3.4	64.1	79.6	135.9	3.0	64.7	80.0	140.1	3.0	65.0	79.8	NI
0-3	4/11/2016 10:00	159.7	4.5	64.3	79.7	165.4	4.5	64.8	79.2	172.4	4.5	64.8	78.8	NI
0-3	4/11/2016 10:01	144.3	5.1	64.2	77.8	133.1	3.0	65.0	78.5	134.5	3.7	64.5	79.1	NI
0-3	4/11/2016 10:02	155.5	2.8	64.4	80.6	161.2	3.7	65.3	78.6	155.5	2.2	64.7	81.1	NI
0-3	4/11/2016 10:03	148.5	3.9	64.8	80.0	149.9	4.5	65.4	78.1	144.3	3.0	64.9	80.5	NI
0-3	4/11/2016 10:04	173.8	5.6	64.8	79.2	196.8	4.5	65.4	77.6	202.5	3.7	65.0	80.7	NI
0-3	4/11/2016 10:05	181.4	5.6	64.8	78.1	172.4	5.2	65.3	77.3	172.4	3.7	65.1	79.7	NI
0-3	4/11/2016 10:06	175.2	3.9	65.0	79.6	181.4	3.0	65.7	78.7	192.6	2.2	65.3	80.5	NI
0-3	4/11/2016 10:07	164.0	2.8	65.6	80.3	158.3	2.2	66.4	79.7	151.3	1.5	65.7	82.0	NI
0-3	4/11/2016 10:08	165.4	2.6	65.8	77.1	198.3	3.0	66.3	77.4	205.3	2.2	65.8	79.5	NI
0-3	4/11/2016 10:09	184.2	4.5	65.7	77.2	162.6	3.7	66.3	76.9	172.4	3.0	66.0	79.4	NI
0-3	4/11/2016 10:10	158.3	5.6	65.7	77.1	175.2	6.0	66.0	76.6	182.8	4.5	66.0	78.5	NI
0-3	4/11/2016 10:11	184.2	5.1	65.5	77.5	180.0	3.7	66.1	76.5	194.0	3.0	66.2	78.4	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
0-3	4/11/2016 10:12	175.2	3.9	65.8	77.8	185.6	3.7	66.5	76.6	191.2	3.0	66.5	76.7	Nil
0-3	4/11/2016 10:13	158.3	3.9	65.8	75.4	162.6	3.7	66.3	74.6	166.8	3.0	66.5	76.9	Nil
0-3	4/11/2016 10:14	169.6	5.6	65.7	76.3	164.0	5.2	66.3	75.7	164.0	3.7	66.6	77.8	Nil
0-3	4/11/2016 10:15	180.0	5.1	65.9	77.3	196.8	5.2	66.4	75.1	187.0	3.7	66.6	76.9	Nil
0-3	4/11/2016 10:16	192.6	6.2	65.7	75.8	199.7	5.2	66.2	74.7	199.7	4.5	66.6	76.4	Nil
0-3	4/11/2016 10:17	187.0	5.6	65.6	75.2	188.4	4.5	66.1	74.9	188.4	3.0	66.6	76.8	Nil
0-3	4/11/2016 10:18	165.4	3.9	65.8	76.0	168.2	3.7	66.4	75.2	166.8	2.2	66.7	76.9	Nil
0-3	4/11/2016 10:19	185.6	6.2	66.0	76.3	181.4	5.2	66.9	76.0	187.0	3.7	67.0	77.8	Nil
0-3	4/11/2016 10:20	175.2	5.6	66.4	76.1	185.6	6.0	66.9	73.6	187.0	4.5	67.1	75.8	Nil
0-3	4/11/2016 10:21	181.4	8.5	66.1	74.9	184.2	6.7	66.7	74.3	185.6	5.2	67.0	76.0	Nil
0-3	4/11/2016 10:22	172.4	6.2	66.0	74.6	172.4	5.2	66.4	74.0	171.0	3.7	66.9	75.2	Nil
0-3	4/11/2016 10:23	175.2	5.1	66.0	74.4	172.4	3.7	66.6	75.7	166.8	3.0	66.8	76.6	Nil
0-3	4/11/2016 10:24	172.4	4.5	66.3	74.3	172.4	4.5	66.8	73.4	173.8	3.0	67.0	75.1	Nil
0-3	4/11/2016 10:25	162.6	5.6	66.3	74.5	184.2	5.2	66.8	73.3	187.0	3.7	67.0	75.3	Nil
0-3	4/11/2016 10:26	180.0	7.3	66.3	74.3	164.0	6.7	66.8	73.2	166.8	4.5	67.1	75.0	Nil
0-3	4/11/2016 10:27	161.2	7.3	66.2	74.3	165.4	6.0	66.9	74.2	165.4	4.5	67.1	75.7	Nil
0-3	4/11/2016 10:28	162.6	7.3	66.3	73.6	166.8	6.7	66.7	72.5	165.4	4.5	67.0	74.7	Nil
0-3	4/11/2016 10:29	165.4	5.6	66.1	74.0	165.4	3.7	66.8	74.6	164.0	3.0	67.0	76.0	Nil
0-3	4/11/2016 10:30	182.8	3.9	66.4	74.2	199.7	3.0	67.2	75.6	261.4	2.2	67.2	76.3	Nil
0-3	4/11/2016 10:31	206.7	3.4	67.2	76.4	206.7	5.2	67.9	73.0	210.9	3.7	67.6	76.2	Nil
0-3	4/11/2016 10:32	194.0	6.2	67.3	73.0	202.5	5.2	68.0	73.3	201.1	3.7	67.9	75.3	Nil
0-3	4/11/2016 10:33	203.9	5.6	67.5	73.9	196.8	4.5	68.3	72.0	198.3	3.7	68.3	74.6	Nil
0-3	4/11/2016 10:34	189.8	4.5	67.6	72.7	198.3	3.7	68.3	72.2	196.8	2.2	68.4	74.8	Nil
0-3	4/11/2016 10:35	185.6	3.9	67.6	72.9	184.2	3.0	68.4	73.0	185.6	2.2	68.7	75.1	Nil
0-3	4/11/2016 10:36	182.8	3.9	67.9	71.8	191.2	4.5	68.6	72.6	192.6	3.7	68.9	74.7	Nil
0-3	4/11/2016 10:37	191.2	5.1	67.8	72.5	189.8	3.7	68.5	69.8	184.2	3.0	69.0	72.3	Nil
0-3	4/11/2016 10:38	196.8	4.5	67.7	71.4	208.1	4.5	68.4	72.2	209.5	3.0	69.1	73.6	Nil
0-3	4/11/2016 10:39	189.8	4.5	67.8	72.8	194.0	3.7	68.4	71.4	199.7	3.0	69.2	72.7	Nil
0-3	4/11/2016 10:40	175.2	5.6	68.0	72.7	173.8	5.2	68.5	70.4	175.2	3.7	69.3	72.3	Nil
0-3	4/11/2016 10:41	164.0	6.2	67.8	71.3	173.8	4.5	68.2	70.2	173.8	3.7	69.0	71.7	Nil
0-3	4/11/2016 10:42	181.4	3.4	67.8	72.4	189.8	3.0	68.2	69.4	175.2	2.2	69.0	71.9	Nil
0-3	4/11/2016 10:43	187.0	4.5	67.7	71.3	199.7	4.5	68.2	71.9	196.8	3.0	69.0	72.9	Nil
0-3	4/11/2016 10:44	185.6	6.2	67.7	71.3	195.4	5.2	68.2	69.4	195.4	3.7	69.0	71.1	Nil
0-3	4/11/2016 10:45	199.7	5.6	67.6	72.3	201.1	4.5	68.6	72.0	199.7	3.0	69.2	73.1	Nil
0-3	4/11/2016 10:46	202.5	5.1	68.0	71.2	189.8	4.5	68.7	70.6	194.0	3.7	69.3	72.1	Nil
0-3	4/11/2016 10:47	168.2	5.6	68.1	71.5	171.0	4.5	68.9	71.1	166.8	3.7	69.3	72.7	Nil
0-3	4/11/2016 10:48	166.8	7.3	68.2	70.5	159.7	6.0	68.7	70.1	158.3	4.5	69.2	71.6	Nil
0-3	4/11/2016 10:49	144.3	3.4	68.4	71.4	138.7	3.7	69.2	70.5	142.9	3.0	69.3	72.1	Nil
0-3	4/11/2016 10:50	152.7	5.6	68.8	72.0	162.6	3.7	69.8	71.5	165.4	3.0	69.6	73.6	Nil
0-3	4/11/2016 10:51	175.2	2.8	69.6	72.9	203.9	2.2	70.5	70.1	192.6	1.5	70.1	73.2	Nil
0-3	4/11/2016 10:52	198.3	5.1	69.8	69.0	191.2	6.0	70.2	68.0	194.0	4.5	70.4	71.0	Nil
0-3	4/11/2016 10:53	181.4	7.9	69.1	68.4	180.0	6.7	69.5	67.6	175.2	5.2	70.1	69.9	Nil
0-3	4/11/2016 10:54	181.4	6.8	68.9	69.5	189.8	6.0	69.5	68.0	189.8	4.5	70.1	69.9	Nil
0-3	4/11/2016 10:55	182.8	9.6	68.7	68.9	182.8	6.7	69.4	67.7	182.8	5.2	69.9	69.6	Nil
0-3	4/11/2016 10:56	188.4	5.6	69.0	69.7	195.4	3.7	69.8	69.7	196.8	3.0	70.1	71.6	Nil
0-3	4/11/2016 10:57	185.6	5.6	69.5	69.0	184.2	5.2	69.9	67.4	185.6	4.5	70.2	69.4	Nil
0-3	4/11/2016 10:58	175.2	6.8	69.3	68.9	184.2	6.0	69.9	67.8	189.8	4.5	70.3	69.8	Nil
0-3	4/11/2016 10:59	182.8	7.3	69.2	68.8	192.6	6.0	69.8	67.4	196.8	4.5	70.3	69.6	Nil
0-3	4/11/2016 11:00	187.0	6.2	69.1	68.1	192.6	6.0	69.6	67.5	192.6	4.5	70.2	69.5	Nil
0-3	4/11/2016 11:01	205.3	6.2	69.1	69.5	213.7	5.2	69.8	67.8	212.3	3.7	70.3	69.6	Nil
0-3	4/11/2016 11:02	202.5	6.8	69.2	68.4	208.1	6.0	69.9	68.2	205.3	4.5	70.5	69.9	Nil
0-3	4/11/2016 11:03	198.3	7.3	69.4	68.3	189.8	6.7	70.0	66.4	187.0	5.2	70.6	68.2	Nil
0-3	4/11/2016 11:04	168.2	7.3	69.5	68.5	175.2	6.0	70.2	67.6	175.2	4.5	70.7	69.7	Nil
0-3	4/11/2016 11:05	172.4	5.6	69.7	67.8	175.2	5.2	70.3	67.9	184.2	3.7	70.7	69.4	Nil
0-3	4/11/2016 11:06	151.3	5.6	70.1	67.1	140.1	6.7	70.6	66.5	137.3	5.2	70.8	68.6	Nil
0-3	4/11/2016 11:07	142.9	8.5	70.0	66.3	165.4	6.7	70.5	66.6	165.4	4.5	70.9	68.6	Nil
0-3	4/11/2016 11:08	194.0	6.8	69.7	66.4	191.2	6.0	70.4	67.0	188.4	4.5	70.9	68.7	Nil
0-3	4/11/2016 11:09	185.6	7.3	69.8	67.2	189.8	6.0	70.4	66.5	184.2	4.5	71.0	68.0	Nil
0-3	4/11/2016 11:10	172.4	6.2	70.0	67.1	168.2	4.5	70.7	67.0	165.4	3.7	71.1	68.8	Nil
0-3	4/11/2016 11:11	159.7	6.8	70.2	66.8	166.8	7.5	70.7	65.3	162.6	6.0	71.1	67.4	Nil
0-3	4/11/2016 11:12	182.8	8.5	70.1	66.7	181.4	7.5	70.5	65.7	185.6	5.2	71.1	67.2	Nil
0-3	4/11/2016 11:13	184.2	8.5	69.9	67.2	185.6	6.7	70.6	65.6	195.4	5.2	71.1	67.8	Nil
0-3	4/11/2016 11:14	180.0	7.3	70.1	67.7	181.4	5.2	71.0	67.7	181.4	4.5	71.2	69.5	Nil
0-3	4/11/2016 11:15	191.2	7.3	70.6	66.2	215.1	6.0	71.2	66.7	212.3	4.5	71.5	68.2	Nil
0-3	4/11/2016 11:16	208.1	4.5	71.0	68.4	206.7	4.5	71.7	65.9	206.7	3.0	71.8	68.7	Nil
0-3	4/11/2016 11:17	201.1	5.1	71.1	66.9	206.7	4.5	71.6	64.6	209.5	3.7	72.1	68.0	Nil
0-3	4/11/2016 11:18	205.3	5.6	71.2	66.8	210.9	6.0	71.7	64.5	210.9	4.5	72.3	67.0	Nil
0-3	4/11/2016 11:19	188.4	7.9	71.2	65.5	175.2	6.0	71.7	63.3	175.2	4.5	72.4	66.4	Nil
0-3	4/11/2016 11:20	172.4	4.5	71.2	67.5	185.6	3.7	72.1	66.3	175.2	3.0	72.5	68.2	Nil
0-3	4/11/2016 11:21	173.8	7.3	71.3	64.9	180.0	7.5	71.9	63.8	175.2	6.0	72.4	66.1	Nil
0-3	4/11/2016 11:22	194.0	10.1	71.0	63.6	194.0	7.5	71.5	65.1	195.4	5.2	72.3	66.6	Nil
0-3	4/11/2016 11:23	189.8	7.3	71.0	64.8	185.6	6.0	71.6	64.6	185.6	4.5	72.2	66.2	Nil
0-3	4/11/2016 11:24	189.8	6.8	71.1	64.2	189.8	4.5	71.7	64.0	189.8	3.7	72.3	66.6	Nil
0-3	4/11/2016 11:25	188.4	5.1	71.2	65.0	205.3	5.2	71.9	63.4	202.5	3.7	72.4	65.9	Nil
0-3	4/11/2016 11:26	203.9	6.8	71.2	65.0	189.8	6.7	71.9	63.4	187.0	5.2	72.5	65.5	Nil
0-3	4/11/2016 11:27	148.5	9.6	71.2	63.8	140.1	8.2	71.8	63.8	141.5	6.0	72.4	65.7	Nil
0-3	4/11/2016 11:28	154.1	9.0	71.3	64.4	165.4	7.5	71.8	62.7	166.8	6.0	72.4	64.9	Nil
0-3	4/11/2016 11:29	175.2	9.6	71.2	63.2	198.3	7.5	71.6	61.6	191.2	6.0	72.3	64.3	Nil
0-3	4/11/2016 11:30	212.3	7.3	70.6	63.2	212.3	5.2	71.4	63.8	216.5	3.7	72.2	65.3	Nil
0-3	4/11/2016 11:31	194.0	5.6	71.2	66.2	201.1	4.5	72.2	64.9	202.5	3.7	72.5	66.6	Nil
0-3	4/11/2016 11:32	188.4	5.1	72.2	65.2	202.5	5.2	72.7	62.4	189.8	3.7	72.9	65.1	Nil
0-3	4/11/2016 11:33	198.8	6.2	72.3	63.4	205.3	6.7	72.5	61.2	209.5	5.2	73.0	63.9	Nil
0-3	4/11/2016 11:34	191.2	8.5	71.6	62.5	184.2	6.7	72.0	62.8	184.2	4.5	72.8	64.6	Nil
0-3	4/11/2016 11:35	180.0	6.8	71.4	64.2	175.2	6.0	72.2	64.3	175.2	4.5	72.7	65.5	Nil
0-3	4/11/2016 11:36	175.2	7.3	71.9	63.1	187.0	6.0	72.5	62.7	182.8	4.5	72.9	65.3	Nil
0-3	4/11/2016 11:37	175.2	7.3	71.9	63.1	175.2	7.5	72.4	61.5	175.2	5.2	73.0	64.4	Nil
0-3	4/11/2016 11:38	201.1	8.5	71.3	61.9	201.1	6.0	72.2	64.7	202.5	4.5	73.0	65.9	Nil
0-3	4/11/2016 11:39	185.6	6.2	71.7	64.4	189.8	6.0	72.6	62.2	196.8	3.7	73.2	64.4	Nil
0-3	4/11/2016 11:40	194.0	5.6	72.3	65.6	202.5	4.5	73.3	61.9	202.5	3.0	73.6	65.3	Nil
0-3	4/11/2016 11:41	206.7	5.1	72.6	63.7	188.4	5.2	73.3	62.0	188.4	3.7	73.7	64.7	Nil
0-3	4/11/2016 11:42	166.8	6.2	72.6	62.9	185.6	5.2	73.4	62.9	184.2	3.7	73.9	65.5	Nil
0-3	4/11/2016 11:43	215.1	9.6	72.4	61.3	220.7	9.0	72.9	61.7	222.1	6.7	73.8	63.8	Nil
0-3	4/11/2016 11:44	210.9	9.0	72.2	60.6	212.3	7.5	72.6	60.8	215.1	5.2	73.8	62.7	Nil
0-3	4/11/2016 11:45	219.3	7.3	72.0	63.4	227.7	6.7	72.6	62.4	224.9	5.2	73.7	63.6	Nil
0-3	4/11/2016 11:46	203.9	8.5	72.3	62.6	189.8	7.5	73.0	61.6	198.3	5.2	73.8	64.0	Nil
0-3	4/11/2016 11:47	187.0	8.5	72.4	63.0	195.4	6.0	73.2	63.3	194.0	4.5	73.8	65.0	Nil
0-3	4/11/2016 11:48	198.3	7.3	72.4	60.7	198.3	6.7	72.9	59.5	198.3	5.2	73.8	62.1	Nil
0-3	4/11/2016 11:49	195.4	5.1	72.2	61.4	198.3	5.2	73.0	62.7	198.3	3.7	73.8	64.8	Nil
0-3	4/11/2016 11:50	216.5	6.2	72.7	61.6	220.7	6.0	73.3	60.5	220.7	4.5	74.0	63.1	Nil
0-3	4/11/2016 11:51	208.1	8.5	72.6	59.9	216.5	6.7	73.0	59.5	215.1	5.2	74.0	61.5	Nil
0-3	4/11/2016 11:52	222.1	6.2	72.3	61.1	229.1	5.2	73.1	62.4	227.7	3.7	74.1	63.6	Nil
0-3	4/11/2016 11:53	230.5	7.3	72.4	60.1	237.6	7.5	73.0	61.9	236.2	5.2	73.9	63.0	Nil
0-3	4/11/2016 11:54	220.7	6.2	72.8	63.6	215.1	5.2	73.8	60.8	217.9	4.5	74.3	64.3	Nil
0-3	4/11/2016 11:55	201.1	8.5	73.3	61.3	195.4	7.5	74.2	59.5	196.8	5.2	74.6	62.7	Nil
0-3	4/11/2016 11:56	201.1	8.5	73.2	60.0	216.5	6.7	73.9	59.6	215.1	5.2	74.7	62.0	Nil
0-3	4/11/2016 11:57	210.9	9.6	72.8	59.8	205.3	9.0	73.6	60.0	209.5	6.7	74.6	61.9	Nil
0-3	4/11/2016 11:58	195.4	10.7	72.7	60.5	203.9	8.2	73.4	60.2	198.3	6.0	74.5	61.6	Nil
0-3	4/11/2016 11:59	206.7	9.0	72.7	60.8	209.5	7.5	73.4	59.6	203.9	5.2	74.3	61.8	Nil

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
0-3	4/11/2016 12:00	205.3	7.9	72.6	60.8	222.1	7.5	73.2	59.6	223.5	5.2	74.3	61.7	NI
0-3	4/11/2016 12:01	208.1	5.6	72.8	61.4	195.4	3.7	73.7	62.0	210.9	3.0	74.3	63.9	NI
0-3	4/11/2016 12:02	181.4	5.6	73.3	60.9	187.0	6.7	74.0	59.5	182.8	5.2	74.6	62.3	NI
0-3	4/11/2016 12:03	168.2	10.1	73.5	61.1	171.0	8.2	74.3	59.4	171.0	6.0	74.7	62.4	NI
0-3	4/11/2016 12:04	166.8	10.1	73.3	59.2	164.0	8.2	73.7	58.5	165.4	6.0	74.5	61.2	NI
0-3	4/11/2016 12:05	165.4	7.9	73.4	60.7	180.0	6.0	74.6	61.8	184.2	3.7	74.8	64.6	NI
0-3	4/11/2016 12:06	185.6	6.8	74.5	61.7	195.4	7.5	75.2	57.5	196.8	5.2	75.4	61.6	NI
0-3	4/11/2016 12:07	188.4	9.6	73.8	58.6	192.6	6.7	74.5	59.6	195.4	4.5	75.3	61.8	NI
0-3	4/11/2016 12:08	182.8	6.8	73.8	60.1	181.4	6.7	74.6	58.5	175.2	4.5	75.3	61.1	NI
0-3	4/11/2016 12:09	172.4	10.7	73.4	57.3	188.4	8.2	74.0	60.3	187.0	6.7	74.9	61.9	NI
0-3	4/11/2016 12:10	181.4	7.9	73.7	59.7	175.2	8.2	74.3	58.4	175.2	6.0	75.0	60.6	NI
0-3	4/11/2016 12:11	185.6	10.1	73.4	58.8	192.6	8.2	73.7	57.6	194.0	6.0	74.7	59.8	NI
0-3	4/11/2016 12:12	202.5	9.0	73.1	57.8	202.5	7.5	73.6	58.7	205.3	5.2	74.6	60.9	NI
0-3	4/11/2016 12:13	175.2	8.5	72.8	58.5	175.2	7.5	73.1	58.6	169.6	6.0	74.1	59.8	NI
0-3	4/11/2016 12:14	185.6	7.9	72.7	59.2	196.8	6.7	73.4	59.1	198.3	5.2	74.0	61.2	NI
0-3	4/11/2016 12:15	181.4	7.9	73.0	60.0	182.8	6.0	74.1	60.1	182.8	4.5	74.3	63.1	NI
0-3	4/11/2016 12:16	175.2	5.1	73.9	58.3	180.0	3.7	74.5	58.6	188.4	3.0	74.7	62.2	NI
0-3	4/11/2016 12:17	172.4	5.1	74.3	60.0	166.8	6.0	74.9	57.3	166.8	4.5	75.1	61.0	NI
0-3	4/11/2016 12:18	189.8	6.8	74.3	58.4	220.7	6.0	74.7	56.8	220.7	4.5	75.2	59.5	NI
0-3	4/11/2016 12:19	219.3	7.9	73.8	57.1	217.9	7.5	74.3	57.3	215.1	5.2	75.2	59.4	NI
0-3	4/11/2016 12:20	226.3	7.3	73.9	59.3	240.4	6.7	74.7	59.1	243.2	5.2	75.4	61.8	NI
0-3	4/11/2016 12:21	227.7	7.9	74.0	58.8	222.1	6.0	75.1	59.5	222.1	4.5	75.6	62.7	NI
0-3	4/11/2016 12:22	219.3	6.2	74.4	56.9	233.3	6.0	75.2	60.0	229.1	4.5	75.8	62.5	NI
0-3	4/11/2016 12:23	209.5	6.2	74.8	59.3	191.2	6.0	75.9	59.2	192.6	4.5	76.3	62.2	NI
0-3	4/11/2016 12:24	165.4	9.0	75.2	57.6	171.0	8.2	75.5	55.7	168.2	6.0	76.4	59.2	NI
0-3	4/11/2016 12:25	175.2	6.2	74.4	58.9	175.2	4.5	74.9	58.2	180.0	3.7	76.0	60.3	NI
0-3	4/11/2016 12:26	171.0	7.9	74.5	58.2	175.2	7.5	75.1	57.5	181.4	6.0	76.0	60.0	NI
0-3	4/11/2016 12:27	181.4	9.6	74.5	58.0	191.2	6.7	74.9	58.5	189.8	4.5	75.9	60.8	NI
0-3	4/11/2016 12:28	199.7	5.1	74.0	58.8	212.3	3.7	74.6	60.7	205.3	2.2	75.8	62.0	NI
0-3	4/11/2016 12:29	209.5	3.9	74.5	59.1	217.9	4.5	75.2	57.6	226.3	3.0	75.9	61.1	NI
0-3	4/11/2016 12:30	239.0	6.2	74.0	55.3	257.2	6.7	74.2	56.3	262.8	5.2	75.2	57.9	NI
0-3	4/11/2016 12:31	215.1	5.6	73.7	59.8	201.1	5.2	74.6	58.1	202.5	3.7	75.1	61.0	NI
0-3	4/11/2016 12:32	205.3	8.5	74.3	58.7	209.5	8.2	74.9	55.7	205.3	6.0	75.3	60.0	NI
0-3	4/11/2016 12:33	194.0	9.6	74.0	56.0	185.6	7.5	74.8	57.6	189.8	5.2	75.4	59.7	NI
0-3	4/11/2016 12:34	182.8	7.9	74.6	57.2	192.6	7.5	75.1	55.8	188.4	5.2	75.7	59.1	NI
0-3	4/11/2016 12:35	188.4	9.0	73.9	55.8	195.4	8.2	73.9	55.3	199.7	6.0	75.1	57.0	NI
0-3	4/11/2016 12:36	203.9	8.5	73.1	56.3	203.9	6.0	73.4	57.3	199.7	4.5	74.6	58.5	NI
0-3	4/11/2016 12:37	208.1	9.0	73.0	57.0	227.7	7.5	73.7	57.6	223.5	5.2	74.4	59.3	NI
0-3	4/11/2016 12:38	239.0	7.9	73.7	56.0	250.2	8.2	74.4	55.8	247.4	6.0	74.7	58.9	NI
0-3	4/11/2016 12:39	240.4	9.6	74.1	56.8	243.2	9.7	74.6	54.7	247.4	6.7	74.9	57.7	NI
0-3	4/11/2016 12:40	233.3	12.4	73.5	55.7	233.3	8.2	74.2	56.9	234.8	6.0	74.7	59.4	NI
0-3	4/11/2016 12:41	217.9	5.6	73.8	56.8	215.1	6.7	74.7	56.2	213.7	4.5	75.0	59.5	NI
0-3	4/11/2016 12:42	203.9	9.6	74.4	56.2	210.9	7.5	75.3	56.5	209.5	6.0	75.5	60.2	NI
0-3	4/11/2016 12:43	206.7	7.9	75.3	57.0	212.3	7.5	75.9	52.9	215.1	5.2	76.1	57.3	NI
0-3	4/11/2016 12:44	219.3	9.0	74.9	53.6	216.5	7.5	75.3	55.6	219.3	5.2	76.2	58.3	NI
0-3	4/11/2016 12:45	198.3	7.3	74.7	56.5	205.3	6.0	75.2	55.9	195.4	4.5	76.2	58.5	NI
0-3	4/11/2016 12:46	209.5	5.1	74.5	54.4	215.1	5.2	74.7	54.2	217.9	3.7	76.0	56.7	NI
0-3	4/11/2016 12:47	198.3	6.2	73.9	56.2	188.4	6.0	74.2	56.3	189.8	4.5	75.6	57.9	NI
0-3	4/11/2016 12:48	182.8	9.6	73.7	55.8	199.7	7.5	74.0	55.5	202.5	5.2	75.1	57.8	NI
0-3	4/11/2016 12:49	203.9	5.6	73.9	57.9	203.9	5.2	74.6	55.3	213.7	3.7	75.2	57.8	NI
0-3	4/11/2016 12:50	210.9	6.2	74.6	57.1	216.5	6.7	75.5	55.3	220.7	4.5	75.6	59.3	NI
0-3	4/11/2016 12:51	216.5	10.1	74.9	54.4	230.5	8.2	75.3	55.2	230.5	6.7	75.9	57.8	NI
NS	4/11/2016 12:52	224.9	7.9	74.4	56.4	233.3	6.7	74.9	54.1	240.4	5.2	75.8	57.1	NI
3-6	4/11/2016 12:53	234.8	9.0	74.1	56.8	237.6	7.5	74.9	56.6	236.2	6.0	75.6	58.8	NI
3-6	4/11/2016 12:54	219.3	6.8	74.7	56.9	203.9	6.0	75.6	56.1	201.1	4.5	75.9	59.6	NI
3-6	4/11/2016 12:55	205.3	6.8	75.2	56.3	215.1	5.2	76.0	54.7	215.1	3.7	76.2	58.9	NI
3-6	4/11/2016 12:56	210.9	3.9	75.2	55.7	209.5	4.5	75.6	54.5	209.5	3.0	76.3	57.6	NI
3-6	4/11/2016 12:57	201.1	6.2	74.7	54.8	209.5	6.7	75.0	54.1	212.3	5.2	76.2	56.7	NI
3-6	4/11/2016 12:58	215.1	10.7	74.1	54.9	222.1	9.7	74.6	56.2	222.1	7.5	75.9	57.8	NI
3-6	4/11/2016 12:59	231.9	10.7	74.0	54.7	236.2	9.0	74.5	54.4	237.6	6.7	75.6	56.5	NI
3-6	4/11/2016 13:00	219.3	7.3	73.9	56.7	206.7	5.2	74.7	57.3	209.5	3.7	75.5	59.1	NI
3-6	4/11/2016 13:01	195.4	3.9	74.9	56.9	205.3	4.5	75.7	57.0	206.7	3.0	75.8	61.0	NI
3-6	4/11/2016 13:02	194.0	6.8	75.5	57.5	189.8	6.0	76.4	55.0	192.6	4.5	76.4	59.7	NI
3-6	4/11/2016 13:03	194.0	7.9	75.6	55.5	192.6	8.2	75.9	52.9	196.8	6.0	76.4	56.1	NI
3-6	4/11/2016 13:04	181.4	11.3	74.9	54.3	191.2	8.2	75.0	53.9	205.3	6.0	75.9	56.4	NI
3-6	4/11/2016 13:05	192.6	9.6	74.3	53.6	188.4	9.7	74.7	54.4	185.6	6.7	75.6	56.8	NI
3-6	4/11/2016 13:06	181.4	11.3	74.3	53.9	185.6	9.0	74.7	53.7	184.2	6.7	75.3	56.4	NI
3-6	4/11/2016 13:07	198.3	9.0	74.5	56.8	217.9	6.7	75.3	55.2	217.9	5.2	75.5	58.8	NI
3-6	4/11/2016 13:08	206.7	6.2	75.4	57.2	192.6	5.2	76.6	58.1	196.8	3.7	76.2	61.5	NI
3-6	4/11/2016 13:09	181.4	9.0	76.4	54.0	181.4	7.5	76.6	51.3	175.2	6.0	76.6	55.7	NI
3-6	4/11/2016 13:10	187.0	6.8	76.0	53.8	198.3	6.0	76.4	56.1	199.7	4.5	76.7	58.4	NI
3-6	4/11/2016 13:11	180.0	6.8	76.1	55.0	181.4	6.0	76.5	53.5	175.2	4.5	76.7	57.2	NI
3-6	4/11/2016 13:12	173.8	7.3	76.2	53.4	175.2	6.7	76.7	54.9	175.2	4.5	76.8	58.6	NI
3-6	4/11/2016 13:13	182.8	6.8	76.5	55.2	194.0	6.0	77.0	54.2	192.6	4.5	77.1	58.5	NI
3-6	4/11/2016 13:14	184.2	6.2	76.3	53.7	185.6	6.0	76.5	52.7	182.8	4.5	77.0	56.7	NI
3-6	4/11/2016 13:15	182.8	7.9	75.7	53.9	192.6	7.5	75.6	51.8	185.6	5.2	76.4	54.4	NI
3-6	4/11/2016 13:16	172.4	7.9	74.8	54.0	165.4	6.7	74.8	53.0	165.4	4.5	75.6	55.5	NI
3-6	4/11/2016 13:17	162.6	7.9	74.9	55.0	182.8	6.7	75.6	55.6	175.2	5.2	75.7	58.6	NI
3-6	4/11/2016 13:18	181.4	7.3	75.6	55.4	168.2	6.0	76.2	54.5	168.2	4.5	76.1	58.3	NI
3-6	4/11/2016 13:19	151.3	8.5	75.5	53.5	142.9	7.5	75.7	52.7	142.9	5.2	76.0	56.4	NI
3-6	4/11/2016 13:20	161.2	6.8	75.2	54.4	180.0	6.0	76.1	55.4	192.6	4.5	76.1	58.8	NI
3-6	4/11/2016 13:21	166.8	6.2	76.2	54.5	165.4	4.5	77.2	56.0	164.0	3.0	76.7	60.4	NI
3-6	4/11/2016 13:22	185.6	4.5	77.3	57.4	206.7	4.5	77.9	51.3	202.5	3.0	77.4	56.6	NI
3-6	4/11/2016 13:23	195.4	5.6	77.3	54.4	194.0	6.0	77.5	52.3	195.4	4.5	77.6	56.4	NI
3-6	4/11/2016 13:24	172.4	9.6	76.2	53.1	175.2	6.7	76.2	52.9	175.2	5.2	77.1	55.7	NI
3-6	4/11/2016 13:25	175.2	7.9	75.6	53.4	188.4	6.7	76.0	53.6	195.4	5.2	76.7	56.5	NI
3-6	4/11/2016 13:26	199.7	6.2	75.8	53.5	219.3	4.5	76.5	55.3	216.5	3.0	76.9	58.6	NI
3-6	4/11/2016 13:27	196.8	7.3	75.9	53.7	196.8	7.5	76.6	54.1	194.0	5.2	77.0	57.1	NI
3-6	4/11/2016 13:28	201.1	10.1	75.7	52.6	209.5	8.2	76.0	52.9	212.3	6.0	76.9	55.6	NI
3-6	4/11/2016 13:29	206.7	9.0	75.2	52.7	215.1	8.2	75.3	52.6	215.1	5.2	76.6	54.9	NI
3-6	4/11/2016 13:30	192.6	6.8	74.6	53.9	194.0	4.5	74.9	53.5	205.3	3.0	76.2	55.6	NI
3-6	4/11/2016 13:31	205.3	5.6	74.3	53.1	210.9	5.2	74.6	54.8	215.1	3.7	75.8	56.4	NI
3-6	4/11/2016 13:32	216.5	6.8	74.2	54.0	227.7	6.7	74.4	54.3	227.7	5.2	75.5	56.0	NI
3-6	4/11/2016 13:33	220.7	6.8	74.1	54.0	229.1	5.2	74.3	54.0	226.3	3.7	75.2	56.0	NI
3-6	4/11/2016 13:34	217.9	5.1	74.1	54.6	226.3	5.2	74.3	54.1	223.5	3.7	75.0	56.9	NI
3-6	4/11/2016 13:35	198.3	6.8	74.1	54.9	188.4	7.5	74.4	54.6	175.2	5.2	74.9	57.1	NI
3-6	4/11/2016 13:36	168.8	9.0	74.5	55.1	182.8	6.7	75.1	55.6	181.4	4.5	75.1	58.8	NI
3-6	4/11/2016 13:37	194.0	5.6	75.0	53.7	192.6	4.5	75.4	55.5	196.8	3.0	75.3	58.9	NI
3-6	4/11/2016 13:38	180.0	5.6	75.3	55.4	189.8	5.2	75.8	54.7	194.0	3.7	75.6	58.3	NI
3-6	4/11/2016 13:39	198.3	5.6	75.8	53.9	199.7	6.0	76.0	52.8	201.1	4.5	75.9	57.0	NI
3-6	4/11/2016 13:40	187.0	8.5	75.4	52.6	188.4	6.7	75.4	51.6	187.0	5.2	75.8	55.2	NI
3-6	4/11/2016 13:41	188.4	6.8	75.0	53.8	202.5	6.7	75.2	54.0	212.3	4.5	75.6	56.7	NI
3-6	4/11/2016 13:42	191.2	7.9	74.9	55.1	201.1	6.0	75.3	54.1	202.5	3.7	75.6	57.3	NI
3-6	4/11/2016 13:43	208.1	6.8	74.8	54.0	213.7	5.2	75.1	53.0	208.1	3.7	75.5	56.0	NI
3-6	4/11/2016 13:44	201.1	6.8	74.7	54.5	208.1	6.7	74.9	53.3	202.5	5.2	75.3	56.1	NI
3-6	4/11/2016 13:45	201.1	9.0	74.5	53.5	196.8	6.7	74.6	54.6	202.5	5.2	75.0	56.7	NI
3-6	4/11/2016 13:46	175.2	9.0	74.3	53.8	175.2	7.5	74.3	53.6	172.4	6.0	74.6	56.1	NI
3-6	4/11/2016 13:47	182.8	9.0	74.1	54.1	194.0	6.7	74.2	53.6	184.2	5.2	74.4	56.4	NI

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
3-6	4/11/2016 13:48	187.0	6.2	74.1	54.8	195.4	3.7	74.4	55.4	199.7	3.0	74.3	58.5	Nil
3-6	4/11/2016 13:49	208.7	4.5	74.4	54.6	220.7	4.5	74.8	55.7	223.5	3.0	74.5	59.1	Nil
3-6	4/11/2016 13:50	203.9	5.6	75.1	54.7	194.0	5.2	75.7	55.0	195.4	3.7	75.0	59.1	Nil
3-6	4/11/2016 13:51	182.8	5.1	75.7	55.3	180.0	5.2	76.2	54.7	185.6	3.7	75.6	59.6	Nil
3-6	4/11/2016 13:52	173.8	9.0	75.9	52.9	172.4	8.2	76.4	53.6	169.6	6.0	76.1	58.6	Nil
3-6	4/11/2016 13:53	171.0	8.5	76.0	53.2	189.8	6.7	76.6	54.0	182.8	5.2	76.4	57.5	Nil
3-6	4/11/2016 13:54	202.5	7.3	76.3	52.1	210.9	7.5	76.5	51.6	213.7	5.2	76.6	56.0	Nil
3-6	4/11/2016 13:55	205.3	9.6	75.8	51.6	229.1	6.0	76.3	53.4	227.7	4.5	76.6	56.9	Nil
3-6	4/11/2016 13:56	231.9	3.9	76.2	55.3	231.9	5.2	76.9	52.9	233.3	3.7	76.9	57.4	Nil
3-6	4/11/2016 13:57	230.5	6.8	76.5	53.1	229.1	5.2	77.0	54.2	230.5	3.7	77.1	57.7	Nil
3-6	4/11/2016 13:58	202.5	6.8	76.3	51.7	198.3	6.7	76.7	52.9	196.8	4.5	77.2	56.6	Nil
3-6	4/11/2016 13:59	192.6	8.5	75.9	51.4	203.9	7.5	76.2	51.8	203.9	5.2	76.9	54.6	Nil
3-6	4/11/2016 14:00	196.8	5.1	75.9	55.4	191.2	3.7	76.7	56.0	196.8	3.0	77.0	58.7	Nil
3-6	4/11/2016 14:01	171.0	3.4	76.6	54.3	159.7	3.7	77.2	53.0	171.0	2.2	77.2	57.0	Nil
3-6	4/11/2016 14:02	156.9	5.1	76.7	53.8	159.7	6.0	77.1	51.9	164.0	4.5	77.2	55.9	Nil
3-6	4/11/2016 14:03	172.4	7.3	76.5	53.4	175.2	6.0	76.6	52.4	181.4	4.5	76.9	55.9	Nil
3-6	4/11/2016 14:04	175.2	7.9	76.0	52.3	175.2	7.5	75.9	52.2	173.8	5.2	76.5	55.1	Nil
3-6	4/11/2016 14:05	181.4	9.0	75.4	52.8	194.0	6.7	75.6	53.7	199.7	4.5	76.0	56.4	Nil
3-6	4/11/2016 14:06	208.1	5.1	75.6	54.0	201.1	5.2	76.1	52.8	202.5	3.7	76.2	56.7	Nil
3-6	4/11/2016 14:07	180.0	7.3	75.9	52.0	189.8	6.7	76.2	52.8	195.4	5.2	76.4	56.3	Nil
3-6	4/11/2016 14:08	169.6	9.6	75.8	52.0	161.2	9.0	76.1	52.3	161.2	6.0	76.4	55.3	Nil
3-6	4/11/2016 14:09	171.0	10.1	75.6	53.2	169.6	8.2	75.9	52.9	169.6	6.0	76.2	56.1	Nil
3-6	4/11/2016 14:10	175.2	9.0	75.6	52.9	175.2	7.5	75.9	52.6	175.2	5.2	76.1	55.9	Nil
3-6	4/11/2016 14:11	168.2	9.0	75.6	52.9	175.2	9.7	76.1	52.3	175.2	6.7	76.1	56.1	Nil
3-6	4/11/2016 14:12	175.2	10.7	75.9	51.8	175.2	6.7	76.4	50.2	171.0	5.2	76.4	54.7	Nil
3-6	4/11/2016 14:13	194.0	6.2	76.3	50.9	212.3	5.2	76.7	53.4	219.3	3.7	76.7	57.1	Nil
3-6	4/11/2016 14:14	217.9	6.8	76.2	51.4	212.3	6.7	76.4	52.2	220.7	5.2	76.8	55.5	Nil
3-6	4/11/2016 14:15	202.5	6.2	75.8	53.3	194.0	5.2	76.0	51.3	195.4	3.7	76.6	54.7	Nil
3-6	4/11/2016 14:16	184.2	5.1	75.5	51.1	185.6	3.0	75.7	52.3	192.6	2.2	76.3	55.1	Nil
3-6	4/11/2016 14:17	182.8	5.1	75.4	52.7	206.7	6.0	75.5	52.9	206.7	4.5	76.1	55.3	Nil
3-6	4/11/2016 14:18	205.3	8.5	75.0	52.4	196.8	7.5	75.2	54.0	201.1	5.2	75.8	56.1	Nil
3-6	4/11/2016 14:19	175.2	7.3	74.9	53.3	161.2	6.7	75.0	53.1	156.3	4.5	75.4	55.3	Nil
3-6	4/11/2016 14:20	166.8	7.3	74.8	53.1	175.2	5.2	75.0	53.7	173.8	3.7	75.2	56.3	Nil
3-6	4/11/2016 14:21	159.7	8.5	75.1	52.7	168.2	7.5	75.4	53.4	165.4	5.2	75.3	56.8	Nil
3-6	4/11/2016 14:22	162.6	7.3	75.6	54.4	161.2	6.0	76.2	54.0	162.6	4.5	75.8	57.9	Nil
3-6	4/11/2016 14:23	169.6	7.3	76.0	53.2	181.4	6.7	76.2	52.5	175.2	5.2	76.0	56.4	Nil
3-6	4/11/2016 14:24	158.3	8.5	75.9	52.3	151.3	6.7	76.1	53.0	151.3	4.5	76.1	56.8	Nil
3-6	4/11/2016 14:25	173.8	6.8	75.9	52.0	173.8	4.5	76.2	52.3	162.6	3.0	76.1	55.9	Nil
3-6	4/11/2016 14:26	168.2	2.8	76.3	54.9	184.2	4.5	76.9	52.4	182.8	3.0	76.4	57.0	Nil
3-6	4/11/2016 14:27	185.6	8.5	76.8	52.4	191.2	7.5	77.3	53.6	196.8	6.0	76.9	57.7	Nil
3-6	4/11/2016 14:28	191.2	9.0	76.8	51.5	182.8	7.5	77.2	51.1	194.0	6.0	77.2	55.4	Nil
3-6	4/11/2016 14:29	166.8	9.0	76.5	51.3	156.9	7.5	76.9	52.9	155.5	5.2	77.2	56.2	Nil
3-6	4/11/2016 14:30	180.0	8.5	76.7	51.8	189.8	6.7	77.4	51.2	192.6	4.5	77.5	55.6	Nil
3-6	4/11/2016 14:31	159.7	9.0	76.8	50.5	155.5	9.0	77.2	51.8	155.5	6.7	77.4	55.6	Nil
3-6	4/11/2016 14:32	159.7	9.0	76.7	52.2	162.6	7.5	77.6	52.7	165.4	5.2	77.6	56.5	Nil
3-6	4/11/2016 14:33	165.4	6.8	77.5	52.6	173.8	6.0	78.3	50.7	172.4	4.5	78.1	55.5	Nil
3-6	4/11/2016 14:34	182.8	7.3	78.0	54.0	180.0	6.7	78.6	49.6	180.0	5.2	78.5	54.9	Nil
3-6	4/11/2016 14:35	182.8	8.5	77.8	50.5	195.4	5.2	78.5	54.6	192.6	3.7	78.6	57.7	Nil
3-6	4/11/2016 14:36	185.6	6.2	78.0	50.6	195.4	6.0	78.6	51.0	192.6	4.5	78.9	56.3	Nil
3-6	4/11/2016 14:37	187.0	6.2	78.3	52.5	185.6	4.5	78.9	51.8	173.8	3.7	79.1	56.0	Nil
3-6	4/11/2016 14:38	162.6	6.2	78.6	51.1	162.6	6.0	79.1	50.3	162.6	4.5	79.3	55.0	Nil
3-6	4/11/2016 14:39	149.9	6.2	78.6	50.3	145.7	5.2	79.1	52.3	144.3	3.7	79.4	56.4	Nil
3-6	4/11/2016 14:40	147.1	5.1	78.6	50.3	149.9	5.2	79.1	51.5	144.3	3.7	79.5	56.7	Nil
3-6	4/11/2016 14:41	154.1	5.6	78.2	49.8	158.3	6.0	78.3	49.9	154.1	5.2	79.0	53.5	Nil
3-6	4/11/2016 14:42	155.5	7.9	77.6	51.2	165.4	6.7	78.0	50.6	164.0	5.2	78.6	54.7	Nil
3-6	4/11/2016 14:43	159.7	7.3	77.4	50.9	162.6	6.0	77.7	51.6	164.0	4.5	78.3	54.3	Nil
3-6	4/11/2016 14:44	161.2	9.0	77.1	51.1	175.2	9.0	77.6	50.4	175.2	6.7	78.0	54.3	Nil
3-6	4/11/2016 14:45	194.0	10.7	77.0	50.4	194.0	9.0	77.3	49.9	196.8	6.7	77.9	53.4	Nil
3-6	4/11/2016 14:46	192.6	10.1	76.7	50.5	202.5	7.5	77.2	50.5	195.4	5.2	77.9	53.8	Nil
3-6	4/11/2016 14:47	188.4	6.8	76.7	51.5	192.6	6.0	77.2	51.1	196.3	4.5	77.8	54.7	Nil
3-6	4/11/2016 14:48	198.3	7.3	76.5	51.1	196.8	6.0	76.9	51.0	199.7	3.7	77.6	54.1	Nil
3-6	4/11/2016 14:49	175.2	6.2	76.6	52.8	188.4	5.2	77.3	52.8	192.6	4.5	77.6	55.9	Nil
3-6	4/11/2016 14:50	196.8	6.8	77.2	52.2	196.8	5.2	78.0	53.5	198.3	3.7	77.9	57.5	Nil
3-6	4/11/2016 14:51	188.4	4.5	77.8	52.4	194.0	3.7	78.7	52.6	189.8	3.0	78.4	57.3	Nil
3-6	4/11/2016 14:52	191.2	6.2	78.2	51.4	192.6	6.7	78.6	49.2	198.3	5.2	78.7	53.5	Nil
3-6	4/11/2016 14:53	187.0	9.0	77.5	49.9	192.6	6.7	77.7	49.6	191.2	4.5	78.4	53.1	Nil
3-6	4/11/2016 14:54	201.1	6.8	77.0	49.9	203.9	6.0	77.4	49.9	202.5	4.5	78.3	53.1	Nil
3-6	4/11/2016 14:55	166.8	7.3	76.6	51.1	148.5	5.2	76.9	50.7	142.9	3.7	77.7	53.0	Nil
3-6	4/11/2016 14:56	130.3	4.5	76.5	50.7	130.3	4.5	76.9	51.1	133.1	3.0	77.2	54.6	Nil
3-6	4/11/2016 14:57	144.3	3.9	77.1	53.1	141.5	5.2	77.8	51.5	138.7	3.7	77.7	55.4	Nil
3-6	4/11/2016 14:58	133.1	7.3	77.5	50.2	134.5	6.0	78.1	51.5	133.1	4.5	78.0	56.4	Nil
3-6	4/11/2016 14:59	128.9	5.6	77.6	51.1	140.1	6.7	78.3	50.2	136.7	4.5	78.2	55.3	Nil
3-6	4/11/2016 15:00	148.5	6.8	77.9	50.8	144.3	6.7	78.3	49.9	140.1	5.2	78.4	53.3	Nil
3-6	4/11/2016 15:01	137.3	8.5	77.4	49.7	135.9	8.2	77.5	48.8	135.9	6.0	77.9	52.2	Nil
3-6	4/11/2016 15:02	144.3	5.6	76.9	50.7	169.6	4.5	77.1	51.0	166.8	3.0	77.5	54.3	Nil
3-6	4/11/2016 15:03	149.9	5.1	76.6	51.2	155.5	5.2	76.8	51.0	147.1	3.7	77.1	54.0	Nil
3-6	4/11/2016 15:04	154.1	5.6	76.3	50.4	147.1	6.0	76.3	51.0	151.3	4.5	76.7	53.8	Nil
3-6	4/11/2016 15:05	161.2	5.6	76.1	52.3	181.4	5.2	76.3	51.6	175.2	3.7	76.4	54.8	Nil
3-6	4/11/2016 15:06	172.4	7.3	76.0	52.0	175.2	6.7	76.1	52.0	182.8	5.2	76.2	55.1	Nil
3-6	4/11/2016 15:07	175.2	8.5	75.8	51.1	172.4	6.7	75.9	52.8	171.0	4.5	76.0	55.6	Nil
3-6	4/11/2016 15:08	185.6	5.6	76.2	52.9	198.3	5.2	76.8	53.0	199.7	3.7	76.2	56.9	Nil
3-6	4/11/2016 15:09	185.6	6.2	76.9	52.4	175.2	4.5	77.6	52.4	181.4	3.0	76.8	57.4	Nil
3-6	4/11/2016 15:10	158.3	5.1	77.5	51.0	156.9	3.7	77.9	52.5	154.1	3.0	77.3	56.9	Nil
3-6	4/11/2016 15:11	169.6	1.7	77.6	52.5	189.8	1.5	78.1	53.3	156.9	0.7	77.6	58.2	Nil
3-6	4/11/2016 15:12	173.8	3.4	77.5	51.3	168.2	5.2	77.5	50.0	172.4	3.7	77.5	54.8	Nil
3-6	4/11/2016 15:13	164.0	6.8	76.7	50.0	147.1	5.2	76.6	49.9	148.5	3.7	76.9	53.4	Nil
3-6	4/11/2016 15:14	154.1	5.1	76.2	51.7	175.2	6.7	76.3	50.6	172.4	4.5	76.6	54.0	Nil
3-6	4/11/2016 15:15	169.6	10.7	76.2	52.1	164.0	9.7	76.8	51.1	161.2	6.7	76.6	54.9	Nil
3-6	4/11/2016 15:16	152.7	10.1	76.9	50.4	152.7	7.5	77.5	49.7	152.7	5.2	77.2	54.4	Nil
3-6	4/11/2016 15:17	172.4	6.8	77.2	50.5	189.8	6.0	77.7	51.1	184.2	4.5	77.5	55.0	Nil
3-6	4/11/2016 15:18	199.7	6.2	77.3	50.4	202.5	5.2	77.8	50.6	203.9	3.7	77.8	55.3	Nil
3-6	4/11/2016 15:19	196.8	3.9	77.5	52.9	201.1	4.5	78.2	51.1	194.0	3.0	78.1	56.0	Nil
3-6	4/11/2016 15:20	171.0	7.3	77.0	49.2	171.0	6.0	77.2	49.9	165.4	4.5	77.6	53.4	Nil
3-6	4/11/2016 15:21	181.4	5.1	76.7	51.0	175.2	4.5	76.9	51.9	181.4	3.0	77.3	55.3	Nil
3-6	4/11/2016 15:22	173.8	6.8	76.4	50.4	189.8	6.0	76.4	50.5	187.0	4.5	76.9	53.5	Nil
3-6	4/11/2016 15:23	172.4	5.6	76.2	51.4	175.2	5.2	76.3	51.3	175.2	3.7	76.6	54.1	Nil
3-6	4/11/2016 15:24	173.8	5.1	76.2	51.4	161.2	3.7	76.2	51.6	158.3	3.0	76.4	55.2	Nil
3-6	4/11/2016 15:25	148.5	5.1	76.1	51.6	152.7	4.5	76.2	51.6	154.1	3.7	76.2	54.8	Nil
3-6	4/11/2016 15:26	165.4	6.8	75.9	51.0	165.4	7.5	75.9	51.7	162.6	5.2	75.9	54.8	Nil
3-6	4/11/2016 15:27	180.0	9.0	75.7	51.4	189.8	7.5	75.8	52.7	189.8	5.2	75.8	55.6	Nil
3-6	4/11/2016 15:28	152.7	7.9	75.7	51.5	151.3	6.0	75.8	51.7	145.7	4.5	75.7	55.1	Nil
3-6	4/11/2016 15:29	161.2	5.6	75.7	51.7	161.2	4.5	75.9	52.3	159.7	3.0	75.7	56.1	Nil
3-6	4/11/2016 15:30	151.3	5.1	75.8	51.9	147.1	6.0	75.9	51.4	147.1	4.5	75.7	55.1	Nil
3-6	4/11/2016 15:31	156.9	7.9	75.8	51.7	161.2	6.0	75.8	50.8	162.6	4.5	75.6	54.7	Nil
3-6	4/11/2016 15:32	154.1	5.6	75.7	51.7	156.9	5.2	75.8	51.4	155.5	3.7	75.5	55.3	Nil
3-6	4/11/2016 15:33	165.4	6.2	75.7	51.8	165.4	6.0	75.8	52.2	165.4	3.7	75.5	56.0	Nil
3-6	4/11/2016 15:34	154.1	5.6	75.7	52.4	168.2	4.5	75.8	53.0	168.2	3.0	75.5	56.5	Nil
3-6	4/11/2016 15:35	175.2	3.9	75.8	52.9	180.0	4.5	75.9	52.7	182.8	3.0	75.6	56.5	Nil

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
3-6	4/11/2016 15:36	180.0	6.2	76.0	52.3	171.0	6.0	76.3	52.4	171.0	4.5	75.8	56.6	Nil
3-6	4/11/2016 15:37	155.5	7.3	76.6	51.8	154.1	6.7	77.3	53.5	155.5	4.5	76.6	58.0	Nil
3-6	4/11/2016 15:38	161.2	7.9	77.2	50.9	165.4	6.7	77.7	50.9	162.6	5.2	77.2	55.9	Nil
3-6	4/11/2016 15:39	175.2	6.2	77.5	50.3	181.4	6.0	77.8	51.6	180.0	4.5	77.6	55.5	Nil
3-6	4/11/2016 15:40	164.0	7.3	77.2	51.1	156.9	7.5	77.2	49.4	155.5	5.2	77.3	53.5	Nil
3-6	4/11/2016 15:41	171.0	7.3	76.8	51.4	194.0	6.0	76.9	51.4	191.2	4.5	77.0	54.9	Nil
3-6	4/11/2016 15:42	194.0	6.8	76.5	51.7	194.0	4.5	76.6	53.4	189.8	3.0	76.9	56.3	Nil
3-6	4/11/2016 15:43	175.2	3.4	76.4	52.4	171.0	3.7	76.6	54.2	175.2	2.2	76.7	57.0	Nil
3-6	4/11/2016 15:44	173.8	5.1	76.4	51.8	185.6	6.0	76.4	51.1	195.4	3.7	76.5	55.0	Nil
3-6	4/11/2016 15:45	187.0	5.6	76.2	52.2	155.5	3.7	76.2	53.3	154.1	2.2	76.3	56.6	Nil
3-6	4/11/2016 15:46	121.8	3.9	76.1	51.7	116.2	3.7	76.2	52.1	117.6	3.0	76.2	55.0	Nil
3-6	4/11/2016 15:47	128.9	3.4	76.2	51.6	148.5	4.5	76.6	51.4	144.3	3.7	76.2	55.5	Nil
3-6	4/11/2016 15:48	147.1	6.2	76.7	51.9	151.3	4.5	77.3	51.7	149.9	3.7	76.6	56.6	Nil
3-6	4/11/2016 15:49	151.3	3.4	77.6	52.6	137.3	4.5	78.3	52.3	134.5	3.0	77.3	57.1	Nil
3-6	4/11/2016 15:50	123.2	5.6	78.6	49.4	138.7	5.2	79.0	49.7	137.3	4.5	78.2	55.6	Nil
6-12	4/11/2016 15:51	137.3	5.1	78.6	50.9	141.5	4.5	79.1	48.3	134.5	3.7	78.6	53.9	Nil
6-12	4/11/2016 15:52	161.2	5.1	78.5	49.9	182.8	3.7	79.0	51.4	173.8	2.2	78.7	55.5	Nil
6-12	4/11/2016 15:53	164.0	5.6	78.8	49.4	164.0	6.0	79.2	50.2	164.0	4.5	79.0	54.4	Nil
6-12	4/11/2016 15:54	172.4	7.9	78.6	49.7	171.0	6.7	78.8	49.3	169.6	4.5	78.9	53.5	Nil
6-12	4/11/2016 15:55	172.4	6.8	78.2	49.4	172.4	6.0	78.2	49.6	171.0	4.5	78.5	52.8	Nil
6-12	4/11/2016 15:56	154.1	8.5	77.5	49.2	156.9	8.2	77.4	49.2	154.1	6.0	77.8	52.4	Nil
6-12	4/11/2016 15:57	166.8	8.5	76.9	49.8	184.2	6.0	76.9	50.3	181.4	4.5	77.3	53.1	Nil
6-12	4/11/2016 15:58	159.7	5.1	76.6	50.5	159.7	4.5	76.7	51.4	161.2	3.0	76.9	54.6	Nil
6-12	4/11/2016 15:59	164.0	5.1	76.6	51.2	161.2	5.2	76.8	50.2	159.7	4.5	76.8	53.8	Nil
6-12	4/11/2016 16:00	140.1	6.8	76.7	49.9	134.5	6.0	76.9	50.3	133.1	4.5	76.7	53.8	Nil
6-12	4/11/2016 16:01	149.9	5.1	77.0	51.1	147.1	5.2	77.3	50.7	144.3	3.7	76.9	54.8	Nil
6-12	4/11/2016 16:02	144.3	7.3	77.1	49.8	156.9	6.7	77.3	51.5	158.3	5.2	76.9	55.4	Nil
6-12	4/11/2016 16:03	175.2	6.2	77.3	50.5	169.6	6.0	77.6	50.1	165.4	4.5	77.2	54.2	Nil
6-12	4/11/2016 16:04	169.6	7.9	77.4	49.1	175.2	6.0	77.6	50.0	171.0	4.5	77.3	53.6	Nil
6-12	4/11/2016 16:05	166.8	5.6	77.7	49.7	169.6	6.0	77.9	49.2	168.2	4.5	77.5	53.6	Nil
6-12	4/11/2016 16:06	164.0	7.9	77.6	49.2	156.9	6.7	77.6	49.3	155.5	4.5	77.5	53.6	Nil
6-12	4/11/2016 16:07	147.1	6.8	77.2	48.3	149.9	6.0	77.3	49.7	144.3	4.5	77.3	53.5	Nil
6-12	4/11/2016 16:08	172.4	5.6	77.1	48.9	187.0	6.0	77.2	48.9	181.4	3.7	77.1	53.0	Nil
6-12	4/11/2016 16:09	159.7	7.9	76.9	49.6	155.5	6.7	77.0	49.6	152.7	4.5	76.9	53.4	Nil
6-12	4/11/2016 16:10	156.9	7.9	76.8	48.7	138.7	6.7	76.9	49.9	137.3	4.5	76.7	53.6	Nil
6-12	4/11/2016 16:11	161.2	6.2	76.8	49.9	187.0	6.7	76.9	49.5	187.0	5.2	76.7	53.3	Nil
6-12	4/11/2016 16:12	172.4	7.3	76.9	50.5	164.0	6.0	77.2	50.9	166.8	4.5	76.8	55.0	Nil
6-12	4/11/2016 16:13	172.4	6.2	77.1	49.0	181.4	5.2	77.2	49.4	189.8	3.7	76.9	53.6	Nil
6-12	4/11/2016 16:14	169.6	6.8	77.1	49.7	166.8	5.2	77.2	50.1	165.4	3.7	77.0	54.2	Nil
6-12	4/11/2016 16:15	166.8	7.3	77.0	49.1	172.4	8.2	76.9	48.9	173.8	6.0	76.9	52.7	Nil
6-12	4/11/2016 16:16	166.8	9.0	76.6	49.0	172.4	8.2	76.5	49.8	171.0	5.2	76.5	53.5	Nil
6-12	4/11/2016 16:17	169.6	8.5	76.3	49.4	169.6	6.7	76.3	49.6	166.8	5.2	76.2	53.4	Nil
6-12	4/11/2016 16:18	169.6	7.3	76.2	49.6	180.0	6.0	76.2	49.8	175.2	4.5	76.1	53.6	Nil
6-12	4/11/2016 16:19	165.4	7.3	76.2	50.2	142.9	6.7	76.2	50.2	144.3	4.5	76.0	53.7	Nil
6-12	4/11/2016 16:20	142.9	6.8	76.2	50.3	155.5	6.0	76.3	50.8	149.9	4.5	75.9	54.7	Nil
6-12	4/11/2016 16:21	144.3	6.8	76.2	50.1	152.7	6.0	76.2	50.4	148.5	4.5	75.9	54.0	Nil
6-12	4/11/2016 16:22	175.2	6.8	76.2	50.7	189.8	6.7	76.2	49.8	189.8	4.5	75.9	54.1	Nil
6-12	4/11/2016 16:23	173.8	7.3	76.1	50.4	165.4	5.2	76.1	50.9	161.2	3.7	75.8	54.8	Nil
6-12	4/11/2016 16:24	151.3	5.6	76.1	50.6	164.0	4.5	76.1	51.7	158.3	3.0	75.8	55.5	Nil
6-12	4/11/2016 16:25	165.4	5.1	76.1	50.4	161.2	4.5	76.1	50.4	158.3	3.7	75.7	54.0	Nil
6-12	4/11/2016 16:26	168.2	5.6	76.1	49.8	169.6	4.5	76.0	50.3	169.6	3.0	75.7	54.3	Nil
6-12	4/11/2016 16:27	151.3	5.6	76.0	50.4	149.9	6.0	76.0	51.6	147.1	4.5	75.6	55.5	Nil
6-12	4/11/2016 16:28	165.4	4.5	76.0	50.9	172.4	3.7	76.0	51.6	172.4	2.2	75.6	55.6	Nil
6-12	4/11/2016 16:29	155.5	3.4	76.1	51.0	147.1	3.0	76.1	51.4	147.1	2.2	75.6	56.0	Nil
6-12	4/11/2016 16:30	142.9	3.9	76.2	50.7	154.1	4.5	76.2	50.2	148.5	3.0	75.7	54.7	Nil
6-12	4/11/2016 16:31	162.6	3.9	76.3	50.0	162.6	3.7	76.4	51.9	158.3	3.0	75.9	56.1	Nil
6-12	4/11/2016 16:32	145.7	4.5	76.6	50.8	142.9	3.7	76.8	52.4	144.3	3.0	76.1	56.7	Nil
6-12	4/11/2016 16:33	172.4	3.4	76.8	50.6	182.8	3.7	77.0	51.4	185.6	2.2	76.3	56.0	Nil
6-12	4/11/2016 16:34	169.6	4.5	77.0	50.1	175.2	3.7	77.3	51.9	180.0	3.0	76.6	56.9	Nil
6-12	4/11/2016 16:35	180.0	6.8	77.2	50.5	184.2	6.0	77.4	49.6	191.2	4.5	76.9	54.6	Nil
6-12	4/11/2016 16:36	175.2	6.8	77.2	49.8	168.2	5.2	77.4	51.1	165.4	3.7	77.0	55.8	Nil
6-12	4/11/2016 16:37	159.7	5.1	77.4	50.9	164.0	5.2	77.6	50.5	164.0	3.7	77.2	54.3	Nil
6-12	4/11/2016 16:38	166.8	6.8	77.4	50.0	175.2	6.7	77.5	49.8	181.4	5.2	77.2	54.2	Nil
6-12	4/11/2016 16:39	173.8	7.9	77.3	49.8	172.4	6.7	77.3	49.8	166.8	5.2	77.2	54.1	Nil
6-12	4/11/2016 16:40	147.1	7.9	77.2	49.9	137.3	6.7	77.3	49.9	131.7	5.2	77.0	53.6	Nil
6-12	4/11/2016 16:41	148.5	6.2	77.2	50.5	148.5	5.2	77.4	49.6	149.9	3.7	77.1	54.2	Nil
6-12	4/11/2016 16:42	144.3	6.2	77.4	49.4	154.1	5.2	77.5	49.9	151.3	3.7	77.1	54.2	Nil
6-12	4/11/2016 16:43	173.8	7.3	77.4	49.1	169.6	6.7	77.5	49.9	168.2	4.5	77.2	54.2	Nil
6-12	4/11/2016 16:44	149.9	6.8	77.4	49.3	156.9	5.2	77.6	51.3	149.9	3.7	77.2	55.6	Nil
6-12	4/11/2016 16:45	159.7	3.9	77.6	49.9	168.2	3.0	77.7	51.2	155.5	2.2	77.2	55.4	Nil
6-12	4/11/2016 16:46	189.8	3.4	77.6	49.9	181.4	3.0	77.8	51.0	175.2	2.2	77.3	55.1	Nil
6-12	4/11/2016 16:47	166.8	5.1	77.6	49.9	168.2	6.0	77.7	50.3	169.6	4.5	77.3	54.1	Nil
6-12	4/11/2016 16:48	149.9	9.0	77.4	48.0	151.3	9.7	77.4	47.5	144.3	7.5	77.1	51.9	Nil
6-12	4/11/2016 16:49	156.9	9.0	77.1	48.1	161.2	6.7	77.2	49.2	162.6	4.5	76.9	53.0	Nil
6-12	4/11/2016 16:50	156.9	7.9	77.1	48.5	144.3	9.0	77.1	49.1	145.7	6.7	76.8	52.9	Nil
6-12	4/11/2016 16:51	148.5	9.6	77.0	48.0	152.7	7.5	77.0	48.5	149.9	5.2	76.7	52.4	Nil
6-12	4/11/2016 16:52	164.0	7.3	77.0	49.2	168.2	6.0	77.1	50.3	171.0	4.5	76.7	54.2	Nil
6-12	4/11/2016 16:53	169.6	5.6	77.1	50.6	199.7	4.5	77.2	49.1	192.6	3.0	76.8	53.9	Nil
6-12	4/11/2016 16:54	175.2	6.2	77.2	49.5	180.0	5.2	77.2	50.3	175.2	3.7	76.8	54.1	Nil
6-12	4/11/2016 16:55	191.2	6.2	77.1	49.6	198.3	6.7	77.1	49.5	201.1	4.5	76.8	53.9	Nil
6-12	4/11/2016 16:56	199.7	10.1	76.9	49.0	196.8	6.7	76.9	50.0	198.3	4.5	76.8	54.5	Nil
6-12	4/11/2016 16:57	173.8	6.8	76.9	49.3	169.6	6.7	76.9	49.3	168.2	4.5	76.7	53.2	Nil
6-12	4/11/2016 16:58	165.4	8.5	76.8	48.4	171.0	6.7	76.9	49.5	171.0	5.2	76.6	53.4	Nil
6-12	4/11/2016 16:59	173.8	7.9	76.9	48.3	187.0	6.0	76.9	48.9	185.6	4.5	76.6	53.0	Nil
6-12	4/11/2016 17:00	158.3	6.2	76.9	48.3	155.5	6.0	76.9	50.0	149.9	4.5	76.5	53.7	Nil
6-12	4/11/2016 17:01	175.2	6.8	76.9	49.3	181.4	6.7	76.9	48.7	175.2	5.2	76.6	52.9	Nil
6-12	4/11/2016 17:02	184.2	9.6	76.9	48.2	182.8	7.5	76.9	49.2	181.4	6.0	76.6	52.9	Nil
6-12	4/11/2016 17:03	175.2	9.6	76.9	48.5	175.2	7.5	76.9	49.6	173.8	5.2	76.5	53.1	Nil
6-12	4/11/2016 17:04	171.0	6.8	76.8	49.9	175.2	6.0	76.8	49.8	172.4	4.5	76.5	53.5	Nil
6-12	4/11/2016 17:05	165.4	9.0	76.8	48.9	161.2	7.5	76.8	49.1	156.9	6.0	76.4	53.0	Nil
6-12	4/11/2016 17:06	161.2	7.9	76.8	48.7	180.0	7.5	76.8	48.6	184.2	6.0	76.4	52.6	Nil
6-12	4/11/2016 17:07	175.2	9.0	76.8	48.9	172.4	7.5	76.8	48.4	166.8	5.2	76.4	52.3	Nil
6-12	4/11/2016 17:08	156.9	9.6	76.7	48.5	156.9	6.7	76.7	48.8	155.5	5.2	76.3	52.7	Nil
6-12	4/11/2016 17:09	161.2	8.5	76.8	48.5	156.9	9.0	76.8	48.4	151.3	6.7	76.3	52.0	Nil
6-12	4/11/2016 17:10	134.5	10.1	76.7	48.4	130.3	7.5	76.8	48.4	126.1	6.0	76.3	52.2	Nil
6-12	4/11/2016 17:11	149.9	7.3	76.8	49.1	164.0	6.0	76.9	49.0	159.7	4.5	76.3	53.0	Nil
6-12	4/11/2016 17:12	165.4	5.1	76.9	49.3	175.2	3.7	77.0	50.1	161.2	2.2	76.4	54.7	Nil
6-12	4/11/2016 17:13	187.0	4.5	77.1	49.5	198.3	4.5	77.2	49.4	201.1	3.0	76.6	54.2	Nil
6-12	4/11/2016 17:14	189.8	7.3	77.1	49.2	184.2	6.7	77.2	49.8	185.6	4.5	76.7	54.1	Nil
6-12	4/11/2016 17:15	175.2	6.2	77.2	48.5	172.4	5.2	77.3	50.3	175.2	3.7	76.8	54.7	Nil
6-12	4/11/2016 17:16	165.4	6.8	77.2	49.1	173.8	5.2	77.2	49.2	172.4	3.7	76.8	53.4	Nil
6-12	4/11/2016 17:17	175.2	5.1	77.2	49.2	168.2	4.5	77.3	49.2	165.4	3.0	76.9	53.9	Nil
6-12	4/11/2016 17:18	156.9	7.9	77.2	48.3	158.3	8.2	77.2	48.1	152.7	6.0	76.8	52.3	Nil
6-12	4/11/2016 17:19	168.2	9.0	77.0	48.2	189.8	6.7	77.0	49.3	182.8	5.2	76.7	53.1	Nil
6-12	4/11/2016 17:20	189.8	7.9	76.9	48.7	169.6	6.7	77.0	49.3	173.8	5.2	76.7	53.0	Nil
6-12	4/11/2016 17:21	155.5	5.6	76.9	49.2	166.8	4.5	77.0	51.1	166.8	3.0	76.6	54.6	Nil
6-12	4/11/2016 17:22	172.4	4.5	77.0	49.1	175.2	4.5	77.0	49.7	189.8	3.7	76.6	53.6	Nil
6-12	4/11/2016 17:23	172.4	6.2	77.0	48.4	182.8	5.2	77.0	49.2	175.2	3.7	76.6	53.3	Nil

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
6-12	4/11/2016 17:24	182.8	5.6	76.9	48.4	191.2	5.2	76.9	49.8	195.4	3.7	76.6	53.6	NI
6-12	4/11/2016 17:25	187.0	4.5	76.9	49.6	188.4	3.7	76.9	50.8	188.4	3.0	76.6	54.3	NI
6-12	4/11/2016 17:26	LOGGING STOPPED FOR MAINTENANCE				185.6	3.7	76.9	49.9	192.6	3.0	76.5	53.6	NI
6-12	4/11/2016 17:27	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				188.4	4.5	76.8	50.3	189.8	3.0	76.5	54.1	NI
6-12	4/11/2016 17:28	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				185.6	5.2	76.7	50.5	194.0	3.7	76.4	54.2	NI
6-12	4/11/2016 17:29	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				198.3	3.7	76.6	50.7	209.5	3.0	76.4	54.2	NI
6-12	4/11/2016 17:30	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				185.6	5.2	76.6	49.1	185.6	3.7	76.3	52.9	NI
6-12	4/11/2016 17:31	185.6	5.1	76.6	49.1	185.6	6.0	76.5	49.7	187.0	4.5	76.2	53.3	0
6-12	4/11/2016 17:32	161.2	6.2	76.5	49.4	162.6	6.0	76.4	50.4	159.7	4.5	76.0	53.8	0
6-12	4/11/2016 17:33	182.8	6.2	76.4	49.7	192.6	6.7	76.2	50.1	194.0	4.5	75.9	53.9	0
6-12	4/11/2016 17:34	198.3	7.3	76.2	49.9	192.6	5.2	76.2	49.6	198.3	3.7	75.9	53.4	0
6-12	4/11/2016 17:35	175.2	5.1	76.2	50.2	180.0	4.5	76.1	50.7	180.0	3.0	75.8	54.5	0
6-12	4/11/2016 17:36	175.2	6.2	76.1	50.2	175.2	5.2	76.0	50.8	175.2	3.7	75.7	54.4	0
6-12	4/11/2016 17:37	172.4	5.6	76.1	50.7	189.8	4.5	75.9	50.9	188.4	3.0	75.6	54.7	0
6-12	4/11/2016 17:38	184.2	5.1	76.0	50.4	180.0	3.7	75.9	51.4	184.2	3.0	75.6	55.2	0
6-12	4/11/2016 17:39	173.8	4.5	76.0	50.7	194.0	4.5	75.9	50.9	188.4	3.0	75.5	54.8	0
6-12	4/11/2016 17:40	194.0	5.6	76.0	50.4	187.0	4.5	75.9	51.0	188.4	3.0	75.5	54.9	0
6-12	4/11/2016 17:41	168.2	5.1	76.0	50.3	171.0	4.5	76.0	50.6	168.2	3.0	75.5	54.3	0
6-12	4/11/2016 17:42	168.2	4.5	76.0	50.8	169.6	3.7	75.9	51.5	161.2	3.0	75.4	55.2	0
6-12	4/11/2016 17:43	172.4	5.1	75.9	50.1	175.2	4.5	75.9	51.3	187.0	3.0	75.4	54.8	0
6-12	4/11/2016 17:44	181.4	3.9	75.9	51.3	196.8	3.7	75.8	51.3	206.7	2.2	75.3	55.4	0
6-12	4/11/2016 17:45	194.0	3.9	75.8	51.1	180.0	3.7	75.7	51.4	191.2	2.2	75.3	55.3	0
6-12	4/11/2016 17:46	181.4	6.2	75.8	49.8	196.8	5.2	75.8	51.1	202.5	3.7	75.3	54.9	0
6-12	4/11/2016 17:47	175.2	5.1	75.9	50.4	175.2	3.7	75.7	51.1	171.0	3.0	75.2	54.9	0
6-12	4/11/2016 17:48	168.2	6.2	75.8	50.4	172.4	6.0	75.7	50.4	172.4	4.5	75.2	54.0	0
6-12	4/11/2016 17:49	175.2	6.2	75.9	50.4	171.0	4.5	75.7	50.8	162.6	3.0	75.2	54.2	0
6-12	4/11/2016 17:50	168.2	5.1	75.8	50.4	172.4	5.2	75.7	50.7	165.4	3.7	75.2	54.4	0
6-12	4/11/2016 17:51	164.0	6.8	75.8	50.1	166.8	5.2	75.7	51.4	164.0	3.7	75.2	55.0	0
6-12	4/11/2016 17:52	166.8	5.1	75.8	50.3	172.4	3.7	75.7	51.0	164.0	3.0	75.2	54.8	0
6-12	4/11/2016 17:53	181.4	5.6	75.9	50.2	182.8	4.5	75.7	51.5	167.0	3.0	75.2	55.1	0
6-12	4/11/2016 17:54	171.0	3.9	75.8	50.9	171.0	3.7	75.6	51.2	169.6	2.2	75.2	54.8	0
6-12	4/11/2016 17:55	166.8	3.4	75.7	50.6	151.3	3.7	75.7	51.0	147.1	3.0	75.2	54.8	0
6-12	4/11/2016 17:56	148.5	2.3	75.8	50.9	152.7	2.2	75.6	51.9	145.7	1.5	75.1	55.8	0
6-12	4/11/2016 17:57	156.9	2.8	75.7	50.9	164.0	3.7	75.6	51.6	164.0	3.0	75.1	55.5	0
6-12	4/11/2016 17:58	155.5	5.1	75.6	50.5	154.1	3.7	75.6	51.1	147.1	3.0	75.1	54.9	0
6-12	4/11/2016 17:59	158.3	3.4	75.6	50.8	171.0	3.0	75.6	51.7	169.6	2.2	75.0	55.2	0
6-12	4/11/2016 18:00	175.2	3.9	75.6	50.7	172.4	5.2	75.6	50.9	173.8	3.7	75.0	54.6	0
6-12	4/11/2016 18:01	156.9	6.8	75.7	50.1	144.3	5.2	75.6	50.5	138.7	4.5	75.0	54.1	0
6-12	4/11/2016 18:02	158.3	5.1	75.7	50.8	192.6	3.0	75.5	51.8	185.6	2.2	75.0	55.9	0
6-12	4/11/2016 18:03	182.8	4.5	75.6	50.4	175.2	5.2	75.5	51.4	175.2	3.7	74.9	55.1	0
6-12	4/11/2016 18:04	164.0	5.1	75.5	50.7	169.6	4.5	75.3	51.1	162.6	3.0	74.9	55.2	0
6-12	4/11/2016 18:05	182.8	5.1	75.5	50.4	182.8	3.7	75.4	51.4	267.0	2.2	74.9	55.0	0
6-12	4/11/2016 18:06	173.8	3.4	75.5	50.7	171.0	3.7	75.3	51.4	187.0	2.2	74.9	55.3	0
6-12	4/11/2016 18:07	165.4	4.5	75.4	51.1	168.2	5.2	75.3	51.3	166.8	3.7	74.8	55.1	0
6-12	4/11/2016 18:08	166.8	5.1	75.5	50.9	187.0	4.5	75.2	52.2	182.8	3.0	74.7	55.7	0
6-12	4/11/2016 18:09	192.6	5.1	75.3	51.0	188.4	3.7	75.2	52.6	188.4	2.2	74.7	56.1	0
6-12	4/11/2016 18:10	185.6	2.8	75.2	52.1	189.8	3.0	75.0	52.3	187.0	2.2	74.6	56.1	0
6-12	4/11/2016 18:11	184.2	5.1	75.1	51.5	180.0	4.5	75.1	51.8	181.4	3.7	74.6	55.3	0
6-12	4/11/2016 18:12	175.2	5.6	75.2	51.5	182.8	5.2	75.1	51.8	187.0	3.7	74.6	55.4	0
6-12	4/11/2016 18:13	175.2	6.2	75.3	51.1	181.4	6.0	75.2	51.7	185.6	4.5	74.6	55.2	0
6-12	4/11/2016 18:14	175.2	6.8	75.3	50.9	172.4	5.2	75.2	52.1	175.2	3.7	74.6	55.7	0
6-12	4/11/2016 18:15	168.2	5.1	75.2	51.6	175.2	4.5	75.1	51.6	171.0	3.0	74.6	55.5	0
6-12	4/11/2016 18:16	175.2	4.5	75.2	51.5	187.0	3.7	75.1	52.2	222.1	2.2	74.6	55.8	0
6-12	4/11/2016 18:17	196.8	5.1	75.2	51.1	205.3	3.7	75.1	52.1	202.5	3.0	74.6	55.9	0
6-12	4/11/2016 18:18	181.4	5.1	75.2	51.6	175.2	5.2	75.1	52.0	172.4	3.7	74.6	55.6	0
6-12	4/11/2016 18:19	175.2	6.2	75.2	51.2	184.2	5.2	75.2	51.8	184.2	3.7	74.6	55.7	0
6-12	4/11/2016 18:20	192.6	6.2	75.4	50.7	187.0	6.0	75.3	51.6	194.0	4.5	74.6	55.3	0
6-12	4/11/2016 18:21	173.8	6.2	75.3	51.4	191.2	4.5	75.1	52.0	185.6	3.0	74.6	55.9	0
6-12	4/11/2016 18:22	191.2	5.6	75.2	51.2	187.0	5.2	75.2	51.6	185.6	3.7	74.6	55.3	0
6-12	4/11/2016 18:23	182.8	5.6	75.3	51.3	188.4	4.5	75.2	51.7	191.2	3.0	74.6	55.5	0
6-12	4/11/2016 18:24	201.1	4.5	75.2	51.8	194.0	3.0	74.9	52.7	203.9	2.2	74.6	56.4	0
6-12	4/11/2016 18:25	185.6	2.8	75.0	52.4	187.0	2.2	74.7	53.6	199.7	1.5	74.4	57.1	0
6-12	4/11/2016 18:26	187.0	2.8	74.8	52.5	201.1	3.7	74.8	52.8	199.7	3.0	74.4	56.1	0
6-12	4/11/2016 18:27	196.8	4.5	74.9	52.5	192.6	3.0	74.7	53.3	194.0	2.2	74.3	56.7	0
6-12	4/11/2016 18:28	202.5	3.4	74.8	52.7	206.7	3.0	74.7	53.4	205.3	2.2	74.3	56.9	0
6-12	4/11/2016 18:29	210.9	3.4	74.8	52.3	213.7	3.0	74.7	53.8	217.9	2.2	74.3	56.9	0
6-12	4/11/2016 18:30	201.1	1.7	74.8	52.8	205.3	3.0	74.7	52.8	215.1	2.2	74.2	56.3	0
6-12	4/11/2016 18:31	196.8	3.9	74.9	52.4	209.5	3.0	74.8	52.8	194.0	2.2	74.2	56.8	0
6-12	4/11/2016 18:32	181.4	3.4	74.9	52.4	173.8	3.0	74.9	53.0	185.6	2.2	74.3	56.6	0
6-12	4/11/2016 18:33	175.2	2.8	74.9	52.6	203.9	3.7	74.7	53.4	210.9	2.2	74.2	57.2	0
6-12	4/11/2016 18:34	195.4	3.4	74.8	52.8	194.0	3.7	74.7	53.4	202.5	2.2	74.2	57.0	0
6-12	4/11/2016 18:35	188.4	4.5	74.8	52.3	189.8	3.7	74.8	53.2	198.3	3.0	74.2	56.9	0
6-12	4/11/2016 18:36	187.0	3.9	74.9	52.8	185.6	3.0	74.7	53.6	182.8	2.2	74.2	57.6	0
6-12	4/11/2016 18:37	184.2	3.4	74.8	52.8	191.2	3.0	74.7	53.7	187.0	2.2	74.2	57.2	0
6-12	4/11/2016 18:38	191.2	2.3	74.7	53.8	189.8	2.2	74.5	54.2	191.2	1.5	74.1	57.7	0
6-12	4/11/2016 18:39	191.2	1.1	74.5	54.5	195.4	1.5	74.3	55.4	199.7	0.7	74.0	58.7	0
6-12	4/11/2016 18:40	191.2	0.6	74.3	54.3	199.7	2.2	74.2	54.7	202.5	1.5	74.0	58.4	0
6-12	4/11/2016 18:41	198.3	3.4	74.4	54.0	199.7	2.2	74.3	55.1	205.3	1.5	73.9	58.5	0
6-12	4/11/2016 18:42	198.3	2.3	74.4	54.2	195.4	3.0	74.3	55.0	206.1	1.5	73.9	58.4	0
6-12	4/11/2016 18:43	188.4	2.8	74.4	53.9	192.6	2.2	74.3	55.2	203.9	1.5	73.8	58.6	0
6-12	4/11/2016 18:44	192.6	1.7	74.4	54.4	194.0	1.5	74.1	56.1	203.9	0.7	73.7	59.6	0
6-12	4/11/2016 18:45	192.6	0.6	74.3	54.6	194.0	1.5	74.1	55.3	203.9	0.7	73.7	58.8	0
6-12	4/11/2016 18:46	192.6	1.1	74.3	54.6	194.0	1.5	74.1	56.0	203.9	0.7	73.7	59.6	0
6-12	4/11/2016 18:47	192.6	1.1	74.2	54.7	189.8	2.2	74.1	55.8	253.0	1.5	73.6	59.0	0
6-12	4/11/2016 18:48	175.2	1.1	74.3	55.0	185.6	1.5	74.0	56.6	326.0	1.5	73.6	60.0	0
6-12	4/11/2016 18:49	175.2	1.1	74.2	54.8	192.6	2.2	74.0	55.8	255.8	1.5	73.6	59.5	0
6-12	4/11/2016 18:50	175.2	1.7	74.2	55.0	328.8	1.5	73.9	56.8	180.0	0.7	73.5	60.4	0
6-12	4/11/2016 18:51	175.2	1.1	74.1	55.3	274.1	1.5	73.9	56.9	180.0	0.7	73.4	60.4	0
6-12	4/11/2016 18:52	175.2	1.7	74.1	55.3	175.2	1.5	73.8	57.1	180.0	0.7	73.4	60.6	0
6-12	4/11/2016 18:53	175.2	1.1	74.0	55.8	175.2	1.5	73.6	57.3	180.0	0.7	73.3	61.2	0
6-12	4/11/2016 18:54	175.2	0.6	73.9	56.1	175.2	1.5	73.6	57.7	180.0	0.7	73.3	61.1	0
6-12	4/11/2016 18:55	175.2	0.6	73.8	56.3	175.2	0.7	73.5	58.3	180.0	0.7	73.2	61.6	0
6-12	4/11/2016 18:56	175.2	0.0	73.6	56.4	175.2	0.7	73.3	58.4	180.0	0.0	73.1	61.7	0
6-12	4/11/2016 18:57	175.2	1.1	73.6	56.6	180.0	1.5	73.4	57.4	180.0	0.7	73.0	61.4	0
6-12	4/11/2016 18:58	168.2	2.6	73.8	55.7	168.2	4.5	73.6	56.5	162.6	3.0	73.0	60.2	0
6-12	4/11/2016 18:59	173.8	5.1	74.1	55.2	175.2	3.7	74.0	56.3	171.0	2.2	73.2	60.1	0
6-12	4/11/2016 19:00	168.2	3.4	74.2	55.0	158.3	3.0	74.0	56.1	158.3	2.2	73.3	60.2	0
6-12	4/11/2016 19:01	155.5	1.7	74.1	55.8	156.9	2.2	73.8	56.7	154.1	1.5	73.2	60.5	0
6-12	4/11/2016 19:02	158.3	2.3	73.9	55.8	168.2	3.0	73.6	56.5	154.1	1.5	73.1	60.3	0
6-12	4/11/2016 19:03	171.0	2.6	73.8	55.8	233.3	2.2	73.6	56.7	181.4	1.5	73.1	60.4	0
6-12	4/11/2016 19:04	175.2	1.7	73.8	55.9	175.2	1.5	73.5	57.6	181.4	0.7	73.0	61.1	0
6-12	4/11/2016 19:05	175.2	1.7	73.7	55.9	175.2	2.2	73.5	57.1	180.0	1.5	73.0	60.7	0
6-12	4/11/2016 19:06	171.0	2.3	73.7	56.0	171.0	1.5	73.4	57.9	180.0	0.7	72.9	61.4	0
6-12	4/11/2016 19:07	171.0	0.6	73.6	56.5	169.6	1.5	73.2	58.0	181.4	0.7	72.8	61.7	0
6-12	4/11/2016 19:08	164.0	1.7	73.5	56.1	165.4	2.2	73.4	56.9	172.4	1.5	72.8	60.6	0
6-12	4/11/2016 19:09	172.4	2.3	73.7	55.9	166.8	1.5	73.4	57.5	168.2	1.5	72.8	61.3	0
6-12	4/11/2016 19:10	172.4	0.6	73.6	56.5	169.6	1.5	73.3	57.0	168.2	0.7	72.7	61.0	0
6-12	4/11/2016 19:11	172.4	1.1	73.6	56.3	175.2	1.5	73.3	57.3	169.6	0.7	72.7	61.3	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
6-12	4/11/2016 19:12	172.4	1.1	73.5	56.5	175.2	1.5	73.2	58.1	168.2	0.7	72.7	61.9	0
6-12	4/11/2016 19:13	172.4	1.1	73.4	57.0	169.6	2.2	73.1	58.5	165.4	1.5	72.6	62.0	0
6-12	4/11/2016 19:14	172.4	2.3	73.3	56.8	304.9	2.2	73.0	58.5	173.8	1.5	72.6	61.9	0
6-12	4/11/2016 19:15	173.8	1.7	73.3	56.8	326.8	1.5	73.1	57.9	175.2	0.7	72.5	62.0	0
6-12	4/11/2016 19:16	173.8	1.1	73.3	56.8	328.8	1.5	73.1	58.5	175.2	0.7	72.5	62.2	0
6-12	4/11/2016 19:17	173.8	0.6	73.2	57.3	328.8	1.5	72.9	58.7	175.2	0.7	72.4	62.5	0
6-12	4/11/2016 19:18	173.8	1.7	73.2	57.3	326.0	2.2	72.9	58.5	175.2	1.5	72.4	62.5	0
6-12	4/11/2016 19:19	171.0	2.3	73.3	56.9	168.2	2.2	73.1	58.1	166.8	1.5	72.4	61.7	0
6-12	4/11/2016 19:20	169.6	1.1	73.2	57.4	182.8	2.2	73.0	58.1	175.2	1.5	72.4	61.8	0
6-12	4/11/2016 19:21	189.8	2.8	73.2	57.2	188.4	2.2	73.0	58.1	199.7	1.5	72.4	61.8	0
6-12	4/11/2016 19:22	168.2	1.1	73.2	57.1	173.8	1.5	73.0	58.7	162.6	0.7	72.4	62.4	0
6-12	4/11/2016 19:23	166.8	0.6	73.1	57.1	173.8	1.5	72.9	58.4	162.6	0.7	72.3	62.6	0
6-12	4/11/2016 19:24	162.6	1.1	73.1	57.3	173.8	2.2	72.8	58.9	168.2	1.5	72.3	62.6	0
6-12	4/11/2016 19:25	169.6	2.3	73.0	57.4	189.8	2.2	72.7	59.0	180.0	1.5	72.2	62.8	0
6-12	4/11/2016 19:26	187.0	1.1	73.0	57.4	192.6	1.5	72.7	58.5	185.6	0.7	72.1	62.1	0
6-12	4/11/2016 19:27	187.0	1.1	73.0	57.4	192.6	1.5	72.7	58.7	185.6	0.7	72.1	62.5	0
6-12	4/11/2016 19:28	187.0	0.0	73.0	57.7	191.2	1.5	72.6	58.9	185.6	0.7	72.1	62.6	0
6-12	4/11/2016 19:29	182.8	1.1	72.9	57.8	201.1	2.2	72.7	58.5	175.2	1.5	72.1	62.4	0
6-12	4/11/2016 19:30	155.5	2.3	73.1	56.9	155.5	2.2	72.9	58.7	166.8	1.5	72.1	62.3	0
6-12	4/11/2016 19:31	155.5	1.1	73.0	57.5	162.6	1.5	72.7	58.6	166.8	0.7	72.1	62.8	0
6-12	4/11/2016 19:32	155.5	1.7	73.0	57.2	165.4	2.2	72.7	58.3	166.8	1.5	72.1	62.3	0
6-12	4/11/2016 19:33	155.5	1.1	73.0	57.3	158.3	1.5	72.7	58.8	166.8	0.7	72.1	62.6	0
6-12	4/11/2016 19:34	155.5	0.6	72.8	57.8	158.3	1.5	72.5	59.0	166.8	0.7	72.0	62.8	0
6-12	4/11/2016 19:35	155.5	1.1	72.7	57.9	159.7	1.5	72.4	59.6	166.8	0.7	71.9	63.4	0
6-12	4/11/2016 19:36	155.5	0.0	72.6	58.3	159.7	0.7	72.3	59.8	166.8	0.0	71.9	63.7	0
6-12	4/11/2016 19:37	155.5	0.6	72.6	58.1	162.6	1.5	72.3	59.8	166.8	0.7	71.8	63.4	0
6-12	4/11/2016 19:38	168.2	1.1	72.6	58.2	175.2	1.5	72.4	60.1	166.8	1.5	71.8	63.2	0
6-12	4/11/2016 19:39	172.4	0.6	72.5	58.7	175.2	0.7	72.2	60.2	166.8	0.7	71.7	63.9	0
6-12	4/11/2016 19:40	172.4	0.0	72.4	58.9	175.2	0.7	72.1	60.7	166.8	0.0	71.7	64.1	0
6-12	4/11/2016 19:41	172.4	0.0	72.3	59.0	175.2	0.7	71.8	61.7	166.8	0.0	71.6	65.1	0
6-12	4/11/2016 19:42	172.4	0.0	72.1	59.6	175.2	0.7	71.6	62.1	166.8	0.0	71.4	65.6	0
6-12	4/11/2016 19:43	171.0	0.6	71.9	60.1	175.2	1.5	71.6	61.7	166.8	0.7	71.3	65.2	0
6-12	4/11/2016 19:44	171.0	1.7	72.0	59.8	173.8	1.5	71.7	61.3	166.8	1.5	71.2	64.7	0
6-12	4/11/2016 19:45	171.0	0.6	72.1	59.9	173.8	1.5	71.7	61.0	166.8	0.7	71.1	65.1	0
6-12	4/11/2016 19:46	171.0	0.6	72.2	59.2	173.8	0.7	71.8	61.0	166.8	0.7	71.1	64.7	0
6-12	4/11/2016 19:47	171.0	1.1	72.2	59.2	173.8	2.2	72.0	60.4	166.8	1.5	71.2	63.9	0
6-12	4/11/2016 19:48	171.0	2.3	72.4	58.6	166.8	3.0	72.3	59.4	161.2	1.5	71.3	63.6	0
6-12	4/11/2016 19:49	158.3	2.8	72.6	58.3	169.6	2.2	72.3	59.6	165.4	1.5	71.4	63.9	0
6-12	4/11/2016 19:50	159.7	1.7	72.5	58.5	169.6	1.5	72.2	60.3	165.4	0.7	71.4	64.2	0
6-12	4/11/2016 19:51	159.7	0.0	72.4	59.1	169.6	0.7	71.9	60.6	165.4	0.0	71.4	64.8	0
6-12	4/11/2016 19:52	159.7	0.6	72.2	58.9	169.6	1.5	71.9	60.8	165.4	0.7	71.3	64.2	0
6-12	4/11/2016 19:53	159.7	0.6	72.1	59.2	161.2	1.5	71.6	61.0	164.0	0.7	71.2	64.5	0
6-12	4/11/2016 19:54	161.2	2.3	72.1	59.2	175.2	2.2	71.9	60.6	165.4	1.5	71.2	64.2	0
6-12	4/11/2016 19:55	166.8	1.1	72.1	59.4	175.2	1.5	71.8	60.9	165.4	0.7	71.2	64.6	0
6-12	4/11/2016 19:56	166.8	1.1	72.1	59.0	175.2	1.5	71.9	60.7	165.4	1.5	71.2	64.2	0
6-12	4/11/2016 19:57	166.8	0.6	72.1	59.3	175.2	0.7	71.8	60.7	165.4	0.7	71.2	64.4	0
6-12	4/11/2016 19:58	166.8	0.0	72.0	59.5	175.2	0.7	71.6	61.3	165.4	0.0	71.1	65.1	0
6-12	4/11/2016 19:59	166.8	0.0	71.8	59.8	175.2	0.7	71.4	61.3	165.4	0.0	71.0	65.0	0
6-12	4/11/2016 20:00	166.8	1.1	71.7	59.8	162.6	1.5	71.5	61.8	155.5	1.5	71.0	65.0	0
6-12	4/11/2016 20:01	166.8	1.1	71.7	60.1	156.9	1.5	71.3	61.9	151.3	0.7	70.8	65.4	0
6-12	4/11/2016 20:02	166.8	0.6	71.6	60.2	156.9	1.5	71.4	61.8	151.3	0.7	70.8	65.4	0
6-12	4/11/2016 20:03	166.8	1.1	71.6	60.3	156.9	1.5	71.4	61.9	151.3	0.7	70.7	65.4	0
6-12	4/11/2016 20:04	166.8	0.0	71.6	60.6	156.9	0.7	71.2	62.3	151.3	0.7	70.7	66.1	0
6-12	4/11/2016 20:05	166.8	0.6	71.4	60.9	156.9	1.5	71.2	62.4	151.3	0.7	70.6	65.8	0
6-12	4/11/2016 20:06	166.8	1.1	71.5	60.8	156.9	2.2	71.4	62.0	151.3	1.5	70.6	65.5	0
6-12	4/11/2016 20:07	166.8	0.6	71.5	61.0	158.3	1.5	71.2	62.7	151.3	0.7	70.6	66.3	0
6-12	4/11/2016 20:08	166.8	0.0	71.3	61.4	158.3	1.5	71.0	62.8	151.3	0.7	70.5	66.5	0
6-12	4/11/2016 20:09	166.8	1.1	71.3	61.2	158.3	1.5	71.1	62.5	151.3	0.7	70.5	66.3	0
6-12	4/11/2016 20:10	166.8	1.7	71.4	61.2	158.3	2.2	71.1	62.4	151.3	1.5	70.4	66.4	0
6-12	4/11/2016 20:11	166.8	1.1	71.4	61.4	156.9	1.5	71.1	62.5	151.3	0.7	70.4	66.6	0
6-12	4/11/2016 20:12	164.0	1.1	71.4	61.8	151.3	2.2	71.0	63.0	149.9	1.5	70.3	66.8	0
6-12	4/11/2016 20:13	151.3	1.7	71.3	61.6	147.1	2.2	71.0	62.9	147.1	1.5	70.3	66.4	0
6-12	4/11/2016 20:14	145.7	1.7	71.3	61.7	144.3	2.2	71.1	63.0	141.5	1.5	70.4	66.3	0
6-12	4/11/2016 20:15	140.1	2.3	71.3	62.5	141.5	3.0	71.1	62.6	137.3	2.2	70.5	66.1	0
6-12	4/11/2016 20:16	135.9	2.8	71.4	61.6	145.7	3.0	71.3	62.4	147.1	2.2	70.5	66.0	0
6-12	4/11/2016 20:17	152.7	2.8	71.4	61.6	144.3	3.0	71.2	62.8	144.3	1.5	70.5	66.5	0
6-12	4/11/2016 20:18	149.9	2.8	71.5	61.4	151.3	3.0	71.2	62.6	151.3	2.2	70.5	66.5	0
6-12	4/11/2016 20:19	151.3	2.3	71.4	61.3	156.9	2.2	71.3	62.8	148.5	1.5	70.5	66.4	0
6-12	4/11/2016 20:20	155.5	1.7	71.4	61.6	155.5	2.2	71.1	62.8	149.9	1.5	70.5	66.3	0
6-12	4/11/2016 20:21	152.7	2.3	71.3	61.8	156.9	3.0	71.1	62.7	155.5	2.2	70.5	66.0	0
6-12	4/11/2016 20:22	159.7	3.4	71.4	61.4	152.7	3.0	71.2	62.2	152.7	2.2	70.5	65.7	0
6-12	4/11/2016 20:23	145.7	2.8	71.5	61.1	154.1	3.0	71.3	62.5	148.5	2.2	70.5	66.0	0
6-12	4/11/2016 20:24	169.6	1.7	71.4	61.4	159.7	2.2	71.2	62.1	148.5	1.5	70.5	65.6	0
6-12	4/11/2016 20:25	166.8	1.7	71.4	61.4	159.7	1.5	71.1	62.7	148.5	0.7	70.5	66.0	0
6-12	4/11/2016 20:26	166.8	1.1	71.2	61.5	159.7	1.5	70.9	63.2	148.5	0.7	70.4	66.4	0
6-12	4/11/2016 20:27	165.4	0.0	71.0	61.8	158.3	1.5	70.7	63.3	148.5	0.7	70.2	66.5	0
6-12	4/11/2016 20:28	161.2	1.1	71.0	61.9	151.3	1.5	70.7	63.3	148.5	1.5	70.2	66.6	0
6-12	4/11/2016 20:29	159.7	1.1	70.9	62.1	155.5	2.2	70.6	63.3	149.9	1.5	70.1	66.7	0
6-12	4/11/2016 20:30	159.7	2.3	70.9	62.3	154.1	1.5	70.6	63.4	151.3	0.7	70.0	66.8	0
6-12	4/11/2016 20:31	158.3	0.6	70.8	62.6	152.7	2.2	70.6	63.6	149.9	1.5	69.9	66.9	0
6-12	4/11/2016 20:32	147.1	2.3	70.8	62.5	148.5	2.2	70.5	63.7	148.5	1.5	69.9	67.1	0
6-12	4/11/2016 20:33	145.7	2.3	70.8	62.4	144.3	2.2	70.6	63.4	144.3	1.5	69.9	66.9	0
6-12	4/11/2016 20:34	151.3	2.3	70.9	62.2	147.1	1.5	70.5	63.7	142.9	0.7	69.9	67.2	0
6-12	4/11/2016 20:35	151.3	0.6	70.8	62.6	147.1	1.5	70.4	64.2	142.9	0.7	69.8	67.6	0
6-12	4/11/2016 20:36	151.3	1.7	70.7	62.5	152.7	2.2	70.5	63.8	144.3	1.5	69.8	67.2	0
6-12	4/11/2016 20:37	151.3	1.7	70.7	62.4	152.7	2.2	70.5	64.1	159.7	1.5	69.8	67.5	0
6-12	4/11/2016 20:38	151.3	1.7	70.7	62.5	152.7	2.2	70.4	64.0	158.3	1.5	69.8	67.4	0
6-12	4/11/2016 20:39	151.3	1.7	70.7	62.3	155.5	2.2	70.6	63.7	156.9	1.5	69.8	67.0	0
6-12	4/11/2016 20:40	151.3	1.1	70.7	62.5	158.3	2.2	70.5	63.8	155.5	1.5	69.8	67.4	0
6-12	4/11/2016 20:41	159.7	2.8	70.7	62.6	158.3	2.2	70.5	63.5	152.7	1.5	69.8	67.2	0
6-12	4/11/2016 20:42	159.7	1.7	70.7	62.6	158.3	2.2	70.4	64.0	152.7	1.5	69.7	67.7	0
6-12	4/11/2016 20:43	158.3	2.8	70.6	62.5	151.3	3.0	70.5	63.7	148.5	2.2	69.8	67.3	0
6-12	4/11/2016 20:44	148.5	2.3	70.6	62.7	148.5	2.2	70.4	63.9	147.1	1.5	69.7	67.3	0
6-12	4/11/2016 20:45	149.9	1.7	70.6	63.0	145.7	1.5	70.2	64.2	147.1	0.7	69.6	67.7	0
6-12	4/11/2016 20:46	149.9	1.1	70.4	62.9	145.7	1.5	70.2	64.2	147.1	0.7	69.6	67.5	0
6-12	4/11/2016 20:47	151.3	0.6	70.3	63.5	162.6	1.5	70.1	64.6	147.1	1.5	69.5	67.6	0
6-12	4/11/2016 20:48	156.9	1.7	70.3	63.2	148.5	2.2	70.2	64.2	142.9	1.5	69.5	67.4	0
6-12	4/11/2016 20:49	155.5	1.7	70.4	63.0	159.7	2.2	70.1	64.7	159.7	1.5	69.5	67.7	0
6-12	4/11/2016 20:50	156.9	0.6	70.2	63.3	159.7	0.7	69.9	64.7	161.2	0.7	69.4	68.0	0
6-12	4/11/2016 20:51	156.9	0.0	70.1	63.9	159.7	1.5	69.9	64.6	158.3	0.7	69.4	67.8	0
6-12	4/11/2016 20:52	156.9	2.3	70.2	63.9	155.5	2.2	69.9	64.9	152.7	1.5	69.3	68.1	0
6-12	4/11/2016 20:53	155.5	1.1	70.1	64.1	155.5	2.2	69.8	65.1	152.7	0.7	69.3	68.3	0
6-12	4/11/2016 20:54	154.1	2.3	70.0	64.0	147.1	2.2	69.7	65.5	152.7	1.5	69.2	68.7	0
6-12	4/11/2016 20:55	142.9	2.3	69.9	64.1	149.9	3.0	69.8	65.0	142.9	2.2	69.1	68.3	0
6-12	4/11/2016 20:56	151.3	3.4	70.2	63.6	158.3	3.7	70.2	64.5	154.1	3.0	69.3	67.6	0
6-12	4/11/2016 20:57	158.3	4.5	70.4	63.3	158.3	3.7	70.2	64.5	158.3	2.2	69.5	67.8	0
6-12	4/11/2016 20:58	145.7	2.8	70.3	63.3	162.6	3.0	70.1	64.7	156.9	2.2	69.5	67.9	0
6-12	4/11/2016 20:59	156.9	3.9	70.2	63.6	161.2	3.7	70.0	64.5	156.9	2.2	69.4	67.7	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/11/2016 21:00	156.9	3.9	70.2	63.8	156.9	3.0	69.9	65.1	151.3	2.2	69.3	68.3	0
12-24	4/11/2016 21:01	161.2	3.9	70.0	64.0	164.0	4.5	69.9	64.9	159.7	3.0	69.3	67.9	0
12-24	4/11/2016 21:02	161.2	4.5	70.2	63.5	165.4	3.7	70.1	64.7	155.5	3.0	69.4	67.7	0
12-24	4/11/2016 21:03	161.2	4.5	70.2	63.4	169.6	3.7	70.1	64.7	171.0	3.0	69.4	67.8	0
12-24	4/11/2016 21:04	171.0	4.5	70.2	63.4	172.4	4.5	70.0	64.7	168.2	3.0	69.4	68.1	0
12-24	4/11/2016 21:05	161.2	5.1	70.3	63.3	166.8	4.5	70.1	64.2	161.2	3.7	69.4	67.8	0
12-24	4/11/2016 21:06	159.7	5.1	70.3	63.2	162.6	3.7	70.0	64.6	162.6	3.0	69.4	68.0	0
12-24	4/11/2016 21:07	164.0	3.9	70.2	63.4	166.8	4.5	69.9	64.4	166.8	3.0	69.3	68.1	0
12-24	4/11/2016 21:08	155.5	5.6	70.2	63.6	161.2	5.2	69.9	65.1	159.7	3.7	69.3	68.6	0
12-24	4/11/2016 21:09	161.2	5.6	70.0	63.8	161.2	4.5	69.6	65.4	155.5	3.0	69.1	69.0	0
12-24	4/11/2016 21:10	156.9	4.5	69.7	64.4	155.5	4.5	69.4	65.9	155.5	3.0	68.9	69.4	0
12-24	4/11/2016 21:11	158.3	5.1	69.6	64.6	155.5	4.5	69.4	66.2	151.3	3.7	68.8	69.7	0
12-24	4/11/2016 21:12	147.1	3.9	69.4	65.2	154.1	3.0	69.2	66.8	147.1	2.2	68.7	70.2	0
12-24	4/11/2016 21:13	152.7	3.9	69.3	65.1	159.7	3.7	69.1	67.3	148.5	3.0	68.6	70.2	0
12-24	4/11/2016 21:14	169.6	5.1	69.3	65.4	168.2	4.5	69.3	66.6	168.2	3.7	68.5	70.2	0
12-24	4/11/2016 21:15	169.6	5.1	69.4	65.2	175.2	3.7	69.2	66.8	175.2	2.2	68.5	70.7	0
12-24	4/11/2016 21:16	164.0	2.8	69.3	65.7	164.0	2.2	69.0	67.5	158.3	1.5	68.4	71.0	0
12-24	4/11/2016 21:17	164.0	3.4	69.2	65.6	168.2	3.0	68.9	67.8	165.4	2.2	68.3	71.4	0
12-24	4/11/2016 21:18	172.4	3.4	69.0	66.4	175.2	3.7	68.7	67.9	171.0	2.2	68.1	71.5	0
12-24	4/11/2016 21:19	171.0	3.4	68.9	66.4	175.2	3.0	68.7	68.4	171.0	2.2	68.1	71.8	0
12-24	4/11/2016 21:20	171.0	3.4	68.9	66.8	180.0	3.0	68.5	69.1	185.6	2.2	68.0	72.2	0
12-24	4/11/2016 21:21	180.0	3.4	68.7	67.4	254.4	3.0	68.4	68.8	189.8	2.2	67.8	72.6	0
12-24	4/11/2016 21:22	175.2	2.3	68.6	67.5	175.2	2.2	68.2	70.1	185.6	1.5	67.7	73.3	0
12-24	4/11/2016 21:23	172.4	3.4	68.4	68.3	166.8	3.0	68.1	70.1	189.8	2.2	67.5	73.3	0
12-24	4/11/2016 21:24	162.6	4.5	68.4	68.1	172.4	3.7	68.2	70.2	172.4	3.0	67.5	73.4	0
12-24	4/11/2016 21:25	173.8	5.1	68.5	67.8	187.0	4.5	68.4	69.5	201.1	3.0	67.5	73.0	0
12-24	4/11/2016 21:26	175.2	3.9	68.6	68.1	184.2	3.0	68.1	70.8	180.0	2.2	67.5	73.9	0
12-24	4/11/2016 21:27	175.2	2.8	68.4	68.2	175.2	3.7	68.2	70.3	168.2	2.2	67.5	73.3	0
12-24	4/11/2016 21:28	173.8	3.4	68.4	68.5	185.6	3.0	68.1	70.3	192.6	2.2	67.5	73.5	0
12-24	4/11/2016 21:29	175.2	4.5	68.4	68.0	175.2	3.0	68.2	70.1	206.7	2.2	67.5	73.4	0
12-24	4/11/2016 21:30	172.4	2.8	68.4	68.1	166.8	3.7	68.3	69.7	171.0	2.2	67.5	73.2	0
12-24	4/11/2016 21:31	165.4	3.9	68.5	68.2	168.8	3.7	68.3	69.9	159.7	2.2	67.6	73.1	0
12-24	4/11/2016 21:32	166.8	3.9	68.6	67.9	168.2	3.0	68.3	69.9	166.8	2.2	67.6	73.1	0
12-24	4/11/2016 21:33	172.4	3.4	68.5	68.0	175.2	3.7	68.3	69.3	173.8	2.2	67.8	72.8	0
12-24	4/11/2016 21:34	166.8	5.1	68.7	67.5	164.0	5.2	68.7	68.2	162.6	3.7	67.8	72.0	0
12-24	4/11/2016 21:35	162.6	6.2	69.0	66.5	166.8	5.2	69.0	67.7	162.6	3.7	68.1	71.4	0
12-24	4/11/2016 21:36	165.4	5.6	69.2	66.4	159.7	3.7	69.0	67.6	155.5	3.0	68.2	71.1	0
12-24	4/11/2016 21:37	154.1	4.5	69.1	66.4	164.0	4.5	68.9	67.4	158.3	3.0	68.3	70.8	0
12-24	4/11/2016 21:38	155.5	3.9	69.0	66.5	158.3	3.7	68.8	67.6	152.7	3.0	68.3	71.0	0
12-24	4/11/2016 21:39	165.4	3.9	68.9	66.8	156.9	3.7	68.7	67.9	161.2	3.0	68.2	71.0	0
12-24	4/11/2016 21:40	152.7	5.1	68.9	66.5	144.3	5.2	68.8	67.3	144.3	3.7	68.2	70.5	0
12-24	4/11/2016 21:41	149.9	5.6	69.0	66.1	159.7	4.5	68.9	67.7	155.5	3.0	68.3	70.7	0
12-24	4/11/2016 21:42	159.7	3.9	68.9	66.6	154.1	3.7	68.7	67.4	148.5	3.0	68.2	70.6	0
12-24	4/11/2016 21:43	151.3	4.5	68.9	66.5	152.7	4.5	68.7	67.3	149.9	3.0	68.2	70.3	0
12-24	4/11/2016 21:44	148.5	5.6	69.0	65.9	147.1	4.5	68.9	67.3	142.9	3.7	68.3	70.5	0
12-24	4/11/2016 21:45	147.1	3.9	69.0	65.9	158.3	4.5	68.9	66.9	148.5	3.0	68.3	70.2	0
12-24	4/11/2016 21:46	164.0	5.1	69.0	66.1	164.0	4.5	68.9	66.8	161.2	3.0	68.2	70.1	0
12-24	4/11/2016 21:47	155.5	3.9	69.0	66.0	151.3	3.7	68.8	67.0	149.9	2.2	68.2	70.3	0
12-24	4/11/2016 21:48	145.7	3.9	68.9	66.1	138.7	3.7	68.6	67.3	138.7	3.0	68.1	70.6	0
12-24	4/11/2016 21:49	152.7	5.6	68.7	66.2	159.7	4.5	68.5	67.4	158.3	3.0	68.0	70.5	0
12-24	4/11/2016 21:50	137.3	3.9	68.7	66.4	145.7	4.5	68.4	67.3	144.3	3.0	67.8	70.5	0
12-24	4/11/2016 21:51	141.5	4.5	68.7	66.4	131.7	3.7	68.4	67.9	131.7	3.0	67.8	71.2	0
12-24	4/11/2016 21:52	149.9	5.1	68.6	66.2	149.9	6.0	68.5	67.6	154.1	4.5	67.8	70.9	0
12-24	4/11/2016 21:53	135.9	5.6	68.7	66.2	141.5	3.7	68.4	67.5	135.9	3.0	67.8	71.0	0
12-24	4/11/2016 21:54	140.1	2.8	68.5	66.8	140.1	3.7	68.3	67.5	137.3	2.2	67.7	70.9	0
12-24	4/11/2016 21:55	144.3	3.9	68.4	67.0	149.9	3.7	68.1	68.4	147.1	2.2	67.5	71.6	0
12-24	4/11/2016 21:56	147.1	3.4	68.2	67.2	154.1	3.0	68.1	68.0	149.9	2.2	67.5	71.1	0
12-24	4/11/2016 21:57	159.7	4.5	68.2	67.3	164.0	4.5	68.1	68.1	158.3	3.0	67.5	71.2	0
12-24	4/11/2016 21:58	155.5	5.1	68.3	67.1	158.3	4.5	68.2	67.6	156.9	3.0	67.5	70.9	0
12-24	4/11/2016 21:59	162.6	5.1	68.5	66.5	169.6	5.2	68.4	67.4	169.6	3.7	67.6	70.7	0
12-24	4/11/2016 22:00	171.0	5.6	68.5	66.4	173.8	3.7	68.2	67.8	172.4	3.0	67.6	71.1	0
12-24	4/11/2016 22:01	168.2	3.9	68.3	66.8	172.4	3.7	68.1	67.6	165.4	2.2	67.5	70.9	0
12-24	4/11/2016 22:02	158.3	4.5	68.3	66.6	171.0	3.7	68.0	68.3	175.2	2.2	67.5	71.3	0
12-24	4/11/2016 22:03	172.4	3.4	68.1	67.0	182.8	2.2	67.8	69.0	181.4	1.5	67.4	71.7	0
12-24	4/11/2016 22:04	171.0	2.3	67.8	67.5	175.2	3.0	67.5	69.2	227.7	1.5	67.2	71.7	0
12-24	4/11/2016 22:05	175.2	2.8	67.6	68.0	172.4	3.7	67.5	68.6	253.0	2.2	67.1	71.2	0
12-24	4/11/2016 22:06	171.0	5.1	67.9	67.5	173.8	3.0	67.6	68.8	172.4	2.2	67.2	71.3	0
12-24	4/11/2016 22:07	168.2	3.4	67.9	66.9	181.4	4.5	67.8	68.2	175.2	3.0	67.2	70.8	0
12-24	4/11/2016 22:08	168.2	5.6	68.1	66.1	162.6	5.2	68.1	67.0	159.7	3.7	67.3	70.3	0
12-24	4/11/2016 22:09	158.3	5.6	68.4	65.6	165.4	3.7	68.1	66.9	162.6	3.0	67.4	70.4	0
12-24	4/11/2016 22:10	165.4	3.4	68.3	65.7	164.0	4.5	68.3	66.2	165.4	3.0	67.5	69.5	0
12-24	4/11/2016 22:11	162.6	4.5	68.4	65.3	175.2	3.0	68.3	66.2	171.0	2.2	67.5	69.5	0
12-24	4/11/2016 22:12	171.0	3.4	68.4	65.3	172.4	3.0	68.1	66.4	180.0	2.2	67.5	69.6	0
12-24	4/11/2016 22:13	162.6	2.8	68.3	65.4	175.2	3.0	68.0	66.6	171.0	2.2	67.4	69.6	0
12-24	4/11/2016 22:14	175.2	3.9	68.1	65.3	175.2	3.7	68.0	66.3	205.3	2.2	67.4	69.5	0
12-24	4/11/2016 22:15	173.8	3.9	68.3	65.2	173.8	3.0	68.0	66.2	181.4	1.5	67.3	69.4	0
12-24	4/11/2016 22:16	161.2	2.3	68.1	65.1	169.6	3.0	68.0	65.8	168.2	1.5	67.3	69.1	0
12-24	4/11/2016 22:17	172.4	4.5	68.2	64.9	169.6	4.5	68.1	65.8	162.6	3.0	67.4	69.1	0
12-24	4/11/2016 22:18	159.7	5.1	68.4	64.5	159.7	5.2	68.3	65.2	154.1	3.7	67.5	68.6	0
12-24	4/11/2016 22:19	156.9	5.1	68.5	63.7	155.5	3.7	68.4	64.8	154.1	3.0	67.6	68.2	0
12-24	4/11/2016 22:20	152.7	3.4	68.6	63.7	152.7	3.7	68.4	64.9	156.9	2.2	67.6	68.2	0
12-24	4/11/2016 22:21	156.9	2.8	68.5	64.0	162.6	2.2	68.1	65.5	149.9	1.5	67.5	68.6	0
12-24	4/11/2016 22:22	175.2	2.3	68.2	64.2	171.0	2.2	67.9	65.7	151.3	1.5	67.4	68.7	0
12-24	4/11/2016 22:23	168.2	2.8	68.1	64.1	159.7	3.0	67.9	65.4	161.2	2.2	67.3	68.3	0
12-24	4/11/2016 22:24	161.2	2.3	68.1	64.4	171.0	2.2	67.7	66.1	164.0	1.5	67.2	69.0	0
12-24	4/11/2016 22:25	172.4	1.7	68.0	64.4	172.4	2.2	67.8	65.7	162.6	1.5	67.2	68.5	0
12-24	4/11/2016 22:26	175.2	2.3	68.0	64.5	166.8	2.2	67.7	65.7	162.6	1.5	67.1	68.7	0
12-24	4/11/2016 22:27	175.2	2.8	68.0	64.4	173.8	3.0	67.8	65.2	169.6	2.2	67.1	68.3	0
12-24	4/11/2016 22:28	172.4	3.4	68.0	64.2	175.2	2.2	67.7	65.6	173.8	1.5	67.1	68.8	0
12-24	4/11/2016 22:29	175.2	1.7	67.9	64.3	172.4	2.2	67.5	65.6	171.0	1.5	66.9	68.9	0
12-24	4/11/2016 22:30	165.4	2.8	67.9	64.2	166.8	2.2	67.5	65.9	175.2	1.5	66.9	69.2	0
12-24	4/11/2016 22:31	161.2	1.7	67.7	64.6	162.6	3.0	67.4	65.7	161.2	2.2	66.8	68.8	0
12-24	4/11/2016 22:32	162.6	3.4	67.7	64.7	158.3	3.0	67.4	66.0	166.8	2.2	66.7	69.2	0
12-24	4/11/2016 22:33	156.9	3.4	67.7	64.5	159.7	3.0	67.5	65.7	155.5	2.2	66.7	69.0	0
12-24	4/11/2016 22:34	169.6	2.8	67.8	64.2	172.4	3.0	67.5	65.8	159.7	2.2	66.7	69.1	0
12-24	4/11/2016 22:35	162.6	2.3	67.8	64.4	156.9	2.2	67.5	65.4	151.3	1.5	66.8	68.8	0
12-24	4/11/2016 22:36	159.7	1.7	67.8	64.2	159.7	2.2	67.5	65.4	148.5	1.5	66.7	68.8	0
12-24	4/11/2016 22:37	155.5	2.3	67.8	64.0	162.6	2.2	67.5	65.6	156.9	1.5	66.7	68.9	0
12-24	4/11/2016 22:38	159.7	1.7	67.8	64.0	138.7	2.2	67.5	65.5	159.7	1.5	66.7	68.8	0
12-24	4/11/2016 22:39	142.9	0.6	67.7	64.4	134.5	1.5	67.3	65.8	159.7	0.7	66.6	69.1	0
12-24	4/11/2016 22:40	142.9	1.1	67.6	64.4	137.3	1.5	67.2	66.2	156.9	0.7	66.6	69.2	0
12-24	4/11/2016 22:41	142.9	0.6	67.4	64.8	140.1	1.5	66.9	66.1	156.9	0.7	66.4	69.4	0
12-24	4/11/2016 22:42	145.7	1.1	67.4	64.8	154.1	1.5	67.1	66.1	156.9	1.5	66.5	69.1	0
12-24	4/11/2016 22:43	147.1	1.1	67.4	64.6	155.5	2.2	67.2	66.0	156.9	0.7	66.4	69.1	0
12-24	4/11/2016 22:44	148.5	1.7	67.5	64.5	156.9	1.5	67.1	66.2	156.9	0.7	66.4	69.5	0
12-24	4/11/2016 22:45	149.9	1.1	67.5	64.6	156.9	1.5	67.0	66.3	156.9	0.7	66.3	69.6	0
12-24	4/11/2016 22:46	151.3	1.1	67.3	64.8	161.2	2.2	67.1	65.9	165.4	1.5	66.3	69.5	0
12-24	4/11/2016 22:47	155.5	2.8	67.4	64.6	158.3	3.0	67.1	66.2	154.1	1.5	66.2	69.7	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
12-24	4/11/2016 22:48	154.1	1.7	67.2	64.9	166.8	2.2	66.9	66.2	154.1	1.5	66.2	69.6	0
12-24	4/11/2016 22:49	164.0	2.3	67.3	64.8	169.6	2.2	67.1	65.8	155.5	1.5	66.2	69.4	0
12-24	4/11/2016 22:50	172.4	2.8	67.4	64.4	181.4	3.0	67.2	65.5	162.6	2.2	66.3	69.1	0
12-24	4/11/2016 22:51	172.4	2.3	67.5	64.2	173.8	2.2	67.3	65.3	161.2	1.5	66.3	69.2	0
12-24	4/11/2016 22:52	173.8	1.7	67.6	64.0	175.2	2.2	67.3	65.2	166.8	1.5	66.3	69.1	0
12-24	4/11/2016 22:53	169.6	2.8	67.7	63.5	173.8	3.0	67.7	64.2	175.2	2.2	66.6	68.2	0
12-24	4/11/2016 22:54	172.4	2.3	67.9	63.2	175.2	2.2	67.7	64.2	180.0	1.5	66.6	68.4	0
12-24	4/11/2016 22:55	159.7	1.1	67.8	63.3	175.2	1.5	67.5	64.7	180.0	0.7	66.6	68.7	0
12-24	4/11/2016 22:56	159.7	0.6	67.6	63.7	168.2	1.5	67.3	64.8	175.2	0.7	66.6	68.6	0
12-24	4/11/2016 22:57	147.1	1.7	67.6	63.5	142.9	1.5	67.2	64.9	123.2	1.5	66.6	68.4	0
12-24	4/11/2016 22:58	142.9	1.1	67.5	63.5	151.3	2.2	67.3	64.6	123.2	1.5	66.6	68.1	0
12-24	4/11/2016 22:59	144.3	1.7	67.6	63.3	152.7	2.2	67.5	64.2	138.7	1.5	66.6	68.0	0
12-24	4/11/2016 23:00	156.9	2.8	67.7	63.1	161.2	2.2	67.5	64.4	148.5	1.5	66.6	68.0	0
12-24	4/11/2016 23:01	159.7	1.1	67.6	63.3	156.9	2.2	67.4	64.3	148.5	1.5	66.6	67.9	0
12-24	4/11/2016 23:02	158.3	1.1	67.6	63.4	155.5	1.5	67.3	64.5	148.5	0.7	66.6	68.2	0
12-24	4/11/2016 23:03	158.3	0.6	67.5	63.6	156.9	1.5	67.2	64.6	151.3	1.5	66.5	68.2	0
12-24	4/11/2016 23:04	166.8	1.7	67.4	63.5	161.2	2.2	67.2	64.4	151.3	1.5	66.5	67.9	0
12-24	4/11/2016 23:05	152.7	2.8	67.6	63.0	147.1	2.2	67.4	64.5	134.5	1.5	66.6	67.9	0
12-24	4/11/2016 23:06	137.3	0.0	67.5	63.6	147.1	1.5	67.2	64.5	128.9	0.7	66.6	68.1	0
12-24	4/11/2016 23:07	138.7	1.7	67.5	63.3	164.0	2.2	67.3	64.4	137.3	1.5	66.6	67.7	0
12-24	4/11/2016 23:08	156.9	2.3	67.5	63.3	164.0	2.2	67.3	64.4	149.9	1.5	66.6	67.8	0
12-24	4/11/2016 23:09	156.9	2.8	67.6	62.7	156.9	3.0	67.5	63.9	156.9	2.2	66.8	67.6	0
12-24	4/11/2016 23:10	162.6	1.1	67.6	63.0	165.4	1.5	67.3	64.5	169.6	0.7	66.7	68.1	0
12-24	4/11/2016 23:11	162.6	0.6	67.4	63.5	169.6	2.2	67.2	64.2	169.6	1.5	66.6	67.9	0
12-24	4/11/2016 23:12	165.4	2.8	67.5	63.0	165.4	2.2	67.4	64.5	161.2	1.5	66.7	67.9	0
12-24	4/11/2016 23:13	164.0	0.6	67.4	63.7	165.4	0.7	67.1	65.4	161.2	0.7	66.6	68.6	0
12-24	4/11/2016 23:14	164.0	1.1	67.2	64.1	165.4	2.2	66.9	65.5	161.2	1.5	66.5	68.5	0
12-24	4/11/2016 23:15	164.0	1.1	67.0	64.4	166.8	1.5	66.6	66.6	161.2	0.7	66.4	69.3	0
12-24	4/11/2016 23:16	164.0	0.0	66.8	64.9	166.8	1.5	66.4	67.2	161.2	0.7	66.3	69.7	0
12-24	4/11/2016 23:17	165.4	1.1	66.7	65.3	169.6	1.5	66.4	67.4	161.2	0.7	66.1	70.0	0
12-24	4/11/2016 23:18	165.4	1.1	66.6	65.4	172.4	1.5	66.4	66.9	161.2	0.7	66.0	69.6	0
12-24	4/11/2016 23:19	175.2	1.7	66.7	65.2	175.2	2.2	66.5	66.7	161.2	1.5	66.0	69.6	0
12-24	4/11/2016 23:20	168.2	1.7	66.8	65.1	168.2	2.2	66.6	66.9	162.6	1.5	66.0	69.9	0
12-24	4/11/2016 23:21	169.6	1.7	66.8	65.1	171.0	1.5	66.6	66.5	162.6	0.7	65.9	69.8	0
12-24	4/11/2016 23:22	171.0	1.1	66.8	65.1	175.2	1.5	66.6	66.1	175.2	0.7	65.9	69.6	0
12-24	4/11/2016 23:23	175.2	2.3	66.9	65.0	180.0	2.2	66.6	66.7	188.4	1.5	65.9	69.8	0
12-24	4/11/2016 23:24	185.6	2.3	66.8	65.4	189.8	2.2	66.5	66.9	192.6	1.5	65.8	70.0	0
12-24	4/11/2016 23:25	192.6	1.7	66.7	65.6	202.5	2.2	66.5	66.4	196.8	1.5	65.8	69.6	0
12-24	4/11/2016 23:26	191.2	2.8	66.9	65.0	188.4	2.2	66.9	65.6	198.3	2.2	66.0	69.0	0
12-24	4/11/2016 23:27	182.8	2.3	67.0	64.5	175.2	2.2	66.9	65.3	191.2	1.5	66.1	69.0	0
12-24	4/11/2016 23:28	166.8	2.8	67.2	64.0	172.4	3.0	67.0	65.3	165.4	1.5	66.2	68.9	0
12-24	4/11/2016 23:29	159.7	2.8	67.2	63.5	161.2	3.7	67.2	64.4	155.5	2.2	66.3	68.2	0
12-24	4/11/2016 23:30	152.7	3.9	67.6	62.6	147.1	3.0	67.5	63.9	142.9	2.2	66.5	67.6	0
12-24	4/11/2016 23:31	145.7	2.3	67.7	62.5	149.9	2.2	67.5	63.7	148.5	1.5	66.6	67.3	0
12-24	4/11/2016 23:32	159.7	1.7	67.6	62.7	155.5	2.2	67.3	64.0	156.9	1.5	66.6	67.6	0
12-24	4/11/2016 23:33	159.7	0.6	67.4	63.2	156.9	1.5	67.1	64.1	156.9	0.7	66.6	67.6	0
12-24	4/11/2016 23:34	159.7	1.7	67.2	63.2	169.6	1.5	67.0	64.4	156.9	0.7	66.5	67.6	0
12-24	4/11/2016 23:35	159.7	1.1	67.2	63.3	169.6	1.5	66.9	64.5	156.9	0.7	66.4	67.8	0
12-24	4/11/2016 23:36	172.4	1.7	67.2	63.0	192.6	2.2	67.0	64.5	194.0	1.5	66.4	67.8	0
12-24	4/11/2016 23:37	196.8	1.7	67.2	63.3	195.4	1.5	66.9	64.8	201.1	0.7	66.3	68.1	0
12-24	4/11/2016 23:38	185.6	2.3	67.2	63.0	181.4	3.0	67.2	63.5	180.0	2.2	66.4	67.1	0
12-24	4/11/2016 23:39	181.4	2.8	67.6	62.3	182.8	2.2	67.5	63.0	175.2	1.5	66.6	67.0	0
12-24	4/11/2016 23:40	188.4	1.1	67.7	62.1	182.8	1.5	67.5	63.4	175.2	0.7	66.6	67.3	0
12-24	4/11/2016 23:41	186.4	0.6	67.5	62.8	182.8	0.7	67.2	63.9	175.2	0.7	66.6	67.8	0
12-24	4/11/2016 23:42	159.7	0.0	67.3	63.3	180.0	0.7	66.9	64.8	175.2	0.0	66.5	68.2	0
12-24	4/11/2016 23:43	128.9	0.0	67.1	63.1	172.4	1.5	67.0	63.8	175.2	0.7	66.5	67.2	0
12-24	4/11/2016 23:44	148.5	1.1	67.2	62.9	171.0	0.7	67.0	64.0	172.4	0.7	66.4	67.4	0
12-24	4/11/2016 23:45	149.9	0.6	67.2	62.6	172.4	1.5	67.0	63.5	172.4	0.7	66.4	67.3	0
12-24	4/11/2016 23:46	149.9	0.6	67.3	62.5	173.8	0.7	67.1	63.5	172.4	0.7	66.4	67.3	0
12-24	4/11/2016 23:47	149.9	0.0	67.4	62.2	258.6	1.5	67.2	63.4	173.8	0.7	66.4	67.5	0
12-24	4/11/2016 23:48	175.2	1.1	67.5	61.9	208.1	1.5	67.3	63.4	213.7	0.7	66.4	67.1	0
12-24	4/11/2016 23:49	194.0	0.0	67.5	61.9	208.1	0.7	67.2	63.5	213.7	0.0	66.4	67.5	0
12-24	4/11/2016 23:50	194.0	0.0	67.4	62.3	208.1	0.7	67.1	64.0	213.7	0.0	66.4	67.8	0
12-24	4/11/2016 23:51	194.0	0.0	67.3	62.6	208.1	1.5	67.0	63.6	213.7	0.7	66.3	67.8	0
12-24	4/11/2016 23:52	194.0	0.0	67.3	62.4	215.1	1.5	67.0	64.3	213.7	0.7	66.3	68.3	0
12-24	4/11/2016 23:53	195.4	1.1	67.2	63.7	257.2	2.2	66.8	65.1	213.7	1.5	66.1	69.5	0
12-24	4/11/2016 23:54	227.7	1.1	67.0	64.1	272.7	2.2	66.6	65.6	233.3	1.5	66.0	69.9	0
12-24	4/11/2016 23:55	276.9	2.3	66.9	63.9	297.9	2.2	66.5	66.0	248.8	1.5	65.9	70.0	0
12-24	4/11/2016 23:56	302.1	2.3	67.0	64.1	314.8	2.2	66.6	65.4	250.2	1.5	65.9	69.2	0
12-24	4/11/2016 23:57	312.0	2.8	67.1	63.7	319.0	2.2	66.8	66.0	260.0	1.5	65.9	69.8	0
12-24	4/11/2016 23:58	319.0	3.4	67.0	64.7	321.8	3.7	66.6	66.2	317.6	2.2	65.9	69.8	0
12-24	4/11/2016 23:59	323.2	4.5	66.9	64.5	321.8	4.5	66.7	66.2	316.2	3.0	66.0	69.6	0
12-24	4/12/2016 0:00	319.0	5.1	67.0	64.3	324.6	4.5	66.8	65.4	320.4	3.0	66.1	68.8	0
12-24	4/12/2016 0:01	326.0	5.6	67.0	64.1	321.8	4.5	66.9	65.3	321.8	3.0	66.2	68.6	0
12-24	4/12/2016 0:02	319.0	7.3	67.2	63.7	320.4	6.0	67.0	64.9	317.6	3.7	66.3	68.2	0
12-24	4/12/2016 0:03	323.2	5.6	67.2	63.9	321.8	4.5	67.1	65.0	314.8	3.0	66.4	68.4	0
12-24	4/12/2016 0:04	330.2	3.9	67.1	64.4	330.2	3.0	66.9	65.7	316.2	2.2	66.4	68.8	0
12-24	4/12/2016 0:05	327.4	5.1	67.1	64.3	330.2	3.7	67.0	65.0	321.8	2.2	66.4	68.0	0
12-24	4/12/2016 0:06	333.0	5.1	67.2	64.3	321.8	3.7	67.1	65.0	309.2	2.2	66.5	68.0	0
12-24	4/12/2016 0:07	337.2	3.9	67.2	64.3	342.9	2.2	67.0	65.4	319.0	1.5	66.5	68.6	0
12-24	4/12/2016 0:08	326.0	3.9	67.1	64.3	326.0	3.0	67.0	65.2	314.8	1.5	66.5	68.3	0
12-24	4/12/2016 0:09	337.2	2.3	67.0	64.7	327.4	0.7	66.8	66.2	303.5	0.0	66.4	69.2	0
12-24	4/12/2016 0:10	342.9	1.1	66.9	64.9	337.2	1.5	66.7	65.9	303.5	0.7	66.3	69.1	0
12-24	4/12/2016 0:11	342.9	1.7	66.8	65.2	348.5	0.7	66.6	66.6	316.2	0.0	66.2	69.6	0
12-24	4/12/2016 0:12	355.5	2.3	66.7	65.5	359.7	0.7	66.5	67.1	351.3	0.7	66.1	69.9	0
12-24	4/12/2016 0:13	1.1	2.3	66.5	66.2	359.7	0.0	66.4	67.7	354.1	0.0	66.0	70.7	0
12-24	4/12/2016 0:14	359.7	1.1	66.3	66.8	359.7	0.0	66.1	68.5	354.1	0.0	65.8	71.5	0
12-24	4/12/2016 0:15	359.7	2.3	66.1	67.5	1.1	0.7	66.0	69.3	354.1	0.7	65.6	72.5	0
12-24	4/12/2016 0:16	359.7	2.3	65.9	68.3	359.7	0.0	65.6	70.5	354.1	0.0	65.4	73.5	0
12-24	4/12/2016 0:17	358.3	1.7	65.6	68.9	359.7	0.0	65.4	71.2	354.1	0.0	65.1	74.4	0
12-24	4/12/2016 0:18	356.9	1.1	65.4	69.7	359.7	0.0	65.1	72.3	354.1	0.0	64.8	75.2	0
12-24	4/12/2016 0:19	356.9	1.1	65.1	70.4	359.7	0.7	64.9	72.8	354.1	0.0	64.6	75.6	0
12-24	4/12/2016 0:20	356.9	1.1	65.0	71.0	359.7	0.7	64.7	73.9	354.1	0.7	64.4	76.7	0
12-24	4/12/2016 0:21	356.9	1.1	64.7	72.1	359.7	0.0	64.4	75.0	354.1	0.0	64.2	77.6	0
12-24	4/12/2016 0:22	356.9	1.1	64.5	72.9	359.7	0.7	64.2	75.7	354.1	0.0	64.0	78.1	0
12-24	4/12/2016 0:23	356.9	1.7	64.3	73.7	359.7	0.0	64.1	75.9	354.1	0.0	63.8	78.7	0
12-24	4/12/2016 0:24	356.9	2.3	64.2	74.1	359.7	0.0	64.0	76.8	354.1	0.0	63.6	79.4	0
12-24	4/12/2016 0:25	356.9	2.8	64.1	75.2	359.7	0.7	63.9	77.4	354.1	0.7	63.5	79.9	0
12-24	4/12/2016 0:26	356.9	3.4	64.1	75.4	2.5	0.7	63.9	78.0	358.3	0.7	63.4	80.3	0
12-24	4/12/2016 0:27	356.9	2.3	64.0	75.9	2.5	0.7	63.8	78.1	358.3	0.7	63.3	80.2	0
12-24	4/12/2016 0:28	356.9	0.0	63.9	76.6	2.5	0.7	63.7	78.1	358.3	0.0	63.3	80.4	0
12-24	4/12/2016 0:29	351.3	0.6	63.8	76.9	239.0	1.5	63.4	80.2	359.7	0.7	63.3	81.1	0
12-24	4/12/2016 0:30	168.2	1.7	63.5	77.8	175.2	2.2	63.3	80.0	93.8	1.5	63.1	81.3	0
12-24	4/12/2016 0:31	166.8	1.1	63.3	78.4	171.0	0.7	63.1	80.6	135.9	0.7	63.0	82.0	0
12-24	4/12/2016 0:32	166.8	0.0	63.2	79.2	171.0	0.7	63.0	80.4	135.9	0.7	62.9	82.1	0
12-24	4/12/2016 0:33	144.3	0.0	63.1	78.6	114.8	2.2	63.2	80.1	117.6	1.5	62.9	82.1	0
12-24	4/12/2016 0:34	69.9	0.6	63.7	78.5	86.7	1.5	63.4	79.1	107.8	1.5	62.8	82.0	0
12-24	4/12/2016 0:35	69.9	1.1	63.9	77.3	86.7	2.2	63.7	77.9	106.4	1.5	62.8	81.6	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
12-24	4/12/2016 0:36	69.9	0.6	64.1	77.6	86.7	1.5	63.7	78.7	102.2	0.7	62.8	82.1	0
12-24	4/12/2016 0:37	69.9	0.6	63.9	79.2	86.7	1.5	63.4	79.6	103.6	0.7	62.7	83.1	0
12-24	4/12/2016 0:38	69.9	0.0	63.6	79.1	86.7	0.7	63.2	82.0	102.2	0.7	62.7	83.7	0
12-24	4/12/2016 0:39	69.9	0.0	63.4	79.4	93.8	1.5	63.1	81.6	103.6	0.7	62.7	83.3	0
12-24	4/12/2016 0:40	107.8	0.6	63.2	79.7	138.7	1.5	62.9	82.8	112.0	0.7	62.6	83.8	0
12-24	4/12/2016 0:41	156.9	1.1	63.0	80.0	203.9	1.5	62.9	81.5	171.0	0.7	62.6	83.3	0
12-24	4/12/2016 0:42	172.4	0.0	63.1	79.8	203.9	0.0	63.0	81.2	171.0	0.0	62.6	83.3	0
12-24	4/12/2016 0:43	172.4	0.0	63.2	79.1	203.9	0.7	63.1	80.6	171.0	0.0	62.6	83.1	0
12-24	4/12/2016 0:44	172.4	0.6	63.3	79.4	203.9	0.0	63.0	82.3	171.0	0.0	62.5	84.4	0
12-24	4/12/2016 0:45	172.4	0.6	63.0	80.2	203.9	0.7	62.8	82.3	171.0	0.0	62.4	85.0	0
12-24	4/12/2016 0:46	172.4	1.1	63.0	80.2	203.9	0.7	62.7	82.8	171.0	0.0	62.3	85.2	0
12-24	4/12/2016 0:47	172.4	0.6	63.0	80.4	203.9	0.0	62.7	83.2	171.0	0.0	62.2	85.6	0
12-24	4/12/2016 0:48	172.4	0.6	63.0	80.3	203.9	0.0	62.7	83.2	171.0	0.0	62.2	85.8	0
12-24	4/12/2016 0:49	172.4	0.6	63.2	80.1	203.9	0.0	62.8	83.0	171.0	0.0	62.1	85.9	0
12-24	4/12/2016 0:50	172.4	0.0	63.1	80.1	203.9	0.0	62.7	82.7	171.0	0.0	62.1	85.6	0
12-24	4/12/2016 0:51	172.4	0.0	63.0	82.3	203.9	0.7	62.6	83.2	171.0	0.0	62.1	86.2	0
12-24	4/12/2016 0:52	172.4	0.6	62.7	82.7	203.9	1.5	62.4	83.8	171.0	0.0	62.0	86.4	0
12-24	4/12/2016 0:53	171.0	0.0	62.4	83.0	203.9	0.0	62.2	84.2	171.0	0.0	61.9	86.5	0
12-24	4/12/2016 0:54	171.0	0.0	62.2	83.6	203.9	0.0	62.1	84.6	171.0	0.0	61.9	86.6	0
12-24	4/12/2016 0:55	171.0	0.0	62.1	83.3	203.9	0.0	62.0	85.8	171.0	0.0	61.9	86.7	0
12-24	4/12/2016 0:56	171.0	0.0	62.1	83.2	203.9	0.7	61.9	86.5	171.0	0.0	61.8	86.9	0
12-24	4/12/2016 0:57	171.0	0.0	62.0	83.9	203.9	0.7	61.8	87.0	171.0	0.0	61.8	87.0	0
12-24	4/12/2016 0:58	171.0	0.0	61.8	84.2	203.9	0.0	61.7	86.5	171.0	0.0	61.8	87.1	0
12-24	4/12/2016 0:59	171.0	0.0	61.8	84.6	203.9	0.0	61.7	86.2	171.0	0.0	61.8	87.5	0
12-24	4/12/2016 1:00	171.0	0.0	61.7	84.6	203.9	0.0	61.6	86.6	171.0	0.0	61.7	87.8	0
12-24	4/12/2016 1:01	171.0	0.0	61.7	84.9	203.9	0.0	61.6	87.7	171.0	0.0	61.6	88.1	0
12-24	4/12/2016 1:02	171.0	0.0	61.6	85.5	203.9	0.0	61.5	88.4	171.0	0.0	61.5	88.6	0
12-24	4/12/2016 1:03	171.0	0.0	61.6	86.6	203.9	0.7	61.6	88.3	171.0	0.0	61.5	88.8	0
12-24	4/12/2016 1:04	171.0	0.0	61.7	86.9	203.9	0.0	61.6	88.4	171.0	0.0	61.4	88.8	0
12-24	4/12/2016 1:05	171.0	0.0	61.7	87.3	203.9	0.7	61.5	88.6	171.0	0.0	61.3	89.1	0
12-24	4/12/2016 1:06	171.0	0.0	61.8	87.6	203.9	1.5	61.5	89.2	171.0	0.0	61.3	89.5	0
12-24	4/12/2016 1:07	171.0	0.0	61.8	87.9	203.9	0.7	61.5	89.5	171.0	0.0	61.2	89.7	0
12-24	4/12/2016 1:08	171.0	0.0	61.7	87.7	203.9	1.5	61.5	89.5	171.0	0.0	61.2	89.9	0
12-24	4/12/2016 1:09	171.0	0.0	61.7	87.8	203.9	0.7	61.4	89.4	171.0	0.0	61.2	89.8	0
12-24	4/12/2016 1:10	171.0	0.0	61.7	88.3	203.9	0.0	61.4	89.3	171.0	0.0	61.1	89.8	0
12-24	4/12/2016 1:11	171.0	0.0	61.6	88.8	203.9	0.7	61.3	90.1	171.0	0.0	61.1	90.1	0
12-24	4/12/2016 1:12	171.0	0.0	61.5	89.0	203.9	0.7	61.3	90.2	171.0	0.0	61.1	90.3	0
12-24	4/12/2016 1:13	171.0	0.0	61.5	89.1	203.9	0.0	61.4	90.4	171.0	0.0	61.1	90.4	0
12-24	4/12/2016 1:14	171.0	0.0	61.5	89.2	203.9	0.7	61.4	90.3	171.0	0.0	61.1	90.6	0
12-24	4/12/2016 1:15	171.0	0.0	61.5	89.0	203.9	0.7	61.4	90.2	171.0	0.0	61.0	90.6	0
12-24	4/12/2016 1:16	171.0	0.0	61.5	88.9	203.9	0.0	61.3	90.1	171.0	0.0	61.0	90.5	0
12-24	4/12/2016 1:17	171.0	0.0	61.4	88.7	203.9	0.0	61.3	89.5	171.0	0.0	61.0	90.3	0
12-24	4/12/2016 1:18	171.0	0.0	61.4	88.0	203.9	0.0	61.3	89.1	171.0	0.0	61.1	90.4	0
12-24	4/12/2016 1:19	171.0	0.0	61.3	88.3	203.9	0.0	61.2	89.8	171.0	0.0	61.1	90.5	0
12-24	4/12/2016 1:20	171.0	0.0	61.3	89.7	203.9	0.7	61.2	90.9	171.0	0.0	61.1	90.7	0
12-24	4/12/2016 1:21	171.0	0.0	61.2	90.3	203.9	0.7	61.1	91.2	171.0	0.0	61.1	90.8	0
12-24	4/12/2016 1:22	171.0	0.0	61.2	90.3	203.9	0.7	61.1	91.5	171.0	0.0	61.1	90.7	0
12-24	4/12/2016 1:23	171.0	0.0	61.2	90.4	203.9	0.0	61.1	91.6	171.0	0.0	61.0	90.7	0.008
12-24	4/12/2016 1:24	171.0	0.0	61.2	90.3	203.9	0.0	61.1	91.8	171.0	0.0	61.0	90.7	0
12-24	4/12/2016 1:25	171.0	0.0	61.2	89.9	203.9	0.0	61.1	91.5	171.0	0.0	61.0	90.9	0
12-24	4/12/2016 1:26	171.0	0.0	61.2	90.4	203.9	0.0	61.1	91.2	171.0	0.0	61.0	91.4	0
12-24	4/12/2016 1:27	171.0	0.0	61.2	90.9	203.9	0.7	61.1	91.0	171.0	0.0	61.0	91.7	0
12-24	4/12/2016 1:28	171.0	0.0	61.1	91.5	203.9	0.7	61.1	91.5	171.0	0.0	60.9	91.9	0.008
12-24	4/12/2016 1:29	171.0	0.0	61.0	91.8	203.9	0.7	61.0	92.0	171.0	0.0	60.9	92.2	0
12-24	4/12/2016 1:30	171.0	0.0	60.9	92.1	203.9	0.7	60.9	92.1	171.0	0.0	60.9	92.3	0
12-24	4/12/2016 1:31	171.0	0.0	61.0	92.0	203.9	0.7	60.9	92.3	171.0	0.0	60.9	92.5	0
12-24	4/12/2016 1:32	171.0	0.0	61.0	91.4	203.9	0.0	61.0	92.3	171.0	0.0	60.9	92.4	0
12-24	4/12/2016 1:33	171.0	0.0	61.1	91.6	203.9	0.7	61.1	91.8	171.0	0.0	60.9	92.2	0
12-24	4/12/2016 1:34	171.0	0.0	61.2	91.7	203.9	0.7	61.2	91.9	171.0	0.0	60.9	92.2	0
12-24	4/12/2016 1:35	171.0	0.0	61.2	92.1	203.9	0.7	61.1	92.5	171.0	0.0	60.9	92.1	0
12-24	4/12/2016 1:36	171.0	0.0	61.1	92.4	203.9	0.7	61.0	92.6	171.0	0.0	60.9	92.2	0
12-24	4/12/2016 1:37	171.0	0.0	61.0	92.5	203.9	0.7	61.0	92.9	171.0	0.0	60.9	92.1	0
12-24	4/12/2016 1:38	171.0	0.0	60.9	92.7	203.9	0.7	60.9	93.0	171.0	0.0	60.9	92.0	0
12-24	4/12/2016 1:39	171.0	0.0	60.9	92.5	203.9	0.0	60.9	93.3	171.0	0.0	60.9	92.0	0
12-24	4/12/2016 1:40	171.0	0.0	60.9	92.2	203.9	0.0	60.9	93.5	171.0	0.0	60.9	92.0	0
12-24	4/12/2016 1:41	171.0	0.0	60.9	92.5	203.9	0.0	60.9	93.4	171.0	0.0	60.9	92.0	0
12-24	4/12/2016 1:42	171.0	0.0	60.9	92.9	203.9	0.0	60.9	93.0	171.0	0.0	60.9	92.3	0
12-24	4/12/2016 1:43	171.0	0.0	60.8	92.8	203.9	0.0	60.8	92.9	171.0	0.0	60.8	92.7	0
12-24	4/12/2016 1:44	171.0	0.0	60.8	92.9	203.9	0.0	60.8	93.5	171.0	0.0	60.8	92.8	0
12-24	4/12/2016 1:45	171.0	0.0	60.8	92.4	203.9	0.7	60.7	93.9	171.0	0.0	60.7	92.9	0.008
12-24	4/12/2016 1:46	145.7	0.6	60.7	93.2	196.8	1.5	60.7	94.1	171.0	0.0	60.6	93.1	0
12-24	4/12/2016 1:47	100.8	1.1	60.7	93.5	137.3	1.5	60.7	94.2	134.5	0.7	60.6	93.2	0
12-24	4/12/2016 1:48	96.6	1.1	60.7	93.9	135.9	1.5	60.6	94.4	131.7	0.7	60.6	93.2	0
12-24	4/12/2016 1:49	96.6	0.0	60.6	94.2	135.9	1.5	60.6	94.3	131.7	0.7	60.6	93.2	0
12-24	4/12/2016 1:50	96.6	0.0	60.6	94.5	135.9	1.5	60.6	94.2	130.3	0.7	60.6	93.3	0.008
12-24	4/12/2016 1:51	96.6	0.0	60.5	95.0	135.9	1.5	60.6	94.3	130.3	0.7	60.6	93.4	0
12-24	4/12/2016 1:52	96.6	0.0	60.5	95.1	135.9	1.5	60.6	94.3	130.3	0.7	60.6	93.5	0
12-24	4/12/2016 1:53	96.6	0.0	60.5	95.5	114.8	1.5	60.6	94.4	120.4	1.5	60.6	93.6	0
12-24	4/12/2016 1:54	96.6	0.6	60.5	95.3	100.8	1.5	60.6	94.3	109.2	0.7	60.5	93.7	0
12-24	4/12/2016 1:55	96.6	0.6	60.5	95.6	105.0	2.2	60.6	94.3	109.2	1.5	60.5	93.7	0
12-24	4/12/2016 1:56	96.6	0.6	60.4	95.5	102.2	2.2	60.6	94.7	107.8	1.5	60.5	93.7	0.008
12-24	4/12/2016 1:57	92.4	1.7	60.4	95.5	85.3	2.2	60.6	95.0	98.0	1.5	60.5	93.8	0
12-24	4/12/2016 1:58	88.1	1.1	60.4	95.5	85.3	1.5	60.5	95.1	98.0	0.7	60.5	93.8	0
12-24	4/12/2016 1:59	88.1	0.0	60.4	95.5	85.3	0.7	60.5	95.2	98.0	0.0	60.4	93.9	0.008
12-24	4/12/2016 2:00	88.1	0.0	60.4	95.5	85.3	0.7	60.5	95.3	98.0	0.0	60.4	93.9	0
12-24	4/12/2016 2:01	88.1	0.0	60.3	95.4	85.3	0.0	60.5	95.1	98.0	0.0	60.4	93.9	0
12-24	4/12/2016 2:02	88.1	0.0	60.3	95.3	85.3	0.0	60.5	94.8	98.0	0.0	60.4	93.8	0
12-24	4/12/2016 2:03	88.1	0.0	60.3	95.5	85.3	0.7	60.4	94.6	98.0	0.7	60.4	93.8	0
12-24	4/12/2016 2:04	88.1	0.0	60.3	95.8	85.3	0.7	60.4	94.5	98.0	0.0	60.4	93.9	0
12-24	4/12/2016 2:05	88.1	0.0	60.3	96.0	86.7	1.5	60.4	94.6	98.0	0.7	60.3	94.0	0.008
12-24	4/12/2016 2:06	92.4	1.1	60.3	95.9	99.4	2.2	60.4	94.8	103.6	1.5	60.3	94.0	0
12-24	4/12/2016 2:07	98.0	1.1	60.3	95.9	92.4	2.2	60.4	94.9	100.8	1.5	60.3	94.1	0
12-24	4/12/2016 2:08	93.8	1.7	60.3	95.8	103.6	2.2	60.4	95.0	107.8	1.5	60.3	94.2	0
12-24	4/12/2016 2:09	102.2	0.6	60.3	95.5	107.8	2.2	60.5	94.8	109.2	1.5	60.3	94.1	0
12-24	4/12/2016 2:10	105.0	1.1	60.3	95.5	116.2	2.2	60.5	94.5	117.6	1.5	60.3	94.0	0
12-24	4/12/2016 2:11	106.4	0.6	60.3	95.3	107.8	1.5	60.5	94.5	120.4	0.7	60.2	94.0	0
12-24	4/12/2016 2:12	105.0	0.0	60.3	94.8	107.8	1.5	60.6	94.3	120.4	0.7	60.2	94.0	0
12-24	4/12/2016 2:13	91.0	1.1	60.4	94.7	83.9	1.5	60.6	94.5	107.8	1.5	60.2	94.0	0
12-24	4/12/2016 2:14	79.7	0.6	60.4	94.8	81.1	1.5	60.6	94.6	106.4	0.7	60.2	94.0	0
12-24	4/12/2016 2:15	79.7	0.0	60.4	94.6	81.1	0.7	60.6	94.2	106.4	0.7	60.2	94.0	0
12-24	4/12/2016 2:16	79.7	0.0	60.4	94.3	81.1	0.7	60.6	94.0	106.4	0.0	60.2	94.0	0
12-24	4/12/2016 2:17	79.7	0.0	60.4	94.6	81.1	0.7	60.6	94.2	106.4	0.7	60.2	94.1	0
12-24	4/12/2016 2:18	76.9	0.0	60.4	94.3	72.7	0.7	60.5	94.3	106.4	0.0	60.2	94.2	0
12-24	4/12/2016 2:19	76.9	0.0	60.4	94.2	71.3	0.0	60.5	94.5	106.4	0.0	60.1	94.1	0
12-24	4/12/2016 2:20	76.9	0.0	60.4	94.0	71.3	0.0	60.5	94.8	106.4	0.0	60.1	94.1	0
12-24	4/12/2016 2:21	76.9	0.0	60.4	94.0	71.3	0.7	60.5	95.0	106.4	0.0	60.1	94.3	0
12-24	4/12/2016 2:22	76.9	0.0	60.4	94.8	71.3	1.5	60.5	95.4	106.4	0.7	60.1	94.4	0
12-24	4/12/2016 2:23	76.9	0.6	60.4	95.0	69.9	1.5	60.5	95.4	106.4	0.7	60.2	94.6	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
12-24	4/12/2016 2:24	76.9	0.0	60.4	94.9	69.9	0.7	60.5	95.4	106.4	0.7	60.2	94.5	0
12-24	4/12/2016 2:25	76.9	0.0	60.4	95.3	69.9	0.7	60.4	95.3	106.4	0.7	60.2	94.5	0
12-24	4/12/2016 2:26	76.9	0.0	60.3	95.4	69.9	0.7	60.3	95.3	106.4	0.0	60.1	94.5	0
12-24	4/12/2016 2:27	76.9	0.0	60.2	95.0	71.3	1.5	60.2	95.6	106.4	0.7	60.1	94.4	0
12-24	4/12/2016 2:28	78.3	0.6	60.1	95.0	83.9	1.5	60.1	95.8	106.4	0.7	60.0	94.3	0
12-24	4/12/2016 2:29	79.7	0.6	60.0	95.0	91.0	0.7	60.0	96.0	106.4	0.7	60.0	94.4	0
12-24	4/12/2016 2:30	79.7	0.0	60.0	94.9	91.0	0.7	60.0	96.1	106.4	0.7	60.0	94.5	0
12-24	4/12/2016 2:31	79.7	0.0	60.0	95.4	91.0	0.7	60.0	95.9	106.4	0.0	59.9	94.4	0
12-24	4/12/2016 2:32	79.7	0.0	59.9	96.1	91.0	0.7	59.9	96.1	106.4	0.7	59.9	94.5	0
12-24	4/12/2016 2:33	79.7	0.0	59.9	96.3	91.0	1.5	59.9	96.3	106.4	0.7	59.8	94.7	0
12-24	4/12/2016 2:34	78.3	0.0	59.9	96.5	91.0	0.7	60.0	96.5	106.4	0.7	59.8	94.7	0
12-24	4/12/2016 2:35	78.3	0.0	59.9	96.5	91.0	0.0	60.0	96.6	106.4	0.0	59.8	94.7	0
12-24	4/12/2016 2:36	78.3	0.0	59.9	96.4	91.0	0.0	60.0	96.5	106.4	0.0	59.8	94.7	0
12-24	4/12/2016 2:37	78.3	0.0	59.9	96.5	91.0	0.0	60.0	96.6	106.4	0.0	59.9	94.9	0
12-24	4/12/2016 2:38	78.3	0.0	60.0	96.4	91.0	0.0	60.0	96.8	106.4	0.0	59.9	94.9	0
12-24	4/12/2016 2:39	78.3	0.0	60.0	96.4	91.0	0.0	60.0	97.0	106.4	0.0	59.9	95.0	0
12-24	4/12/2016 2:40	78.3	0.0	60.0	96.3	91.0	0.0	60.0	97.0	106.4	0.0	59.9	95.2	0
12-24	4/12/2016 2:41	78.3	0.0	60.0	96.3	91.0	0.0	60.1	97.1	106.4	0.0	59.9	95.3	0
12-24	4/12/2016 2:42	78.3	0.0	60.0	96.3	91.0	0.0	60.1	97.1	106.4	0.0	60.0	95.3	0
12-24	4/12/2016 2:43	78.3	0.0	60.0	96.3	68.5	0.0	60.1	97.3	106.4	0.0	60.0	95.4	0
12-24	4/12/2016 2:44	78.3	0.0	60.0	96.3	53.1	0.0	60.1	97.3	106.4	0.0	60.0	95.4	0
12-24	4/12/2016 2:45	78.3	0.0	60.1	96.4	53.1	0.0	60.2	97.3	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 2:46	78.3	0.0	60.1	96.3	53.1	0.0	60.2	97.4	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 2:47	78.3	0.0	60.1	96.3	53.1	0.0	60.2	97.3	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 2:48	78.3	0.0	60.1	96.3	53.1	0.7	60.2	97.3	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 2:49	78.3	0.0	60.2	96.3	53.1	0.0	60.2	97.4	106.4	0.0	60.1	95.5	0
12-24	4/12/2016 2:50	78.3	0.0	60.2	96.3	53.1	0.0	60.2	97.4	106.4	0.0	60.1	95.6	0
12-24	4/12/2016 2:51	78.3	0.0	60.1	96.3	53.1	0.0	60.2	97.3	106.4	0.0	60.1	95.6	0
12-24	4/12/2016 2:52	78.3	0.0	60.1	96.2	53.1	0.0	60.2	97.3	106.4	0.0	60.1	95.5	0
12-24	4/12/2016 2:53	78.3	0.0	60.1	96.3	53.1	0.0	60.2	97.0	106.4	0.0	60.1	95.5	0
12-24	4/12/2016 2:54	78.3	0.0	60.0	96.6	53.1	0.0	60.1	97.0	106.4	0.0	60.1	95.5	0
12-24	4/12/2016 2:55	78.3	0.0	60.0	96.6	53.1	0.0	60.1	96.8	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 2:56	78.3	0.0	60.0	96.7	53.1	0.7	60.1	96.8	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 2:57	78.3	0.0	60.0	96.7	53.1	0.7	60.1	96.8	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 2:58	78.3	0.0	60.1	96.6	53.1	0.7	60.1	96.8	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 2:59	78.3	0.0	60.1	96.6	53.1	0.0	60.1	96.6	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:00	78.3	0.0	60.1	96.5	53.1	0.0	60.2	96.6	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:01	78.3	0.0	60.1	96.3	53.1	0.0	60.2	96.8	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:02	78.3	0.0	60.1	96.1	53.1	0.0	60.2	96.8	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:03	78.3	0.0	60.1	96.0	53.1	0.0	60.2	96.9	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:04	78.3	0.0	60.1	96.0	53.1	0.0	60.2	96.8	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:05	78.3	0.0	60.1	95.9	53.1	0.0	60.2	96.6	106.4	0.0	60.0	95.4	0
12-24	4/12/2016 3:06	78.3	0.0	60.1	96.0	53.1	0.0	60.2	96.8	106.4	0.0	60.0	95.4	0
12-24	4/12/2016 3:07	78.3	0.0	60.1	96.6	53.1	0.0	60.2	96.6	106.4	0.0	60.0	95.4	0
12-24	4/12/2016 3:08	78.3	0.0	60.1	96.9	53.1	0.0	60.2	96.7	106.4	0.0	60.0	95.4	0.008
12-24	4/12/2016 3:09	78.3	0.0	60.1	97.0	53.1	0.7	60.1	96.9	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:10	78.3	0.0	60.1	97.3	53.1	0.0	60.1	97.1	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:11	78.3	0.0	60.1	97.2	53.1	0.0	60.1	97.3	106.4	0.0	60.0	95.5	0
12-24	4/12/2016 3:12	78.3	0.0	60.1	97.0	53.1	0.0	60.1	97.4	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:13	78.3	0.0	60.1	96.8	53.1	0.0	60.2	97.5	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:14	78.3	0.0	60.1	96.8	53.1	0.0	60.2	97.5	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:15	78.3	0.0	60.1	96.6	53.1	0.0	60.2	97.5	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:16	78.3	0.0	60.1	96.6	53.1	0.0	60.1	97.6	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:17	78.3	0.0	60.0	96.7	53.1	0.0	60.1	97.5	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:18	78.3	0.0	60.0	97.0	53.1	0.7	60.1	97.5	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:19	78.3	0.0	60.0	97.3	53.1	0.0	60.1	97.4	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:20	78.3	0.0	60.0	97.2	53.1	0.0	60.1	97.3	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:21	78.3	0.0	60.0	97.1	53.1	0.0	60.1	97.2	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:22	78.3	0.0	60.0	97.3	53.1	0.7	60.1	97.3	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:23	78.3	0.0	60.0	97.3	53.1	0.7	60.1	97.5	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:24	78.3	0.0	60.0	97.5	53.1	0.7	60.1	97.6	106.4	0.0	60.0	95.7	0.008
12-24	4/12/2016 3:25	78.3	0.0	60.0	97.5	53.1	0.0	60.0	97.6	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:26	78.3	0.0	60.0	97.5	53.1	0.0	60.0	97.5	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:27	78.3	0.0	60.0	97.4	53.1	0.0	60.0	97.6	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:28	78.3	0.0	60.0	97.5	53.1	0.7	60.0	97.7	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:29	78.3	0.0	60.0	97.5	53.1	0.7	60.0	97.6	106.4	0.0	60.0	95.7	0.008
12-24	4/12/2016 3:30	78.3	0.0	60.0	97.5	53.1	0.7	60.0	97.7	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:31	78.3	0.0	60.0	97.3	54.5	0.7	60.0	97.8	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:32	78.3	0.0	59.9	97.2	54.5	0.7	60.0	97.8	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:33	78.3	0.0	59.9	97.5	54.5	0.7	60.0	98.0	106.4	0.0	60.0	95.7	0
12-24	4/12/2016 3:34	78.3	0.0	59.9	97.7	54.5	0.0	60.0	98.0	106.4	0.0	59.9	95.7	0
12-24	4/12/2016 3:35	78.3	0.0	59.9	97.6	54.5	0.0	60.0	98.0	106.4	0.0	60.0	95.8	0.008
12-24	4/12/2016 3:36	78.3	0.0	60.0	97.5	54.5	0.0	60.0	97.9	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:37	78.3	0.0	59.9	97.7	54.5	0.0	60.0	97.9	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:38	78.3	0.0	60.0	97.8	54.5	0.0	60.0	97.8	106.4	0.0	60.0	95.8	0.008
12-24	4/12/2016 3:39	78.3	0.0	60.0	97.9	54.5	0.0	60.0	97.7	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:40	78.3	0.0	60.0	97.7	54.5	0.0	60.0	97.8	106.4	0.0	60.0	95.8	0.008
12-24	4/12/2016 3:41	78.3	0.0	60.0	97.8	54.5	0.0	60.0	97.9	106.4	0.0	60.0	95.8	0
12-24	4/12/2016 3:42	78.3	0.0	60.0	97.9	54.5	0.0	60.0	98.0	106.4	0.0	60.0	95.9	0
12-24	4/12/2016 3:43	78.3	0.0	60.0	97.9	54.5	0.0	60.0	98.1	106.4	0.0	60.0	96.0	0.008
12-24	4/12/2016 3:44	78.3	0.0	60.0	98.0	54.5	0.7	60.1	98.1	106.4	0.0	60.0	96.1	0
12-24	4/12/2016 3:45	78.3	0.0	60.0	98.1	54.5	0.7	60.1	98.2	106.4	0.0	60.0	96.0	0.008
12-24	4/12/2016 3:46	78.3	0.0	60.0	98.3	54.5	0.7	60.1	98.3	106.4	0.0	60.0	96.1	0
12-24	4/12/2016 3:47	78.3	0.0	60.0	98.2	54.5	1.5	60.1	98.2	106.4	0.0	60.0	96.2	0.008
12-24	4/12/2016 3:48	78.3	0.6	60.0	98.3	48.8	2.2	60.2	98.3	106.4	1.5	60.0	96.3	0
12-24	4/12/2016 3:49	76.9	0.6	60.1	98.3	47.4	1.5	60.2	98.4	106.4	0.7	60.1	96.3	0
12-24	4/12/2016 3:50	76.9	0.0	60.1	98.3	46.0	0.7	60.2	98.4	106.4	0.0	60.1	96.3	0.008
12-24	4/12/2016 3:51	76.9	0.0	60.1	98.3	46.0	0.7	60.2	98.6	106.4	0.0	60.1	96.3	0.008
12-24	4/12/2016 3:52	76.9	0.0	60.1	98.2	53.1	0.7	60.2	98.4	107.8	0.0	60.1	96.3	0
12-24	4/12/2016 3:53	127.5	1.1	60.1	98.1	185.6	2.2	60.2	98.3	172.4	1.5	60.1	96.3	0.008
12-24	4/12/2016 3:54	191.2	2.8	60.0	98.1	199.7	2.2	60.2	98.4	202.5	1.5	60.1	96.3	0
12-24	4/12/2016 3:55	194.0	1.7	60.0	98.1	192.6	1.5	60.1	98.4	201.1	0.7	60.1	96.3	0.008
12-24	4/12/2016 3:56	194.0	0.0	60.0	98.0	191.2	0.0	60.1	98.4	201.1	0.0	60.1	96.3	0
12-24	4/12/2016 3:57	194.0	0.0	60.0	98.0	191.2	0.0	60.1	98.3	201.1	0.0	60.1	96.2	0.008
12-24	4/12/2016 3:58	194.0	0.0	60.0	97.9	191.2	0.0	60.1	98.3	201.1	0.0	60.0	96.2	0
12-24	4/12/2016 3:59	194.0	0.0	60.0	97.8	191.2	0.7	60.0	98.4	201.1	0.0	60.0	96.3	0.008
12-24	4/12/2016 4:00	194.0	1.1	60.0	97.9	191.2	0.7	60.0	98.5	201.1	0.7	60.0	96.3	0
12-24	4/12/2016 4:01	194.0	0.6	60.0	97.9	191.2	0.0	60.1	98.5	201.1	0.0	60.0	96.4	0
12-24	4/12/2016 4:02	194.0	0.0	60.0	98.0	191.2	0.0	60.1	98.5	201.1	0.0	60.0	96.5	0
12-24	4/12/2016 4:03	194.0	0.0	60.0	97.9	191.2	0.0	60.1	98.5	201.1	0.0	60.0	96.5	0.008
12-24	4/12/2016 4:04	194.0	0.0	60.0	97.9	191.2	0.0	60.1	98.5	201.1	0.0	60.0	96.6	0
12-24	4/12/2016 4:05	194.0	0.0	60.0	98.0	191.2	0.7	60.2	98.5	201.1	0.7	60.0	96.6	0
12-24	4/12/2016 4:06	195.4	0.0	60.0	98.1	215.1	1.5	60.2	98.5	201.1	0.7	60.0	96.6	0
12-24	4/12/2016 4:07	196.8	0.0	60.0	98.1	227.7	0.7	60.2	98.5	201.1	0.0	60.0	96.5	0
12-24	4/12/2016 4:08	304.9	1.1	60.0	98.0	352.7	1.5	60.2	98.5	202.5	0.7	60.0	96.6	0
12-24	4/12/2016 4:09	1.1	2.3	60.0	98.1	13.7	1.5	60.2	98.5	358.3	0.7	60.0	96.6	0
12-24	4/12/2016 4:10	2.5	1.7	60.1	98.1	13.7	1.5	60.2	98.7	6.7	1.5	60.1	96.7	0
12-24	4/12/2016 4:11	9.5	2.3	60.1	98.2	16.5	1.5	60.2	98.7	20.8	1.5	60.1	96.7	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
12-24	4/12/2016 4:12	9.5	1.7	60.0	98.2	16.5	1.5	60.2	98.6	22.2	0.7	60.1	96.6	0
12-24	4/12/2016 4:13	8.1	1.7	60.0	98.2	16.5	1.5	60.2	98.6	22.2	1.5	60.0	96.6	0.008
12-24	4/12/2016 4:14	2.5	1.1	60.0	98.1	3.9	0.7	60.2	98.3	15.1	0.7	60.0	96.6	0
12-24	4/12/2016 4:15	355.5	1.7	60.0	98.1	6.7	0.7	60.3	98.4	5.3	0.7	60.0	96.6	0
12-24	4/12/2016 4:16	1.1	0.6	60.0	98.1	2.5	0.7	60.3	98.3	2.5	0.0	60.0	96.6	0
12-24	4/12/2016 4:17	352.7	1.7	60.1	98.1	352.7	0.7	60.3	98.3	349.9	0.0	60.1	96.6	0
12-24	4/12/2016 4:18	352.7	2.3	60.1	98.1	354.1	0.0	60.3	98.3	349.9	0.0	60.1	96.6	0
12-24	4/12/2016 4:19	351.3	1.7	60.1	98.1	358.3	0.7	60.3	98.4	354.1	0.0	60.1	96.6	0
12-24	4/12/2016 4:20	358.3	1.7	60.1	98.1	355.5	0.7	60.3	98.3	355.5	0.0	60.1	96.7	0
12-24	4/12/2016 4:21	354.1	1.1	60.1	98.1	354.1	0.0	60.3	98.4	355.5	0.0	60.1	96.7	0
12-24	4/12/2016 4:22	359.7	2.3	60.1	98.2	9.5	1.5	60.3	98.5	359.7	0.7	60.1	96.7	0
12-24	4/12/2016 4:23	12.3	2.3	60.1	98.2	19.4	1.5	60.3	98.5	19.4	1.5	60.1	96.7	0
12-24	4/12/2016 4:24	15.1	0.6	60.1	98.2	20.8	1.5	60.3	98.5	29.2	1.5	60.1	96.7	0
12-24	4/12/2016 4:25	12.3	2.3	60.1	98.2	19.4	1.5	60.3	98.4	39.0	1.5	60.1	96.6	0
12-24	4/12/2016 4:26	9.5	0.6	60.1	98.2	25.0	1.5	60.3	98.3	37.6	0.7	60.1	96.6	0
12-24	4/12/2016 4:27	29.2	1.1	60.1	98.1	37.6	2.2	60.3	98.1	51.6	1.5	60.0	96.6	0
12-24	4/12/2016 4:28	25.0	1.1	60.1	98.0	26.4	1.5	60.3	97.8	53.1	0.7	60.0	96.5	0
12-24	4/12/2016 4:29	27.8	2.3	60.1	98.0	44.6	3.0	60.4	97.6	47.4	2.2	60.0	96.5	0
12-24	4/12/2016 4:30	30.6	1.7	60.1	98.0	41.8	2.2	60.4	97.6	41.8	1.5	60.0	96.5	0
12-24	4/12/2016 4:31	25.0	0.6	60.1	97.9	46.0	1.5	60.4	97.6	32.0	1.5	60.0	96.5	0
12-24	4/12/2016 4:32	25.0	1.1	60.2	97.9	32.0	2.2	60.4	97.6	33.4	1.5	60.0	96.5	0
12-24	4/12/2016 4:33	34.8	2.3	60.2	97.8	37.6	3.0	60.5	97.5	50.2	2.2	60.1	96.5	0
12-24	4/12/2016 4:34	25.0	2.3	60.3	97.9	34.8	2.2	60.5	97.4	46.0	1.5	60.1	96.4	0
12-24	4/12/2016 4:35	20.8	1.1	60.3	97.8	40.4	1.5	60.5	97.4	48.8	1.5	60.1	96.4	0
12-24	4/12/2016 4:36	18.0	0.6	60.3	97.8	27.8	1.5	60.5	97.5	37.6	1.5	60.1	96.4	0
12-24	4/12/2016 4:37	22.2	1.7	60.3	97.8	29.2	3.0	60.5	97.6	40.4	3.0	60.2	96.4	0
12-24	4/12/2016 4:38	39.0	2.3	60.3	97.8	50.2	3.0	60.6	97.6	53.1	2.2	60.2	96.4	0
12-24	4/12/2016 4:39	47.4	2.8	60.3	97.9	61.5	3.0	60.6	97.6	62.9	2.2	60.2	96.3	0
12-24	4/12/2016 4:40	58.7	1.7	60.3	97.8	60.1	2.2	60.6	97.6	55.9	1.5	60.2	96.3	0
12-24	4/12/2016 4:41	41.8	2.8	60.3	97.9	58.7	3.0	60.6	97.6	51.6	2.2	60.3	96.3	0
12-24	4/12/2016 4:42	64.3	1.1	60.3	97.9	54.5	1.5	60.5	97.6	60.1	1.5	60.2	96.3	0
12-24	4/12/2016 4:43	36.2	0.6	60.3	97.8	60.1	2.2	60.5	97.6	60.1	1.5	60.2	96.3	0
12-24	4/12/2016 4:44	32.0	2.3	60.3	97.8	44.6	2.2	60.6	97.6	50.2	1.5	60.2	96.3	0
12-24	4/12/2016 4:45	47.4	0.6	60.3	97.8	75.5	2.2	60.6	97.6	83.9	1.5	60.2	96.3	0
12-24	4/12/2016 4:46	65.7	1.7	60.3	97.8	71.3	2.2	60.6	97.6	74.1	1.5	60.2	96.3	0
12-24	4/12/2016 4:47	68.5	0.0	60.3	97.9	69.9	0.7	60.5	97.6	71.3	0.7	60.2	96.3	0
12-24	4/12/2016 4:48	68.5	0.0	60.3	97.8	69.9	0.7	60.5	97.6	71.3	0.0	60.2	96.3	0
12-24	4/12/2016 4:49	68.5	0.0	60.3	97.9	69.9	0.0	60.4	97.6	71.3	0.0	60.2	96.3	0
12-24	4/12/2016 4:50	68.5	0.0	60.3	97.8	69.9	0.7	60.5	97.6	71.3	0.7	60.2	96.3	0
12-24	4/12/2016 4:51	68.5	0.0	60.3	98.0	71.3	1.5	60.5	97.6	71.3	0.7	60.2	96.3	0
12-24	4/12/2016 4:52	68.5	0.0	60.3	98.0	99.4	1.5	60.4	97.4	75.5	0.7	60.2	96.3	0
12-24	4/12/2016 4:53	68.5	0.6	60.3	98.1	114.8	1.5	60.4	97.4	81.1	0.7	60.2	96.3	0.008
12-24	4/12/2016 4:54	69.9	0.0	60.2	98.1	114.8	1.5	60.3	97.4	82.5	0.7	60.1	96.3	0
12-24	4/12/2016 4:55	69.9	0.0	60.2	98.2	120.4	1.5	60.3	97.6	86.7	0.7	60.1	96.3	0
12-24	4/12/2016 4:56	79.7	0.6	60.1	98.1	127.5	1.5	60.3	97.7	102.2	0.7	60.1	96.4	0
12-24	4/12/2016 4:57	110.6	0.6	60.1	98.1	128.9	1.5	60.3	97.8	107.8	0.7	60.1	96.4	0
12-24	4/12/2016 4:58	112.0	0.0	60.1	98.2	128.9	1.5	60.3	97.8	116.2	1.5	60.1	96.5	0
12-24	4/12/2016 4:59	112.0	0.6	60.1	98.4	128.9	1.5	60.2	97.8	120.4	0.7	60.1	96.5	0
12-24	4/12/2016 5:00	112.0	0.0	60.1	98.5	128.9	0.7	60.2	97.7	120.4	0.7	60.1	96.5	0
12-24	4/12/2016 5:01	112.0	0.0	60.1	98.5	128.9	0.7	60.2	97.9	120.4	0.0	60.1	96.5	0
12-24	4/12/2016 5:02	112.0	0.0	60.0	98.4	130.3	0.7	60.2	98.1	120.4	0.7	60.1	96.5	0
12-24	4/12/2016 5:03	112.0	0.0	60.0	98.2	130.3	0.7	60.2	98.2	120.4	0.7	60.0	96.5	0
12-24	4/12/2016 5:04	112.0	0.0	60.0	98.2	130.3	0.7	60.1	98.3	120.4	0.7	60.0	96.5	0
12-24	4/12/2016 5:05	112.0	0.0	60.0	98.2	130.3	1.5	60.1	98.2	120.4	0.7	60.0	96.5	0
12-24	4/12/2016 5:06	112.0	0.6	60.0	98.1	130.3	1.5	60.1	98.3	123.2	0.7	60.0	96.5	0
12-24	4/12/2016 5:07	112.0	0.0	59.9	98.1	130.3	0.7	60.1	98.3	126.1	0.0	60.0	96.6	0
12-24	4/12/2016 5:08	112.0	0.0	59.9	98.2	130.3	0.7	60.0	98.2	126.1	0.0	60.0	96.6	0
12-24	4/12/2016 5:09	112.0	0.0	59.9	98.3	127.5	0.0	60.0	98.2	126.1	0.0	60.0	96.5	0
12-24	4/12/2016 5:10	34.8	1.1	59.9	98.3	338.6	2.2	60.0	98.3	348.5	0.7	59.9	96.5	0
12-24	4/12/2016 5:11	330.2	1.7	59.9	98.3	328.8	0.7	60.1	98.5	328.8	0.0	59.9	96.7	0
12-24	4/12/2016 5:12	328.8	0.0	60.0	98.3	328.8	0.0	60.1	98.5	328.8	0.0	60.0	96.7	0
12-24	4/12/2016 5:13	328.8	0.0	60.0	98.2	328.8	0.0	60.1	98.4	328.8	0.0	60.0	96.7	0
12-24	4/12/2016 5:14	328.8	0.0	60.0	98.2	328.8	0.0	60.1	98.4	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:15	328.8	0.0	60.0	98.2	330.2	0.7	60.1	98.4	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:16	330.2	0.6	60.0	98.3	334.4	0.0	60.1	98.4	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:17	330.2	0.0	60.0	98.2	334.4	0.0	60.2	98.4	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:18	330.2	0.0	60.0	98.1	334.4	0.0	60.2	98.3	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:19	330.2	0.0	60.0	98.0	334.4	0.0	60.2	98.3	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:20	330.2	0.0	60.0	98.3	334.4	0.0	60.2	98.3	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:21	330.2	0.0	60.1	98.2	334.4	0.0	60.2	98.5	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:22	330.2	0.0	60.0	98.2	337.2	0.0	60.2	98.4	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:23	330.2	0.0	60.0	98.2	337.2	0.0	60.2	98.3	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:24	330.2	0.0	60.0	98.2	338.6	0.0	60.2	98.2	328.8	0.0	60.0	96.8	0
12-24	4/12/2016 5:25	330.2	0.0	60.0	98.2	359.7	1.5	60.2	98.2	328.8	0.7	60.0	96.7	0
12-24	4/12/2016 5:26	330.2	0.0	60.0	98.3	92.4	1.5	60.2	98.2	327.4	0.7	60.0	96.8	0
12-24	4/12/2016 5:27	307.8	1.7	60.0	98.3	144.3	2.2	60.1	98.3	217.9	1.5	60.0	96.8	0
12-24	4/12/2016 5:28	171.0	2.3	60.0	98.2	158.3	2.2	60.1	98.5	164.0	1.5	60.0	96.8	0
12-24	4/12/2016 5:29	169.6	1.7	60.0	98.3	158.3	1.5	60.1	98.5	164.0	1.5	60.0	96.8	0
12-24	4/12/2016 5:30	169.6	0.6	60.0	98.2	158.3	1.5	60.1	98.5	164.0	0.7	60.0	96.8	0
12-24	4/12/2016 5:31	169.6	0.0	60.0	98.1	158.3	0.7	60.1	98.6	164.0	0.7	60.0	96.8	0
12-24	4/12/2016 5:32	169.6	0.0	59.9	98.1	158.3	0.7	60.0	98.7	164.0	0.7	59.9	96.7	0
12-24	4/12/2016 5:33	168.2	0.0	59.9	98.2	152.7	0.7	60.1	98.6	164.0	0.7	60.0	96.8	0
12-24	4/12/2016 5:34	164.0	0.0	60.0	98.3	149.9	0.7	60.1	98.7	164.0	0.7	59.9	96.8	0
12-24	4/12/2016 5:35	164.0	0.0	60.0	98.3	149.9	0.7	60.1	98.7	164.0	0.0	60.0	96.8	0
12-24	4/12/2016 5:36	164.0	0.0	60.0	98.3	149.9	0.0	60.1	98.6	164.0	0.0	60.0	96.8	0
12-24	4/12/2016 5:37	164.0	0.0	60.0	98.4	149.9	0.0	60.1	98.5	164.0	0.0	60.0	96.8	0
12-24	4/12/2016 5:38	164.0	0.0	60.0	98.3	149.9	0.0	60.1	98.5	164.0	0.0	60.0	96.7	0
12-24	4/12/2016 5:39	164.0	0.0	60.0	98.3	149.9	0.0	60.1	98.5	164.0	0.0	60.0	96.8	0
12-24	4/12/2016 5:40	164.0	0.0	60.0	98.5	149.9	0.7	60.1	98.5	164.0	0.0	60.0	96.7	0
12-24	4/12/2016 5:41	164.0	0.0	60.0	98.6	149.9	0.7	60.1	98.4	164.0	0.7	60.0	96.8	0
12-24	4/12/2016 5:42	164.0	0.0	60.0	98.7	149.9	0.7	60.1	98.4	164.0	0.0	60.0	96.8	0
12-24	4/12/2016 5:43	164.0	0.0	60.0	98.7	149.9	0.7	60.1	98.5	164.0	0.0	60.0	96.7	0
12-24	4/12/2016 5:44	164.0	0.0	60.0	98.7	149.9	0.0	60.1	98.6	164.0	0.0	60.0	96.7	0
12-24	4/12/2016 5:45	164.0	0.0	60.0	98.6	149.9	0.7	60.1	98.5	164.0	0.7	60.0	96.8	0
12-24	4/12/2016 5:46	164.0	0.0	60.0	98.8	141.5	1.5	60.1	98.5	164.0	0.7	59.9	96.7	0
12-24	4/12/2016 5:47	162.6	0.0	60.0	98.9	137.3	1.5	60.1	98.5	156.9	1.5	60.0	96.8	0
12-24	4/12/2016 5:48	140.1	1.7	60.0	98.9	126.1	2.2	60.1	98.5	137.3	1.5	60.0	96.9	0
12-24	4/12/2016 5:49	124.7	1.7	60.0	98.9	131.7	3.0	60.1	98.5	135.9	2.2	60.0	97.0	0
12-24	4/12/2016 5:50	133.1	2.8	60.0	98.9	137.3	3.0	60.1	98.5	135.9	2.2	60.0	97.0	0
12-24	4/12/2016 5:51	135.9	3.4	60.0	98.9	133.1	3.0	60.1	98.5	133.1	2.2	60.0	97.0	0
12-24	4/12/2016 5:52	131.7	2.8	60.0	98.8	137.3	3.0	60.2	98.5	137.3	2.2	60.0	97.0	0
12-24	4/12/2016 5:53	127.5	3.4	60.0	98.8	127.5	3.0	60.2	98.5	124.7	2.2	60.0	97.0	0
12-24	4/12/2016 5:54	138.7	2.8	60.1	98.6	141.5	3.0	60.3	98.6	142.9	2.2	60.0	97.0	0
12-24	4/12/2016 5:55	141.5	2.8	60.1	98.5	142.9	3.0	60.3	98.5	137.3	2.2	60.0	97.0	0
12-24	4/12/2016 5:56	138.7	3.9	60.1	98.5	140.1	3.0	60.3	98.5	137.3	2.2	60.0	97.0	0
12-24	4/12/2016 5:57	144.3	2.3	60.1	98.5	141.5	3.0	60.3	98.5	140.1	2.2	60.0	97.0	0
12-24	4/12/2016 5:58	137.3	3.4	60.2	98.5	138.7	3.7	60.3	98.4	137.3	3.0	60.0	97.0	0
12-24	4/12/2016 5:59	142.9	3.9	60.2	98.3	147.1	3.0	60.4	98.3	145.7	2.2	60.0	96.9	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
12-24	4/12/2016 6:00	145.7	2.8	60.2	98.2	151.3	2.2	60.3	98.3	151.3	1.5	60.0	96.9	0
12-24	4/12/2016 6:01	148.5	2.8	60.2	98.2	156.9	3.0	60.3	98.3	154.1	2.2	60.0	96.9	0
12-24	4/12/2016 6:02	155.5	3.4	60.2	98.1	149.9	3.0	60.3	98.2	149.9	2.2	60.0	96.8	0
12-24	4/12/2016 6:03	141.5	2.3	60.2	98.2	138.7	3.0	60.3	98.1	135.9	2.2	60.0	96.8	0
12-24	4/12/2016 6:04	130.3	4.5	60.2	98.1	130.3	3.7	60.4	98.1	133.1	3.0	60.0	96.8	0
12-24	4/12/2016 6:05	133.1	2.8	60.2	97.9	140.1	3.0	60.4	97.8	140.1	2.2	60.0	96.8	0
12-24	4/12/2016 6:06	140.1	3.9	60.3	97.6	137.3	3.7	60.5	97.6	134.5	3.0	60.0	96.7	0
12-24	4/12/2016 6:07	124.7	3.4	60.3	97.6	130.3	3.7	60.5	97.6	128.9	2.2	60.1	96.7	0
12-24	4/12/2016 6:08	128.9	3.9	60.3	97.5	134.5	3.7	60.5	97.6	134.5	3.0	60.1	96.6	0
12-24	4/12/2016 6:09	140.1	3.9	60.3	97.6	140.1	3.7	60.4	97.6	141.5	3.0	60.1	96.6	0
12-24	4/12/2016 6:10	142.9	3.4	60.3	97.6	148.5	3.7	60.4	97.6	145.7	2.2	60.1	96.6	0
12-24	4/12/2016 6:11	142.9	2.8	60.3	97.7	144.3	3.0	60.4	97.7	145.7	2.2	60.1	96.6	0
12-24	4/12/2016 6:12	138.7	2.8	60.3	97.8	147.1	3.0	60.4	97.8	141.5	2.2	60.1	96.6	0
12-24	4/12/2016 6:13	149.9	3.4	60.2	97.8	151.3	3.7	60.4	97.9	148.5	3.0	60.1	96.6	0
12-24	4/12/2016 6:14	147.1	3.9	60.2	97.7	149.9	3.0	60.4	97.8	147.1	2.2	60.1	96.6	0
12-24	4/12/2016 6:15	152.7	3.9	60.2	97.6	154.1	4.5	60.5	97.6	149.9	3.0	60.1	96.6	0
12-24	4/12/2016 6:16	148.5	4.5	60.3	97.3	151.3	3.7	60.6	97.3	149.9	3.0	60.1	96.5	0
12-24	4/12/2016 6:17	151.3	5.1	60.4	96.9	151.3	4.5	60.6	97.1	148.5	3.0	60.1	96.3	0
12-24	4/12/2016 6:18	155.5	5.1	60.4	96.8	154.1	4.5	60.6	96.9	151.3	3.0	60.1	96.3	0
12-24	4/12/2016 6:19	155.5	5.1	60.4	96.7	162.6	5.2	60.6	96.7	161.2	3.7	60.1	96.3	0
12-24	4/12/2016 6:20	154.1	6.2	60.5	96.4	158.3	5.2	60.8	96.4	151.3	3.7	60.2	96.0	0
12-24	4/12/2016 6:21	156.9	6.8	60.6	96.0	152.7	5.2	60.9	95.8	149.9	3.7	60.2	95.7	0
12-24	4/12/2016 6:22	151.3	3.9	60.7	95.4	149.9	3.7	60.9	95.6	147.1	2.2	60.3	95.5	0
12-24	4/12/2016 6:23	149.9	4.5	60.7	95.1	152.7	4.5	60.9	95.4	148.5	3.0	60.3	95.4	0
12-24	4/12/2016 6:24	151.3	3.9	60.7	94.9	154.1	3.7	60.9	95.0	149.9	2.2	60.3	95.3	0
12-24	4/12/2016 6:25	147.1	3.4	60.8	94.5	152.7	3.0	60.9	94.9	148.5	2.2	60.3	95.0	0
12-24	4/12/2016 6:26	147.1	2.8	60.7	94.6	137.3	3.0	60.9	94.9	135.9	2.2	60.3	95.0	0
12-24	4/12/2016 6:27	137.3	2.8	60.6	94.8	131.7	3.0	60.8	95.1	133.1	2.2	60.3	95.0	0
12-24	4/12/2016 6:28	135.9	2.8	60.6	95.0	135.9	3.0	60.7	95.1	138.7	2.2	60.3	95.0	0
12-24	4/12/2016 6:29	127.5	1.7	60.6	95.3	120.4	2.2	60.7	95.3	124.7	1.5	60.2	95.1	0
12-24	4/12/2016 6:30	99.4	1.7	60.5	95.4	106.4	2.2	60.6	95.5	98.0	1.5	60.2	95.3	0
12-24	4/12/2016 6:31	116.2	1.7	60.5	95.6	121.8	2.2	60.6	95.6	126.1	1.5	60.2	95.2	0
12-24	4/12/2016 6:32	109.2	1.1	60.5	95.6	128.9	2.2	60.6	95.8	121.8	1.5	60.2	95.3	0
12-24	4/12/2016 6:33	117.6	0.6	60.5	95.7	138.7	1.5	60.6	96.0	131.7	1.5	60.2	95.4	0
12-24	4/12/2016 6:34	155.5	0.6	60.4	95.7	164.0	1.5	60.5	96.0	175.2	0.7	60.2	95.4	0
12-24	4/12/2016 6:35	164.0	0.0	60.4	95.8	164.0	0.7	60.5	95.9	175.2	0.7	60.2	95.5	0
12-24	4/12/2016 6:36	164.0	0.0	60.3	96.0	164.0	0.7	60.5	95.9	175.2	0.7	60.1	95.5	0
12-24	4/12/2016 6:37	164.0	0.0	60.3	96.2	164.0	0.7	60.5	95.9	175.2	0.0	60.1	95.5	0
12-24	4/12/2016 6:38	164.0	0.0	60.3	96.0	164.0	0.7	60.5	96.0	175.2	0.7	60.1	95.6	0
12-24	4/12/2016 6:39	164.0	0.0	60.3	96.0	164.0	0.7	60.4	96.4	175.2	0.0	60.1	95.7	0
12-24	4/12/2016 6:40	164.0	0.0	60.3	96.0	164.0	0.7	60.4	96.6	175.2	0.0	60.1	95.7	0
12-24	4/12/2016 6:41	164.0	0.0	60.3	96.0	164.0	0.0	60.3	96.7	175.2	0.0	60.1	95.7	0
12-24	4/12/2016 6:42	164.0	0.0	60.2	96.0	164.0	0.7	60.3	96.7	175.2	0.0	60.1	95.8	0
12-24	4/12/2016 6:43	164.0	0.0	60.2	96.6	164.0	0.0	60.3	96.6	175.2	0.0	60.1	95.8	0
12-24	4/12/2016 6:44	164.0	0.0	60.1	96.9	164.0	0.0	60.2	96.8	175.2	0.0	60.1	95.9	0
12-24	4/12/2016 6:45	164.0	0.0	60.1	97.0	164.0	0.7	60.2	96.9	175.2	0.0	60.0	96.0	0
12-24	4/12/2016 6:46	164.0	0.0	60.1	96.8	164.0	0.0	60.3	96.8	175.2	0.0	60.0	96.0	0
12-24	4/12/2016 6:47	164.0	0.0	60.1	96.7	164.0	0.7	60.3	96.7	175.2	0.7	60.0	96.0	0
12-24	4/12/2016 6:48	164.0	0.0	60.2	96.6	164.0	0.0	60.3	96.7	175.2	0.0	60.0	96.0	0
12-24	4/12/2016 6:49	158.3	0.0	60.2	96.6	134.5	1.5	60.4	96.7	144.3	0.7	60.1	96.0	0
12-24	4/12/2016 6:50	133.1	0.6	60.3	96.4	117.6	0.7	60.5	96.7	117.6	0.7	60.1	95.9	0
12-24	4/12/2016 6:51	133.1	0.0	60.3	96.3	147.1	1.5	60.5	96.7	130.3	0.7	60.1	95.9	0
12-24	4/12/2016 6:52	156.9	0.6	60.3	96.3	171.0	1.5	60.5	96.6	156.9	0.7	60.1	95.9	0
12-24	4/12/2016 6:53	161.2	0.6	60.3	96.4	172.4	1.5	60.5	96.7	172.4	0.7	60.1	96.0	0
12-24	4/12/2016 6:54	161.2	0.0	60.3	96.5	175.2	0.7	60.4	96.8	184.2	0.7	60.1	96.0	0
12-24	4/12/2016 6:55	161.2	0.0	60.3	96.5	175.2	0.7	60.4	96.7	184.2	0.7	60.1	96.1	0
12-24	4/12/2016 6:56	161.2	0.0	60.3	96.6	203.9	1.5	60.4	96.6	199.7	0.7	60.1	96.1	0
12-24	4/12/2016 6:57	180.0	0.6	60.3	96.8	253.0	2.2	60.4	96.8	241.8	1.5	60.1	96.2	0
12-24	4/12/2016 6:58	258.6	2.3	60.2	97.1	271.3	2.2	60.3	97.1	268.4	1.5	60.1	96.3	0
12-24	4/12/2016 6:59	261.4	1.7	60.2	97.3	258.6	2.2	60.3	97.3	267.0	1.5	60.1	96.4	0
12-24	4/12/2016 7:00	257.2	1.7	60.1	97.5	244.6	2.2	60.2	97.6	250.2	1.5	60.0	96.4	0
12-24	4/12/2016 7:01	251.6	1.1	60.1	97.5	244.6	1.5	60.2	97.6	250.2	0.7	60.0	96.4	0
12-24	4/12/2016 7:02	248.8	0.6	60.1	97.7	248.8	1.5	60.2	97.6	250.2	1.5	60.0	96.5	0
12-24	4/12/2016 7:03	248.8	1.1	60.1	97.5	255.8	2.2	60.2	97.6	250.2	1.5	60.0	96.5	0
12-24	4/12/2016 7:04	250.2	0.6	60.2	97.3	262.8	2.2	60.3	97.4	264.2	1.5	60.0	96.4	0
12-24	4/12/2016 7:05	262.8	0.0	60.2	97.2	255.8	0.7	60.3	97.3	268.4	0.7	60.0	96.4	0
12-24	4/12/2016 7:06	264.2	0.0	60.2	97.3	255.8	0.7	60.3	97.1	268.4	0.0	60.0	96.4	0
12-24	4/12/2016 7:07	264.2	0.0	60.2	97.3	255.8	0.0	60.3	97.3	268.4	0.0	60.0	96.3	0
12-24	4/12/2016 7:08	264.2	0.0	60.1	97.3	260.0	0.7	60.3	97.3	269.9	0.0	60.0	96.4	0
12-24	4/12/2016 7:09	278.3	0.0	60.2	97.3	296.5	0.7	60.3	97.3	299.3	0.7	60.0	96.3	0
12-24	4/12/2016 7:10	285.3	0.0	60.2	97.2	296.5	0.7	60.3	97.2	299.3	0.0	60.0	96.3	0
12-24	4/12/2016 7:11	285.3	0.0	60.3	97.1	296.5	0.7	60.3	97.1	299.3	0.0	60.0	96.3	0
12-24	4/12/2016 7:12	285.3	0.0	60.2	97.3	278.3	1.5	60.3	97.3	290.9	0.7	60.0	96.4	0
12-24	4/12/2016 7:13	279.7	1.1	60.3	97.1	257.2	1.5	60.3	97.2	258.6	1.5	60.0	96.4	0
12-24	4/12/2016 7:14	268.4	0.6	60.3	97.2	264.2	2.2	60.4	97.1	257.2	1.5	60.0	96.4	0
12-24	4/12/2016 7:15	269.9	1.1	60.3	97.1	274.1	1.5	60.4	97.0	265.6	1.5	60.1	96.4	0
12-24	4/12/2016 7:16	269.9	1.1	60.3	97.0	271.3	2.2	60.4	97.0	268.4	1.5	60.1	96.3	0
12-24	4/12/2016 7:17	268.4	0.0	60.3	97.1	265.6	0.7	60.4	97.0	268.4	0.7	60.1	96.4	0
12-24	4/12/2016 7:18	268.4	0.0	60.3	97.3	265.6	1.5	60.4	97.1	268.4	0.7	60.1	96.4	0
12-24	4/12/2016 7:19	268.4	0.0	60.3	97.4	267.0	0.7	60.3	97.3	268.4	0.7	60.1	96.5	0
12-24	4/12/2016 7:20	268.4	0.0	60.3	97.3	267.0	0.7	60.3	97.3	268.4	0.7	60.1	96.5	0
12-24	4/12/2016 7:21	268.4	0.0	60.3	97.4	264.2	0.7	60.3	97.3	268.4	0.7	60.1	96.5	0
12-24	4/12/2016 7:22	268.4	0.0	60.3	97.4	262.8	0.7	60.3	97.4	268.4	0.7	60.1	96.5	0
12-24	4/12/2016 7:23	268.4	0.0	60.3	97.6	262.8	0.7	60.3	97.4	268.4	0.7	60.1	96.5	0
12-24	4/12/2016 7:24	268.4	0.0	60.3	97.6	262.8	1.5	60.3	97.6	268.4	0.7	60.1	96.5	0
12-24	4/12/2016 7:25	268.4	0.6	60.2	97.8	262.8	1.5	60.3	97.8	268.4	0.7	60.1	96.5	0.008
12-24	4/12/2016 7:26	268.4	1.1	60.2	97.8	250.2	2.2	60.3	97.8	265.6	1.5	60.1	96.5	0
12-24	4/12/2016 7:27	231.9	0.6	60.1	97.8	233.3	1.5	60.2	97.9	255.8	0.7	60.1	96.6	0
12-24	4/12/2016 7:28	229.1	0.0	60.1	97.8	233.3	1.5	60.2	98.0	255.6	0.7	60.1	96.5	0.008
12-24	4/12/2016 7:29	229.1	0.0	60.1	98.0	233.3	1.5	60.2	98.1	250.2	0.7	60.0	96.6	0
12-24	4/12/2016 7:30	229.1	0.6	60.0	98.1	233.3	1.5	60.1	98.2	240.4	0.7	60.0	96.5	0.008
12-24	4/12/2016 7:31	229.1	0.6	60.0	98.2	233.3	1.5	60.1	98.2	240.4	0.7	60.0	96.6	0.008
12-24	4/12/2016 7:32	229.1	0.0	60.0	98.3	233.3	1.5	60.1	98.3	240.4	0.7	60.0	96.6	0
12-24	4/12/2016 7:33	229.1	0.0	60.0	98.4	233.3	0.7	60.1	98.3	240.4	0.0	60.0	96.6	0.008
12-24	4/12/2016 7:34	229.1	0.0	60.0	98.2	233.3	0.7	60.0	98.4	240.4	0.0	60.0	96.6	0
12-24	4/12/2016 7:35	227.7	0.0	60.0	98.2	233.3	0.7	60.0	98.5	240.4	0.7	60.0	96.7	0
12-24	4/12/2016 7:36	227.7	0.0	60.0	98.1	233.3	0.7	60.0	98.5	240.4	0.7	60.0	96.7	0.008
12-24	4/12/2016 7:37	227.7	0.0	60.0	98.1	233.3	0.7	60.0	98.6	240.4	0.0	60.0	96.7	0.008
12-24	4/12/2016 7:38	227.7	0.0	59.9	98.1	233.3	0.0	60.0	98.6	240.4	0.0	60.0	96.7	0
12-24	4/12/2016 7:39	227.7	0.0	59.9	98.1	233.3	0.0	60.0	98.5	240.4	0.0	60.0	96.7	0
12-24	4/12/2016 7:40	227.7	0.0	59.9	98.0	233.3	0.0	60.0	98.5	240.4	0.0	60.0	96.7	0
12-24	4/12/2016 7:41	227.7	0.0	59.9	98.0	233.3	0.0	60.0	98.5	240.4	0.0	60.0	96.7	0
12-24	4/12/2016 7:42	227.7	0.0	59.9	98.0	233.3	0.0	60.0	98.4	240.4	0.0	60.0	96.8	0
12-24	4/12/2016 7:43	227.7	0.0	59.9	98.0	233.3	0.0	60.0	98.3	240.4	0.0	60.0	96.8	0
12-24	4/12/2016 7:44	227.7	0.0	59.9	98.1	233.3	0.0	60.0	98.3	240.4	0.0	60.0	96.8	0
12-24	4/12/2016 7:45	227.7	0.0	59.9	98.5	233.3	0.0	60.0	98.3	240.4	0.0	60.0	96.9	0.008
12-24	4/12/2016 7:46	227.7	0.0	59.9	98.7	233.3	0.7	60.0	98.3	240.4	0.0	60.0	97.0	0
12-24	4/12/2016 7:47	229.1	0.0	59.9	98.8	233.3	0.7	60.0	98.4	240.4	0.7	60.0	97.0	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
12-24	4/12/2016 7:48	229.1	0.0	59.9	99.0	239.0	1.5	60.0	98.5	240.4	0.7	60.0	97.1	0
12-24	4/12/2016 7:49	229.1	0.0	59.9	99.0	246.0	1.5	60.0	98.7	240.4	0.7	60.0	97.1	0.008
12-24	4/12/2016 7:50	229.1	0.0	59.9	99.1	246.0	0.7	60.0	98.8	240.4	0.7	60.0	97.1	0
12-24	4/12/2016 7:51	229.1	0.0	59.9	99.1	246.0	0.7	60.0	98.8	240.4	0.0	60.0	97.1	0
12-24	4/12/2016 7:52	229.1	0.0	59.9	99.1	246.0	0.7	60.0	99.0	240.4	0.7	60.0	97.1	0
12-24	4/12/2016 7:53	229.1	0.0	59.9	99.2	246.0	0.0	60.0	99.0	240.4	0.0	60.0	97.1	0
12-24	4/12/2016 7:54	229.1	0.0	59.9	99.2	246.0	0.7	60.0	99.0	240.4	0.0	60.0	97.2	0
12-24	4/12/2016 7:55	229.1	0.0	59.9	99.3	251.6	1.5	60.0	99.0	240.4	0.0	60.0	97.3	0.008
12-24	4/12/2016 7:56	229.1	0.6	59.9	99.2	267.0	1.5	60.0	99.0	247.4	1.5	60.0	97.3	0
12-24	4/12/2016 7:57	239.0	1.1	60.0	99.4	289.5	1.5	60.1	99.0	279.7	1.5	60.1	97.3	0
12-24	4/12/2016 7:58	283.9	1.1	60.0	99.4	302.1	1.5	60.1	99.1	290.9	1.5	60.1	97.3	0
12-24	4/12/2016 7:59	293.7	1.7	60.0	99.5	310.6	2.2	60.1	99.2	290.9	1.5	60.1	97.3	0
12-24	4/12/2016 8:00	302.1	0.6	60.0	99.5	310.6	1.5	60.1	99.2	290.9	0.7	60.1	97.5	0
12-24	4/12/2016 8:01	302.1	0.6	60.0	99.5	300.7	2.2	60.2	99.3	290.9	1.5	60.1	97.6	0.008
12-24	4/12/2016 8:02	302.1	1.7	60.0	99.5	299.3	2.2	60.1	99.3	289.5	2.2	60.1	97.6	0
12-24	4/12/2016 8:03	297.9	2.8	60.0	99.5	297.9	3.7	60.1	99.3	290.9	3.0	60.1	97.6	0
12-24	4/12/2016 8:04	299.3	4.5	60.0	99.5	309.2	3.7	60.1	99.3	302.1	3.0	60.1	97.5	0
12-24	4/12/2016 8:05	304.9	3.9	60.0	99.5	300.7	3.7	60.1	99.2	302.1	3.0	60.1	97.5	0
12-24	4/12/2016 8:06	302.1	3.9	60.0	99.5	295.1	3.7	60.1	99.3	295.1	3.0	60.0	97.5	0.008
12-24	4/12/2016 8:07	292.3	3.9	60.0	99.5	296.5	3.7	60.1	99.3	292.3	2.2	60.0	97.5	0.008
12-24	4/12/2016 8:08	299.3	2.3	60.0	99.5	297.9	2.2	60.1	99.3	302.1	1.5	60.0	97.5	0
12-24	4/12/2016 8:09	283.9	1.1	60.0	99.4	275.5	2.2	60.1	99.3	265.6	1.5	60.0	97.5	0
12-24	4/12/2016 8:10	274.1	0.0	60.0	99.4	281.1	0.7	60.1	99.2	264.2	0.7	60.0	97.5	0.008
12-24	4/12/2016 8:11	274.1	0.0	60.0	99.3	297.9	0.7	60.1	99.1	264.2	0.0	60.0	97.5	0.008
12-24	4/12/2016 8:12	327.4	1.1	60.0	99.3	331.6	0.7	60.1	99.1	264.2	0.0	60.0	97.5	0
12-24	4/12/2016 8:13	326.6	0.0	60.0	99.2	18.0	0.7	60.1	99.0	180.0	0.7	60.0	97.5	0.008
12-24	4/12/2016 8:14	330.2	0.0	60.0	99.1	61.1	1.5	60.1	99.0	135.9	0.7	60.0	97.5	0.008
12-24	4/12/2016 8:15	340.0	0.0	60.0	99.1	140.1	1.5	60.1	98.9	135.9	0.7	60.0	97.5	0.008
12-24	4/12/2016 8:16	44.6	0.0	60.0	99.2	141.5	1.5	60.1	98.9	135.9	1.5	60.0	97.5	0.008
12-24	4/12/2016 8:17	131.7	1.1	60.0	99.1	149.9	2.2	60.1	99.0	140.1	1.5	60.0	97.5	0.008
12-24	4/12/2016 8:18	133.1	1.1	59.9	99.1	131.7	2.2	60.1	98.9	124.7	1.5	60.0	97.4	0.008
12-24	4/12/2016 8:19	124.7	1.1	59.9	99.1	141.5	1.5	60.1	98.9	123.2	1.5	60.0	97.4	0
12-24	4/12/2016 8:20	124.7	1.7	60.0	99.3	126.1	3.0	60.1	98.8	124.7	1.5	60.0	97.5	0.008
12-24	4/12/2016 8:21	124.7	2.8	59.9	99.3	133.1	3.0	60.1	98.8	130.3	2.2	60.0	97.5	0
12-24	4/12/2016 8:22	140.1	3.4	60.0	99.3	140.1	3.0	60.2	98.9	134.5	2.2	60.0	97.5	0.008
12-24	4/12/2016 8:23	138.7	3.4	60.0	99.4	144.3	3.7	60.1	99.0	140.1	2.2	60.1	97.5	0
12-24	4/12/2016 8:24	140.1	4.5	60.0	99.5	140.1	4.5	60.1	99.0	137.3	3.0	60.1	97.6	0
12-24	4/12/2016 8:25	149.9	5.6	60.0	99.5	154.1	4.5	60.1	99.2	151.3	3.7	60.0	97.6	0
12-24	4/12/2016 8:26	154.1	5.1	60.0	99.5	156.9	4.5	60.1	99.3	154.1	3.0	60.1	97.6	0
12-24	4/12/2016 8:27	154.1	5.1	60.0	99.5	152.7	3.7	60.2	99.3	148.5	3.0	60.1	97.6	0
12-24	4/12/2016 8:28	156.9	4.5	60.0	99.4	165.4	5.2	60.2	99.4	162.6	3.7	60.1	97.7	0
12-24	4/12/2016 8:29	162.6	6.2	60.1	99.4	166.8	5.2	60.3	99.4	164.0	3.7	60.2	97.7	0
12-24	4/12/2016 8:30	162.6	5.6	60.1	99.3	159.7	5.2	60.3	99.4	152.7	3.7	60.2	97.7	0
12-24	4/12/2016 8:31	151.3	4.5	60.2	99.3	156.9	3.7	60.4	99.4	152.7	2.2	60.3	97.8	0
12-24	4/12/2016 8:32	159.7	3.9	60.3	99.3	166.8	3.7	60.6	99.4	164.0	3.0	60.3	97.8	0.008
12-24	4/12/2016 8:33	158.3	5.6	60.3	99.2	158.3	5.2	60.6	99.2	158.3	3.7	60.3	97.7	0
12-24	4/12/2016 8:34	159.7	5.6	60.4	99.1	161.2	4.5	60.7	99.0	161.2	3.0	60.4	97.6	0
12-24	4/12/2016 8:35	172.4	5.1	60.5	99.0	166.2	3.7	60.9	98.8	166.2	3.0	60.5	97.7	0
12-24	4/12/2016 8:36	154.1	1.7	60.7	98.8	158.3	2.2	61.2	99.0	156.9	1.5	60.7	97.8	0
12-24	4/12/2016 8:37	181.4	3.9	61.2	98.7	191.2	3.7	61.7	98.5	205.3	3.0	61.1	97.9	0
12-24	4/12/2016 8:38	187.0	2.3	61.5	98.2	198.3	2.2	62.3	98.3	185.6	1.5	61.4	97.9	0
12-24	4/12/2016 8:39	187.0	3.4	62.0	98.1	185.6	3.0	62.6	97.9	188.4	2.2	61.8	98.0	0
12-24	4/12/2016 8:40	162.6	1.1	62.3	98.1	184.2	2.2	62.7	97.6	181.4	1.5	62.1	98.1	0
12-24	4/12/2016 8:41	187.0	3.9	62.1	97.5	188.4	3.7	62.3	96.5	192.6	3.0	61.9	97.6	0
12-24	4/12/2016 8:42	173.8	3.9	61.6	97.0	165.4	3.7	61.9	96.6	168.2	3.0	61.5	97.3	0
12-24	4/12/2016 8:43	169.6	5.6	61.4	97.0	173.8	4.5	61.6	96.9	173.8	3.0	61.3	97.1	0
12-24	4/12/2016 8:44	144.3	2.3	61.2	97.4	152.7	2.2	61.5	97.3	141.5	1.5	61.2	97.2	0
12-24	4/12/2016 8:45	175.2	2.3	61.2	97.4	182.8	3.0	61.5	97.4	175.2	2.2	61.2	97.2	0
12-24	4/12/2016 8:46	171.0	4.5	61.1	97.6	154.1	3.7	61.3	97.6	156.9	3.0	61.1	97.1	0
12-24	4/12/2016 8:47	130.3	2.8	61.0	97.5	119.0	3.0	61.2	97.5	107.8	1.5	61.0	97.0	0
12-24	4/12/2016 8:48	134.5	1.7	60.9	97.5	154.1	2.2	61.2	97.5	151.3	1.5	61.0	97.0	0
12-24	4/12/2016 8:49	140.1	2.8	60.9	97.5	135.9	3.0	61.2	97.4	141.5	2.2	60.9	96.9	0
12-24	4/12/2016 8:50	147.1	1.7	60.9	97.8	171.0	3.0	61.1	97.7	166.8	1.5	60.9	97.0	0
12-24	4/12/2016 8:51	173.8	2.3	60.9	97.8	172.4	3.0	61.1	97.9	172.4	2.2	60.9	97.1	0
12-24	4/12/2016 8:52	168.2	1.7	60.9	98.0	158.3	2.2	61.1	97.9	158.3	1.5	60.9	97.1	0
12-24	4/12/2016 8:53	144.3	2.8	60.9	97.8	141.5	3.7	61.1	98.0	135.9	3.0	60.9	97.1	0
12-24	4/12/2016 8:54	145.7	2.8	60.9	98.1	158.3	2.2	61.1	98.1	151.3	1.5	60.9	97.2	0
12-24	4/12/2016 8:55	149.9	0.0	60.9	98.0	162.6	1.5	61.1	98.2	154.1	0.7	60.9	97.2	0
12-24	4/12/2016 8:56	149.9	0.6	60.9	98.0	152.7	2.2	61.2	98.2	152.7	1.5	60.9	97.1	0
12-24	4/12/2016 8:57	138.7	2.8	60.9	98.1	145.7	3.0	61.2	98.0	141.5	2.2	60.9	97.2	0
12-24	4/12/2016 8:58	151.3	2.3	60.9	98.0	151.3	3.0	61.2	97.9	147.1	1.5	60.9	97.2	0
12-24	4/12/2016 8:59	135.9	2.8	60.9	98.0	128.9	3.0	61.2	98.0	130.3	2.2	61.0	97.1	0
NS	4/12/2016 9:00	133.1	2.3	61.0	98.0	145.7	2.2	61.2	97.8	138.7	1.5	61.0	97.2	0
NS	4/12/2016 9:01	144.3	2.8	61.0	97.7	154.1	3.7	61.2	97.6	151.3	2.2	60.9	97.0	0
NS	4/12/2016 9:02	152.7	2.3	61.0	97.7	155.5	3.0	61.3	97.6	155.5	2.2	61.0	97.0	0
NS	4/12/2016 9:03	137.3	3.4	61.0	97.5	137.3	3.7	61.3	97.4	134.5	3.0	61.0	96.9	0
NS	4/12/2016 9:04	144.3	3.9	61.0	97.4	149.9	3.7	61.3	97.4	148.5	2.2	61.0	96.9	0
NS	4/12/2016 9:05	144.3	3.4	61.0	97.6	144.3	3.0	61.2	97.4	142.9	2.2	61.0	96.9	0
NS	4/12/2016 9:06	152.7	2.3	61.0	97.5	159.7	2.2	61.2	97.5	141.5	1.5	60.9	96.9	0
NS	4/12/2016 9:07	144.3	1.7	61.0	97.7	140.1	2.2	61.3	97.5	137.3	1.5	61.0	96.9	0
NS	4/12/2016 9:08	149.9	1.7	61.1	97.7	156.9	2.2	61.3	97.8	159.7	1.5	61.0	96.9	0
NS	4/12/2016 9:09	140.1	1.7	61.1	97.7	133.1	3.0	61.3	97.6	127.5	1.5	61.1	97.0	0
NS	4/12/2016 9:10	135.9	3.4	61.1	97.6	141.5	4.5	61.3	97.6	142.9	3.0	61.1	96.9	0
NS	4/12/2016 9:11	140.1	3.9	61.1	97.5	130.3	3.7	61.4	97.5	128.9	3.0	61.1	96.9	0
NS	4/12/2016 9:12	119.0	1.7	61.2	97.7	138.7	2.2	61.4	97.5	130.3	1.5	61.1	96.9	0
NS	4/12/2016 9:13	144.3	1.7	61.2	97.6	147.1	2.2	61.4	97.6	141.5	1.5	61.2	96.9	0
NS	4/12/2016 9:14	151.3	1.1	61.2	97.5	151.3	2.2	61.5	97.6	155.5	1.5	61.2	97.0	0
NS	4/12/2016 9:15	123.2	0.6	61.3	97.5	123.2	2.2	61.5	97.5	123.2	1.5	61.2	97.0	0
NS	4/12/2016 9:16	128.9	1.7	61.3	97.5	144.3	3.0	61.5	97.5	147.1	2.2	61.2	97.0	0
NS	4/12/2016 9:17	135.9	3.4	61.2	97.2	134.5	3.7	61.5	97.3	134.5	2.2	61.2	96.9	0
NS	4/12/2016 9:18	141.5	2.8	61.2	97.3	142.9	3.0	61.4	97.3	142.9	2.2	61.2	96.9	0
NS	4/12/2016 9:19	152.7	2.8	61.2	97.4	173.8	3.0	61.4	97.3	168.2	2.2	61.2	96.9	0
NS	4/12/2016 9:20	168.2	2.3	61.2	97.3	154.1	2.2	61.5	97.4	154.1	1.5	61.2	96.9	0
NS	4/12/2016 9:21	133.1	1.7	61.2	97.4	149.9	2.2	61.4	97.3	141.5	1.5	61.2	96.8	0
NS	4/12/2016 9:22	151.3	2.8	61.2	97.1	144.3	3.0	61.4	97.1	141.5	2.2	61.1	96.7	0
NS	4/12/2016 9:23	152.7	0.6	61.2	97.1	148.5	1.5	61.4	97.3	147.1	0.7	61.1	96.8	0
NS	4/12/2016 9:24	154.1	0.0	61.2	97.2	154.1	0.7	61.5	97.2	147.1	0.7	61.2	96.8	0
NS	4/12/2016 9:25	154.1	0.0	61.3	97.5	154.1	0.7	61.5	97.5	147.1	0.7	61.2	97.0	0
NS	4/12/2016 9:26	154.1	0.0	61.4	97.5	151.3	1.5	61.6	97.6	147.1	0.7	61.3	97.0	0
NS	4/12/2016 9:27	151.3	0.6	61.4	97.1	126.9	1.5	61.6	97.3	141.5	1.5	61.2	96.9	0
NS	4/12/2016 9:28	130.3	0.0	61.4	97.1	130.3	1.5	61.6	97.3	135.9	0.7	61.3	97.0	0
NS	4/12/2016 9:29	144.3	1.1	61.5	97.4	156.9	2.2	61.7	97.5	147.1	1.5	61.4	97.0	0
NS	4/12/2016 9:30	145.7	2.3	61.5	97.2	131.7	3.0	61.7	97.3	130.3	2.2	61.4	96.9	0
NS	4/12/2016 9:31	138.7	1.7	61.5	97.2	135.9	2.2	61.8	97.0	131.7	1.5	61.5	96.8	0
NS	4/12/2016 9:32	127.5	2.3	61.5	97.0	133.1	3.0	61.8	97.1	123.2	2.2	61.5	96.9	0
NS	4/12/2016 9:33	144.3	2.3	61.6	97.2	134.5	2.2	61.8	97.2	137.3	1.5	61.5	96.8	0
NS	4/12/2016 9:34	126.1	0.6	61.7	97.3	145.7	1.5	62.0	97.3	128.9	1.5	61.6	97.0	0
NS	4/12/2016 9:35	126.1	0.0	61.8	97.1	140.1	1.5	62.0	97.1	123.2	1.5	61.7	96.8	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/12/2016 9:36	117.6	0.0	61.8	96.9	158.3	1.5	62.1	97.2	175.2	0.7	61.7	96.8	0
NS	4/12/2016 9:37	151.3	1.7	61.8	96.8	161.2	3.0	62.0	97.1	162.6	2.2	61.7	96.8	0
NS	4/12/2016 9:38	165.4	3.9	61.7	96.5	164.0	3.7	61.9	96.7	161.2	3.0	61.6	96.5	0
24-36	4/12/2016 9:39	149.9	2.8	61.7	96.7	149.9	2.2	61.8	96.8	142.9	1.5	61.6	96.5	0
24-36	4/12/2016 9:40	138.7	1.1	61.7	96.9	140.1	2.2	61.8	96.9	135.9	1.5	61.6	96.5	0
24-36	4/12/2016 9:41	147.1	2.3	61.6	96.8	149.9	2.2	61.8	97.0	142.9	1.5	61.6	96.5	0
24-36	4/12/2016 9:42	162.6	0.6	61.6	97.0	89.6	2.2	61.8	97.0	65.7	1.5	61.6	96.5	0
24-36	4/12/2016 9:43	130.3	1.1	61.6	97.0	135.9	1.5	61.8	97.0	120.4	0.7	61.6	96.5	0
24-36	4/12/2016 9:44	131.7	0.0	61.6	97.0	124.7	1.5	61.8	97.1	121.8	0.7	61.6	96.6	0
24-36	4/12/2016 9:45	130.3	0.0	61.7	97.0	140.1	1.5	61.8	97.2	121.8	0.7	61.6	96.7	0
24-36	4/12/2016 9:46	158.3	0.6	61.7	97.0	264.2	1.5	61.9	97.2	187.0	1.5	61.6	96.7	0
24-36	4/12/2016 9:47	175.2	0.6	61.8	97.3	175.2	1.5	62.1	97.4	180.0	0.7	61.7	96.8	0
24-36	4/12/2016 9:48	172.4	0.0	61.9	97.3	156.9	1.5	62.1	97.1	164.0	0.7	61.8	96.8	0
24-36	4/12/2016 9:49	138.7	0.6	61.8	96.5	112.0	1.5	62.1	96.7	119.0	1.5	61.8	96.6	0
24-36	4/12/2016 9:50	123.2	0.0	61.9	96.7	112.0	0.7	62.1	96.7	112.0	0.0	61.8	96.6	0
24-36	4/12/2016 9:51	141.5	0.6	61.9	96.5	144.3	1.5	62.1	96.4	133.1	0.7	61.8	96.6	0
24-36	4/12/2016 9:52	142.9	0.0	61.9	96.1	123.2	1.5	62.1	96.4	128.9	0.7	61.8	96.5	0
24-36	4/12/2016 9:53	134.5	0.0	62.0	96.4	135.9	1.5	62.2	96.2	131.7	0.7	61.8	96.5	0
24-36	4/12/2016 9:54	134.5	0.0	62.0	96.5	140.1	1.5	62.2	96.1	133.1	0.7	61.9	96.6	0
24-36	4/12/2016 9:55	134.5	0.0	62.1	96.2	133.1	0.7	62.3	96.2	126.1	0.0	61.9	96.6	0
24-36	4/12/2016 9:56	100.8	0.0	62.1	95.8	95.2	0.7	62.3	95.6	103.6	0.7	61.8	96.3	0
24-36	4/12/2016 9:57	89.6	0.0	62.1	96.3	95.2	0.0	62.4	96.1	103.6	0.0	61.9	96.5	0
24-36	4/12/2016 9:58	89.6	0.0	62.3	96.4	95.2	0.0	62.6	96.2	103.6	0.0	62.0	96.6	0
24-36	4/12/2016 9:59	89.6	0.0	62.3	95.6	95.2	0.0	62.6	95.4	103.6	0.0	61.9	96.3	0
24-36	4/12/2016 10:00	89.6	0.0	62.4	95.8	95.2	0.0	62.7	95.6	103.6	0.0	62.0	96.4	0
24-36	4/12/2016 10:01	89.6	0.0	62.4	95.4	95.2	0.0	62.7	95.0	103.6	0.0	61.9	96.0	0
24-36	4/12/2016 10:02	89.6	0.0	62.5	95.4	95.2	0.0	62.7	95.0	103.6	0.0	61.9	96.0	0
24-36	4/12/2016 10:03	89.6	0.0	62.4	94.9	135.9	0.7	62.7	94.8	231.9	0.7	62.0	96.1	0
24-36	4/12/2016 10:04	91.0	0.0	62.5	95.4	154.1	0.0	62.7	95.4	244.6	0.0	62.1	96.2	0
24-36	4/12/2016 10:05	91.0	0.0	62.5	95.4	154.1	0.7	62.6	95.3	244.6	0.0	62.1	96.2	0
24-36	4/12/2016 10:06	91.0	0.0	62.5	95.2	154.1	0.0	62.7	95.0	244.6	0.0	62.1	96.1	0
24-36	4/12/2016 10:07	91.0	0.0	62.5	95.1	154.1	0.0	62.7	95.4	244.6	0.0	62.1	96.2	0
24-36	4/12/2016 10:08	91.0	0.0	62.5	95.5	154.1	0.0	62.7	95.6	244.6	0.0	62.2	96.3	0
24-36	4/12/2016 10:09	89.6	0.0	62.5	95.4	154.1	0.7	62.7	95.3	244.6	0.0	62.2	96.1	0
24-36	4/12/2016 10:10	89.6	0.0	62.4	95.3	148.5	0.7	62.6	95.7	290.9	0.7	62.2	96.1	0
24-36	4/12/2016 10:11	89.6	0.0	62.4	95.4	148.5	0.7	62.6	95.9	290.9	0.0	62.2	96.2	0
24-36	4/12/2016 10:12	86.7	0.0	62.4	95.6	148.5	0.7	62.5	95.9	290.9	0.0	62.2	96.2	0
24-36	4/12/2016 10:13	16.5	0.6	62.3	95.5	349.9	1.5	62.5	95.9	290.9	0.0	62.1	96.1	0
24-36	4/12/2016 10:14	331.6	1.7	62.2	95.7	334.4	1.5	62.4	96.2	295.1	0.7	62.1	96.1	0
24-36	4/12/2016 10:15	331.6	1.7	62.2	95.8	334.4	0.7	62.4	96.4	297.9	0.0	62.1	96.3	0
24-36	4/12/2016 10:16	330.2	2.3	62.1	96.0	330.2	2.2	62.3	96.3	300.7	0.7	62.1	96.1	0
24-36	4/12/2016 10:17	336.6	2.8	62.0	96.1	335.8	2.2	62.1	96.6	321.8	2.2	62.0	96.2	0
24-36	4/12/2016 10:18	331.6	3.4	62.0	96.4	331.6	2.2	62.1	96.9	319.0	1.5	61.9	96.3	0
24-36	4/12/2016 10:19	327.4	3.4	61.9	96.6	321.8	3.0	62.1	97.1	314.8	1.5	61.9	96.5	0
24-36	4/12/2016 10:20	331.6	2.8	61.9	96.8	341.5	0.7	62.0	97.1	330.2	0.7	61.8	96.4	0
24-36	4/12/2016 10:21	338.6	2.8	61.9	96.8	326.0	3.0	62.0	97.1	323.2	2.2	61.8	96.3	0
24-36	4/12/2016 10:22	331.6	3.9	61.8	96.7	333.0	2.2	62.0	97.1	319.0	0.7	61.8	96.5	0
24-36	4/12/2016 10:23	338.6	3.4	61.8	96.8	338.6	1.5	61.9	97.1	335.8	0.7	61.8	96.4	0
24-36	4/12/2016 10:24	334.4	2.8	61.8	96.8	331.6	0.7	61.9	97.2	337.2	0.7	61.7	96.5	0
24-36	4/12/2016 10:25	348.5	2.3	61.8	96.8	351.3	0.7	61.9	97.3	342.9	0.0	61.7	96.5	0
24-36	4/12/2016 10:26	355.5	1.1	61.8	96.9	354.1	0.7	61.9	97.5	348.5	0.0	61.8	96.7	0
24-36	4/12/2016 10:27	352.7	1.7	61.8	96.8	3.9	0.7	62.0	97.1	352.7	0.7	61.7	96.5	0
24-36	4/12/2016 10:28	358.3	2.3	61.9	96.7	9.5	1.5	62.0	96.9	359.7	0.7	61.7	96.4	0
24-36	4/12/2016 10:29	9.5	1.7	61.9	96.6	16.5	1.5	62.1	96.9	12.3	1.5	61.7	96.4	0
24-36	4/12/2016 10:30	12.3	0.0	61.9	96.9	16.5	1.5	62.1	96.9	12.3	0.7	61.8	96.4	0
24-36	4/12/2016 10:31	16.5	0.0	62.0	96.6	30.6	1.5	62.1	96.6	25.0	0.7	61.8	96.3	0
24-36	4/12/2016 10:32	32.0	0.0	62.0	96.3	36.2	0.7	62.1	96.3	33.4	0.7	61.8	96.4	0
24-36	4/12/2016 10:33	32.0	0.0	62.0	96.2	36.2	0.7	62.2	96.3	33.4	0.0	61.8	96.4	0
24-36	4/12/2016 10:34	75.5	0.6	62.1	96.3	128.9	2.2	62.3	97.0	33.4	1.5	61.9	96.6	0
24-36	4/12/2016 10:35	180.0	1.7	62.1	96.7	198.3	2.2	62.4	96.9	91.0	1.5	62.0	96.7	0
24-36	4/12/2016 10:36	184.2	1.1	62.2	96.5	198.3	1.5	62.4	96.4	165.4	1.5	62.0	96.6	0
24-36	4/12/2016 10:37	184.2	0.0	62.2	96.4	198.3	1.5	62.4	96.7	173.8	0.7	62.1	96.6	0
24-36	4/12/2016 10:38	184.2	0.0	62.3	96.2	198.3	0.7	62.5	96.5	173.8	0.0	62.1	96.6	0
24-36	4/12/2016 10:39	184.2	0.0	62.4	96.1	198.3	0.0	62.6	96.4	173.8	0.0	62.1	96.6	0
24-36	4/12/2016 10:40	184.2	0.0	62.4	95.9	198.3	0.0	62.7	96.1	173.8	0.0	62.1	96.5	0
24-36	4/12/2016 10:41	184.2	0.0	62.5	95.8	198.3	0.0	62.6	95.9	173.8	0.0	62.2	96.5	0
24-36	4/12/2016 10:42	184.2	0.0	62.7	96.1	198.3	0.0	63.0	95.7	173.8	0.0	62.4	96.7	0
24-36	4/12/2016 10:43	184.2	0.0	62.9	95.5	198.3	0.7	63.2	95.5	173.8	0.7	62.6	96.8	0
24-36	4/12/2016 10:44	192.6	0.6	63.1	95.5	199.7	0.7	63.3	95.3	173.8	0.0	62.8	96.6	0
24-36	4/12/2016 10:45	288.1	0.6	63.2	95.2	229.1	0.7	63.4	95.4	175.2	0.7	62.9	96.3	0
24-36	4/12/2016 10:46	288.1	0.0	63.3	95.2	239.0	0.7	63.6	95.4	175.2	0.0	63.0	96.4	0
24-36	4/12/2016 10:47	289.5	0.6	63.3	95.3	307.8	1.5	63.5	94.7	206.7	0.7	63.0	95.7	0
24-36	4/12/2016 10:48	296.5	0.6	63.2	94.2	313.4	1.5	63.4	94.4	236.2	0.7	62.9	95.1	0
24-36	4/12/2016 10:49	297.9	0.0	63.0	94.4	313.4	0.7	63.3	94.7	236.2	0.0	62.8	95.4	0
24-36	4/12/2016 10:50	297.9	0.0	63.0	94.7	314.8	0.7	63.2	94.7	236.2	0.0	62.8	95.6	0
24-36	4/12/2016 10:51	297.9	0.0	62.9	94.5	314.8	0.7	63.1	94.7	236.2	0.0	62.7	95.4	0
24-36	4/12/2016 10:52	297.9	0.0	62.9	95.1	314.8	0.7	63.0	94.8	236.2	0.0	62.7	95.6	0
24-36	4/12/2016 10:53	297.9	0.0	62.9	94.6	314.8	0.0	63.1	95.1	236.2	0.0	62.7	95.6	0
24-36	4/12/2016 10:54	297.9	0.0	62.9	94.9	314.8	0.0	63.1	95.5	236.2	0.0	62.8	96.1	0
24-36	4/12/2016 10:55	297.9	0.0	63.0	94.9	314.8	1.5	63.2	95.1	236.2	0.7	62.8	95.7	0
24-36	4/12/2016 10:56	297.9	0.0	63.0	94.8	314.8	0.7	63.2	94.9	236.2	0.7	62.8	95.6	0
24-36	4/12/2016 10:57	297.9	0.0	63.0	94.9	314.8	0.0	63.2	95.7	236.2	0.0	62.9	95.9	0
24-36	4/12/2016 10:58	303.5	0.0	63.0	95.4	330.2	0.7	63.2	95.7	286.7	0.0	62.9	96.0	0
24-36	4/12/2016 10:59	341.5	0.6	63.0	95.5	347.1	0.7	63.3	96.4	328.8	0.0	63.0	96.2	0
24-36	4/12/2016 11:00	5.3	0.0	63.1	95.7	359.7	0.7	63.3	96.2	345.7	0.0	63.0	96.2	0
24-36	4/12/2016 11:01	348.5	1.1	63.1	95.5	334.4	1.5	63.2	95.8	319.0	0.7	63.0	95.9	0
24-36	4/12/2016 11:02	337.2	1.1	63.0	95.4	333.0	1.5	63.2	96.0	307.8	0.7	63.0	95.9	0
24-36	4/12/2016 11:03	333.0	1.7	62.9	95.4	330.2	1.5	63.0	95.6	307.8	0.7	62.8	95.5	0
24-36	4/12/2016 11:04	336.6	2.3	62.7	95.4	337.2	1.5	63.0	96.2	307.8	0.7	62.8	95.9	0
24-36	4/12/2016 11:05	335.8	1.7	62.7	95.8	328.8	0.7	63.0	96.5	307.8	0.7	62.8	96.2	0
24-36	4/12/2016 11:06	334.4	1.1	62.7	95.9	319.0	2.2	62.9	96.4	303.5	1.5	62.8	95.9	0
24-36	4/12/2016 11:07	319.0	2.8	62.6	96.1	321.8	2.2	62.9	96.6	302.1	1.5	62.7	96.2	0
24-36	4/12/2016 11:08	323.2	0.6	62.7	96.3	327.4	0.7	62.9	96.8	302.1	0.7	62.7	96.3	0
24-36	4/12/2016 11:09	319.0	1.7	62.6	96.4	314.8	3.7	62.8	96.5	307.8	2.2	62.7	96.1	0
24-36	4/12/2016 11:10	314.8	2.8	62.6	96.3	319.0	1.5	62.8	96.9	304.9	0.7	62.7	96.3	0
24-36	4/12/2016 11:11	333.0	1.1	62.6	96.5	331.6	1.5	62.9	97.0	316.2	0.7	62.7	96.4	0
24-36	4/12/2016 11:12	333.0	0.6	62.7	96.6	331.6	0.7	63.0	97.3	319.0	0.0	62.8	96.7	0
24-36	4/12/2016 11:13	334.4	0.6	62.7	96.9	335.8	0.7	63.0	97.1	319.0	0.7	62.8	96.5	0
24-36	4/12/2016 11:14	333.0	1.7	62.7	96.7	333.0	2.2	62.9	96.7	319.0	1.5	62.7	96.2	0
24-36	4/12/2016 11:15	340.0	2.3	62.6	96.4	340.0	0.7	62.8	96.9	327.4	0.0	62.7	96.2	0
24-36	4/12/2016 11:16	345.7	1.7	62.6	96.5	338.6	0.7	62.8	97.2	334.4	0.7	62.7	96.4	0
24-36	4/12/2016 11:17	344.3	1.1	62.6	96.7	335.8	1.5	62.8	97.0	330.2	0.7	62.7	96.4	0
24-36	4/12/2016 11:18	341.5	0.6	62.6	96.7	331.6	0.7	62.8	97.2	321.8	0.7	62.7	96.4	0
24-36	4/12/2016 11:19	341.5	0.0	62.6	96.7	331.6	0.7	62.8	97.3	321.8	0.7	62.7	96.5	0
24-36	4/12/2016 11:20	338.6	0.6	62.6	96.9	327.4	1.5	62.8	97.3	320.4	1.5	62.7	96.5	0
24-36	4/12/2016 11:21	334.4	0.0	62.6	96.9	327.4	0.7	62.8	97.5	320.4	0.7	62.7	96.7	0
24-36	4/12/2016 11:22	334.4	1.1	62.6	96.9	324.6	2.2	62.8	97.2	320.4	1.5	62.7	96.5	0
24-36	4/12/2016 11:23	338.6	1.1	62.6	96.8	341.5	0.7	62.8	97.4	317.6	0.7	62.7	96.7	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
24-36	4/12/2016 11:24	348.5	1.7	62.6	96.9	335.8	1.5	62.8	97.4	323.2	0.7	62.7	96.7	0
24-36	4/12/2016 11:25	327.4	1.7	62.6	96.9	328.8	1.5	62.8	97.2	319.0	0.7	62.7	96.6	0
24-36	4/12/2016 11:26	337.2	1.1	62.7	96.9	341.5	0.7	62.9	97.6	320.4	0.0	62.8	96.9	0
24-36	4/12/2016 11:27	340.0	1.1	62.7	97.1	341.5	0.7	63.0	97.7	320.4	0.0	62.9	97.0	0
24-36	4/12/2016 11:28	352.7	1.7	62.7	96.9	6.7	1.5	63.0	97.4	1.1	0.7	62.9	96.7	0
24-36	4/12/2016 11:29	351.3	1.7	62.7	96.9	344.3	0.7	63.0	97.6	330.2	0.7	62.9	96.9	0
24-36	4/12/2016 11:30	345.7	0.0	62.9	97.2	341.5	0.7	63.1	97.8	330.2	0.0	63.0	97.0	0
24-36	4/12/2016 11:31	340.0	1.7	62.8	96.8	338.6	1.5	63.0	97.4	330.2	0.7	63.0	96.7	0
24-36	4/12/2016 11:32	338.6	1.1	62.8	96.9	334.4	1.5	63.0	97.4	323.2	0.7	63.0	96.8	0
24-36	4/12/2016 11:33	333.0	2.3	62.7	96.7	323.2	2.2	63.0	97.2	312.0	1.5	62.9	96.5	0
24-36	4/12/2016 11:34	330.2	0.6	62.7	96.9	328.8	0.7	63.0	97.6	312.0	0.0	62.9	96.8	0
24-36	4/12/2016 11:35	330.2	0.0	62.8	97.1	328.8	0.7	63.1	97.8	312.0	0.0	63.0	97.0	0
24-36	4/12/2016 11:36	338.6	1.1	62.9	97.0	1.1	1.5	63.1	97.4	10.9	1.5	63.0	96.7	0
24-36	4/12/2016 11:37	358.3	1.1	62.9	97.2	8.1	0.7	63.1	97.7	20.8	0.0	63.0	96.9	0
24-36	4/12/2016 11:38	356.9	1.7	62.9	96.9	348.5	0.7	63.1	97.5	334.4	0.7	63.0	96.8	0
24-36	4/12/2016 11:39	1.1	1.1	63.0	97.2	12.3	1.5	63.1	97.6	356.9	0.7	63.0	96.9	0
24-36	4/12/2016 11:40	8.1	2.3	62.9	97.1	351.3	2.2	63.1	97.4	349.9	1.5	63.1	96.9	0
24-36	4/12/2016 11:41	352.7	0.6	63.0	97.2	352.7	0.7	63.3	97.9	334.4	0.7	63.2	97.1	0
24-36	4/12/2016 11:42	358.3	2.8	63.0	96.9	13.7	2.2	63.1	97.0	3.9	1.5	63.0	96.5	0
24-36	4/12/2016 11:43	5.3	1.7	63.0	97.0	15.1	1.5	63.2	97.8	16.5	0.7	63.1	96.9	0
24-36	4/12/2016 11:44	13.7	2.8	62.9	96.8	18.0	2.2	63.1	97.4	25.0	2.2	63.0	96.7	0
24-36	4/12/2016 11:45	15.1	2.8	62.9	97.0	358.3	3.0	63.1	97.5	5.3	2.2	63.0	96.7	0
24-36	4/12/2016 11:46	354.1	2.8	62.9	97.1	13.7	2.2	63.2	97.6	6.7	1.5	63.1	96.8	0
24-36	4/12/2016 11:47	20.8	1.7	63.0	97.2	29.2	1.5	63.3	98.1	40.4	1.5	63.2	97.0	0
24-36	4/12/2016 11:48	10.9	1.7	63.1	97.2	10.9	1.5	63.4	97.8	10.9	1.5	63.3	97.0	0
24-36	4/12/2016 11:49	356.9	1.7	63.3	97.2	9.5	2.2	63.5	97.4	9.5	1.5	63.3	96.8	0
24-36	4/12/2016 11:50	13.7	1.7	63.3	97.0	25.0	1.5	63.5	97.5	32.0	0.7	63.3	96.8	0
24-36	4/12/2016 11:51	8.1	0.6	63.4	97.0	18.0	1.5	63.5	97.2	30.6	0.7	63.3	96.8	0
24-36	4/12/2016 11:52	10.9	2.3	63.3	96.7	349.9	1.5	63.5	97.0	10.9	1.5	63.3	96.6	0
24-36	4/12/2016 11:53	340.0	2.3	63.2	96.6	328.8	1.5	63.4	97.3	314.6	1.5	63.3	96.7	0
24-36	4/12/2016 11:54	323.2	0.0	63.3	97.1	324.6	1.5	63.6	97.8	310.6	0.7	63.4	97.0	0
24-36	4/12/2016 11:55	341.5	0.6	63.4	97.3	8.1	0.7	63.7	97.5	351.3	0.7	63.5	97.0	0
24-36	4/12/2016 11:56	9.5	1.7	63.5	97.1	20.8	2.2	63.7	97.1	22.2	1.5	63.5	96.9	0
24-36	4/12/2016 11:57	22.2	3.4	63.4	96.5	32.0	3.0	63.7	97.3	46.0	2.2	63.5	96.8	0
24-36	4/12/2016 11:58	19.4	0.0	63.5	97.0	19.4	0.7	63.8	97.3	20.8	0.7	63.6	96.8	0
24-36	4/12/2016 11:59	356.9	0.6	63.6	96.8	3.9	0.7	63.9	97.4	2.5	0.7	63.6	96.8	0
24-36	4/12/2016 12:00	345.7	1.1	63.6	96.7	349.9	0.7	63.9	97.1	356.9	0.0	63.7	96.8	0
24-36	4/12/2016 12:01	342.9	0.0	63.8	96.8	344.3	0.7	64.1	97.4	348.5	0.7	63.9	97.1	0
24-36	4/12/2016 12:02	342.9	0.6	63.9	97.0	344.3	0.7	64.2	97.4	348.5	0.7	63.9	97.0	0
24-36	4/12/2016 12:03	344.3	0.6	63.9	96.6	342.9	0.7	64.1	96.4	347.1	0.0	63.9	96.6	0
24-36	4/12/2016 12:04	344.3	0.6	63.8	96.2	351.3	0.7	64.0	96.7	351.3	0.0	63.8	96.4	0
24-36	4/12/2016 12:05	9.5	0.6	63.8	96.1	20.8	1.5	64.0	96.6	25.0	0.7	63.8	96.3	0
24-36	4/12/2016 12:06	354.1	0.6	63.9	96.2	358.3	1.5	64.1	96.9	6.7	0.7	63.9	96.5	0
24-36	4/12/2016 12:07	335.8	2.3	63.8	96.1	333.0	1.5	64.0	96.9	324.6	0.7	63.8	96.4	0
24-36	4/12/2016 12:08	348.5	0.6	63.8	96.2	5.3	1.5	64.0	96.8	345.7	0.7	63.8	96.3	0
24-36	4/12/2016 12:09	6.7	1.1	63.7	96.3	348.5	0.7	63.9	96.8	335.8	0.7	63.8	96.2	0
24-36	4/12/2016 12:10	352.7	0.6	63.8	96.8	327.4	1.5	63.9	96.6	317.6	1.5	63.8	96.2	0
24-36	4/12/2016 12:11	327.4	1.7	63.6	96.1	347.1	1.5	63.8	96.1	337.2	0.7	63.6	95.8	0
24-36	4/12/2016 12:12	5.3	1.7	63.4	96.0	1.1	1.5	63.7	96.3	19.4	1.5	63.6	96.2	0
24-36	4/12/2016 12:13	331.6	1.1	63.5	96.5	303.5	2.2	63.8	96.6	306.4	1.5	63.6	96.3	0
24-36	4/12/2016 12:14	310.6	0.6	63.6	96.6	307.8	0.7	63.9	96.8	302.1	0.7	63.6	96.3	0
24-36	4/12/2016 12:15	310.6	0.0	63.6	96.7	309.2	0.7	63.9	96.8	302.1	0.7	63.6	96.3	0
24-36	4/12/2016 12:16	320.4	1.1	63.6	96.6	323.2	1.5	63.9	96.3	303.5	0.7	63.6	96.0	0
24-36	4/12/2016 12:17	338.6	1.7	63.5	95.6	326.0	1.5	63.7	95.9	316.2	0.7	63.5	95.8	0
24-36	4/12/2016 12:18	326.0	2.3	63.4	95.8	331.6	2.2	63.6	95.7	309.2	1.5	63.4	95.6	0
24-36	4/12/2016 12:19	340.0	2.8	63.3	96.0	335.8	1.5	63.6	96.2	317.6	0.7	63.4	95.8	0
24-36	4/12/2016 12:20	333.0	1.7	63.3	96.2	327.4	1.5	63.6	96.5	317.6	0.7	63.4	96.0	0
24-36	4/12/2016 12:21	333.0	1.1	63.3	95.9	327.4	2.2	63.6	96.2	314.8	1.5	63.4	96.0	0
24-36	4/12/2016 12:22	330.2	1.1	63.3	96.0	328.8	1.5	63.6	96.2	313.4	0.7	63.4	95.9	0
24-36	4/12/2016 12:23	349.9	0.6	63.4	96.2	348.5	0.7	63.7	96.8	327.4	0.0	63.5	96.3	0
24-36	4/12/2016 12:24	1.1	1.7	63.5	96.2	8.1	1.5	63.7	96.7	1.1	1.5	63.5	96.2	0
24-36	4/12/2016 12:25	13.7	1.1	63.5	96.0	19.4	1.5	63.6	96.3	18.0	0.7	63.5	96.0	0
24-36	4/12/2016 12:26	15.1	2.8	63.4	96.0	27.8	2.2	63.6	95.7	27.8	1.5	63.4	95.5	0
24-36	4/12/2016 12:27	39.0	1.7	63.3	95.6	33.4	2.2	63.6	95.9	41.8	1.5	63.4	95.6	0
24-36	4/12/2016 12:28	20.8	2.8	63.3	95.4	22.2	3.0	63.5	95.3	33.4	2.2	63.3	95.2	0
24-36	4/12/2016 12:29	6.7	3.9	63.3	95.5	3.9	2.2	63.5	96.0	12.3	1.5	63.3	95.4	0
24-36	4/12/2016 12:30	355.5	2.3	63.5	95.6	5.3	1.5	63.6	95.6	13.7	0.7	63.3	95.6	0
24-36	4/12/2016 12:31	356.9	2.8	63.6	95.3	349.9	1.5	63.8	95.6	345.7	0.7	63.4	95.7	0
24-36	4/12/2016 12:32	349.9	2.3	63.8	95.4	348.5	0.7	64.1	96.4	349.9	0.7	63.7	96.3	0
24-36	4/12/2016 12:33	349.9	0.6	64.2	95.9	5.3	1.5	64.5	95.6	2.5	1.5	63.9	96.1	0
24-36	4/12/2016 12:34	10.9	1.1	64.5	94.9	8.1	0.7	64.9	94.9	1.1	0.7	64.2	96.1	0
24-36	4/12/2016 12:35	344.3	1.1	65.0	95.4	6.7	1.5	65.4	95.1	328.8	0.7	64.6	96.0	0
24-36	4/12/2016 12:36	16.5	2.3	65.3	94.2	355.5	1.5	65.7	95.0	2.5	0.7	64.8	95.9	0
24-36	4/12/2016 12:37	358.3	1.1	65.7	94.5	358.3	1.5	66.2	94.5	5.3	0.7	65.4	96.4	0
24-36	4/12/2016 12:38	356.9	3.4	65.9	92.4	349.9	1.5	66.0	92.5	3.9	1.5	65.3	94.2	0
24-36	4/12/2016 12:39	345.7	3.4	65.8	93.0	337.2	2.2	66.0	93.1	341.5	1.5	65.5	94.6	0
24-36	4/12/2016 12:40	338.6	2.8	65.7	92.2	331.6	2.2	66.0	92.7	321.8	1.5	65.5	93.8	0
24-36	4/12/2016 12:41	335.8	1.7	65.6	93.3	340.0	1.5	66.1	93.6	333.0	0.7	65.7	94.7	0
24-36	4/12/2016 12:42	349.9	2.3	65.6	92.6	358.3	1.5	66.0	92.4	352.7	0.7	65.6	93.2	0
24-36	4/12/2016 12:43	2.5	2.3	65.6	92.1	1.1	0.7	65.8	93.7	356.9	0.7	65.6	94.4	0
24-36	4/12/2016 12:44	351.3	2.3	65.5	92.4	337.2	2.2	65.5	92.0	338.6	1.5	65.4	92.6	0
24-36	4/12/2016 12:45	345.7	2.3	65.2	92.5	348.5	0.0	65.4	93.6	3.9	0.7	65.4	93.4	0
24-36	4/12/2016 12:46	349.9	0.0	65.5	93.7	338.6	0.7	65.7	94.5	351.3	0.7	65.4	94.2	0
24-36	4/12/2016 12:47	335.8	1.1	65.4	92.9	321.8	2.2	65.7	94.5	324.6	1.5	65.5	94.4	0
24-36	4/12/2016 12:48	324.6	1.1	65.5	93.3	323.2	0.7	65.8	94.3	323.2	0.7	65.6	94.4	0
24-36	4/12/2016 12:49	324.6	0.6	65.5	93.5	333.0	0.7	65.9	94.2	328.8	0.7	65.7	94.3	0
24-36	4/12/2016 12:50	342.9	1.1	65.6	93.8	10.9	2.2	65.9	94.3	13.7	0.7	65.7	94.1	0
24-36	4/12/2016 12:51	13.7	2.3	65.5	91.9	15.1	1.5	65.8	92.9	37.6	1.5	65.7	93.2	0
24-36	4/12/2016 12:52	347.1	1.7	65.7	93.9	338.6	2.2	66.0	92.1	348.5	1.5	65.7	92.2	0
24-36	4/12/2016 12:53	335.8	2.8	65.7	91.9	344.3	1.5	66.0	91.6	330.2	1.5	65.7	92.2	0
24-36	4/12/2016 12:54	5.3	1.7	65.8	90.8	15.1	2.2	66.2	92.5	20.8	2.2	65.9	92.9	0
24-36	4/12/2016 12:55	1.1	2.3	66.2	92.0	12.3	2.2	66.5	91.8	26.4	1.5	66.2	92.9	0
24-36	4/12/2016 12:56	16.5	2.8	66.4	92.4	15.1	1.5	66.9	93.6	25.0	1.5	66.5	94.1	0
24-36	4/12/2016 12:57	356.9	1.1	67.0	93.5	342.9	0.7	67.4	93.3	348.5	0.7	66.9	94.2	0
24-36	4/12/2016 12:58	342.9	1.7	67.2	90.5	321.8	2.2	67.5	89.7	317.6	1.5	66.9	90.4	0
24-36	4/12/2016 12:59	328.8	3.4	66.8	89.1	333.0	2.2	67.0	89.0	319.0	1.5	66.8	89.3	0
24-36	4/12/2016 13:00	326.0	3.4	66.3	88.7	320.4	3.7	66.7	89.5	310.6	2.2	66.6	90.1	0
24-36	4/12/2016 13:01	334.4	2.3	66.2	90.6	326.0	1.5	66.7	91.2	327.4	0.7	66.6	91.3	0
24-36	4/12/2016 13:02	333.0	1.1	66.3	90.5	314.8	1.5	66.7	89.7	313.4	1.5	66.6	89.5	0
24-36	4/12/2016 13:03	306.4	2.3	66.1	89.6	310.6	2.2	66.6	90.1	297.9	2.2	66.4	90.4	0
24-36	4/12/2016 13:04	321.8	1.7	66.1	91.3	338.6	0.7	66.5	90.5	333.0	0.7	66.3	90.7	0
24-36	4/12/2016 13:05	351.3	1.7	66.2	90.6	349.9	0.7	66.5	91.2	6.7	0.7	66.4	91.6	0
24-36	4/12/2016 13:06	345.7	2.3	66.2	89.9	337.2	1.5	66.3	89.2	341.5	1.5	66.3	89.3	0
24-36	4/12/2016 13:07	333.0	1.1	66.0	89.2	334.4	0.7	66.3	90.6	333.0	0.7	66.2	90.9	0
24-36	4/12/2016 13:08	333.0	0.0	66.4	91.4	334.4	0.7	66.7	91.5	330.2	0.7	66.4	91.5	0
24-36	4/12/2016 13:09	326.0	1.7	66.5	88.3	317.6	2.2	66.8	88.7	300.7	1.5	66.3	89.3	0
24-36	4/12/2016 13:10	321.8	0.6	66.3	89.4	338.6	0.7	66.8	89.3	321.8	0.7	66.4	90.0	0
24-36	4/12/2016 13:11	354.1	1.1	66.5	89.5	359.7	0.7	66.8	88.5	354.1	0.7	66.5	89.6	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
24-36	4/12/2016 13:12	355.5	1.7	66.6	88.8	1.1	0.7	66.8	89.3	355.5	0.7	66.6	90.3	0
24-36	4/12/2016 13:13	355.5	1.7	66.8	88.9	355.5	1.5	67.0	91.1	358.3	0.7	66.9	91.8	0
24-36	4/12/2016 13:14	330.2	1.7	67.3	90.2	321.8	1.5	67.6	88.6	321.8	1.5	67.2	89.8	0
24-36	4/12/2016 13:15	327.4	2.3	67.3	87.7	326.0	2.2	68.1	90.1	314.8	1.5	67.5	91.7	0
24-36	4/12/2016 13:16	352.7	1.7	68.2	89.9	356.9	1.5	69.0	89.2	358.3	0.7	68.2	91.2	0
24-36	4/12/2016 13:17	355.5	2.8	68.7	87.5	344.3	0.7	68.9	86.0	351.3	0.7	68.2	87.5	0
24-36	4/12/2016 13:18	347.1	0.6	68.6	87.5	341.5	0.7	69.0	85.0	344.3	0.7	68.4	87.2	0
24-36	4/12/2016 13:19	345.7	1.1	68.5	85.6	328.8	0.7	69.0	86.0	327.4	0.7	68.4	87.2	0
24-36	4/12/2016 13:20	309.2	1.1	68.3	85.7	303.5	2.2	68.8	85.4	290.9	2.2	68.3	86.6	0
24-36	4/12/2016 13:21	314.8	2.3	68.1	85.9	327.4	2.2	68.8	85.5	307.8	1.5	68.4	87.4	0
24-36	4/12/2016 13:22	324.6	1.1	68.1	86.5	319.0	1.5	69.0	87.3	310.6	0.7	68.4	88.8	0
24-36	4/12/2016 13:23	324.6	0.6	68.5	87.6	314.8	0.7	69.6	87.8	314.8	0.7	68.7	89.0	0
24-36	4/12/2016 13:24	319.0	3.4	68.4	83.7	324.6	3.0	69.2	85.4	310.6	2.2	68.6	87.1	0
24-36	4/12/2016 13:25	344.3	2.3	68.2	85.2	358.3	2.2	68.9	85.3	359.7	1.5	68.6	87.0	0
24-36	4/12/2016 13:26	348.5	2.8	68.3	85.5	334.4	1.5	68.8	84.1	327.4	0.7	68.7	86.2	0
24-36	4/12/2016 13:27	333.0	1.7	68.4	85.5	355.5	1.5	68.7	85.4	1.1	1.5	68.7	86.1	0
24-36	4/12/2016 13:28	6.7	3.4	68.5	85.8	5.3	0.7	68.7	85.2	19.4	0.7	68.7	86.3	0
24-36	4/12/2016 13:29	8.1	2.3	68.5	85.2	8.1	2.2	68.9	85.1	15.1	1.5	68.8	86.4	0
24-36	4/12/2016 13:30	334.4	1.7	68.7	84.1	319.0	1.5	69.4	86.3	306.4	0.7	69.0	87.1	0
24-36	4/12/2016 13:31	3.9	1.1	69.1	83.0	29.2	3.0	69.3	83.2	40.4	2.2	69.0	85.3	0
24-36	4/12/2016 13:32	22.2	5.1	68.7	82.5	27.8	4.5	69.0	85.1	39.0	3.7	69.1	86.2	0
24-36	4/12/2016 13:33	18.0	4.5	68.9	85.5	22.2	3.7	69.4	87.1	33.4	3.0	69.4	88.1	0
24-36	4/12/2016 13:34	6.7	2.8	69.4	85.7	348.5	1.5	69.9	84.3	338.6	0.7	69.7	86.2	0
24-36	4/12/2016 13:35	355.5	2.3	69.4	82.9	341.5	2.2	69.7	82.8	337.2	1.5	69.7	84.5	0
24-36	4/12/2016 13:36	319.0	2.3	69.1	84.4	321.8	2.2	69.8	83.4	314.8	1.5	69.7	84.8	0
24-36	4/12/2016 13:37	319.0	1.7	69.0	81.9	314.8	2.2	69.7	82.1	306.4	2.2	69.5	83.3	0
24-36	4/12/2016 13:38	330.2	2.8	68.7	84.3	342.9	2.2	69.4	84.2	349.9	1.5	69.4	85.0	0
24-36	4/12/2016 13:39	356.9	2.8	68.7	83.5	354.1	0.7	69.2	83.3	12.3	0.7	69.3	84.5	0
24-36	4/12/2016 13:40	347.1	2.3	68.7	83.0	334.4	2.2	69.0	84.2	321.8	1.5	69.2	85.0	0
24-36	4/12/2016 13:41	340.0	2.8	68.5	83.4	331.6	1.5	68.7	84.2	327.4	1.5	69.0	85.1	0
24-36	4/12/2016 13:42	313.4	2.3	68.3	83.9	313.4	2.2	68.7	84.1	307.8	1.5	68.9	84.8	0
24-36	4/12/2016 13:43	314.8	3.4	68.1	83.5	319.0	2.2	68.5	83.7	316.2	1.5	68.7	84.3	0
24-36	4/12/2016 13:44	328.8	1.7	67.9	84.6	312.0	2.2	68.5	84.4	316.2	1.5	68.6	84.8	0
24-36	4/12/2016 13:45	324.6	1.1	67.8	84.0	321.8	1.5	68.4	85.0	314.8	0.7	68.4	85.7	0
24-36	4/12/2016 13:46	321.8	1.7	67.8	85.0	317.6	2.2	68.3	83.5	303.5	1.5	68.4	84.3	0
24-36	4/12/2016 13:47	323.2	1.1	67.7	83.6	333.0	0.7	68.1	82.7	309.2	0.7	68.2	83.7	0
24-36	4/12/2016 13:48	341.5	1.7	67.6	83.7	342.9	0.7	67.9	83.0	342.9	0.7	68.1	83.9	0
24-36	4/12/2016 13:49	344.3	0.6	67.6	83.4	344.3	0.7	67.9	84.2	1.1	0.7	68.0	85.3	0
24-36	4/12/2016 13:50	344.3	0.0	68.0	85.6	337.2	1.5	68.3	85.1	333.0	0.7	68.2	86.0	0
24-36	4/12/2016 13:51	327.4	1.7	68.1	84.6	309.2	3.0	68.6	85.3	300.7	2.2	68.4	86.4	0
24-36	4/12/2016 13:52	300.7	2.3	68.2	83.4	299.3	2.2	68.8	84.2	285.3	1.5	68.5	85.4	0
24-36	4/12/2016 13:53	316.2	2.3	68.1	83.1	331.6	1.5	68.9	84.5	302.1	1.5	68.6	85.9	0
24-36	4/12/2016 13:54	328.8	1.1	68.4	84.4	335.8	1.5	69.2	84.7	326.0	0.7	68.9	86.4	0
24-36	4/12/2016 13:55	337.2	1.7	68.7	83.5	334.4	1.5	69.3	82.8	327.4	0.7	69.0	84.2	0
24-36	4/12/2016 13:56	337.2	0.6	68.8	82.5	340.0	0.7	69.3	82.7	331.6	0.7	69.0	84.5	0
24-36	4/12/2016 13:57	337.2	0.0	69.2	84.1	340.0	0.0	69.6	81.8	333.0	0.0	69.2	82.7	0
24-36	4/12/2016 13:58	337.2	0.0	69.3	81.9	324.6	1.5	69.8	82.1	319.0	0.7	69.3	83.6	0
24-36	4/12/2016 13:59	337.2	0.6	69.6	80.9	292.3	1.5	70.0	81.4	283.9	1.5	69.4	81.7	0
24-36	4/12/2016 14:00	335.8	0.6	69.6	80.9	278.3	1.5	70.2	81.7	282.5	0.7	69.5	84.3	0
24-36	4/12/2016 14:01	275.5	1.7	69.7	79.5	268.4	3.0	70.4	80.7	265.6	2.2	69.8	83.6	0
24-36	4/12/2016 14:02	272.7	3.4	69.4	81.0	265.6	3.7	70.2	79.1	261.4	3.0	69.9	82.1	0
24-36	4/12/2016 14:03	254.4	2.3	69.4	81.0	268.4	3.0	70.1	80.1	265.6	2.2	69.9	81.9	0
24-36	4/12/2016 14:04	278.3	3.4	69.4	80.9	268.4	3.0	70.1	79.8	262.8	2.2	69.9	81.8	0
24-36	4/12/2016 14:05	269.9	0.6	69.4	79.6	265.6	1.5	70.2	79.5	257.2	0.7	70.0	81.2	0
24-36	4/12/2016 14:06	271.3	0.0	69.5	80.9	283.9	1.5	70.6	80.5	283.9	0.7	70.0	82.6	0
24-36	4/12/2016 14:07	265.6	2.8	69.9	79.2	262.8	3.7	70.9	80.6	261.4	2.2	70.4	83.0	0
24-36	4/12/2016 14:08	282.5	2.3	69.9	80.0	283.9	3.0	71.0	78.2	283.9	2.2	70.5	81.7	0
24-36	4/12/2016 14:09	267.0	1.7	69.9	79.8	271.3	2.2	71.0	79.4	269.9	1.5	70.7	81.1	0
24-36	4/12/2016 14:10	288.1	0.6	69.9	78.8	299.3	0.7	71.4	80.2	297.9	0.7	70.8	82.4	0
24-36	4/12/2016 14:11	292.3	0.0	70.2	79.8	299.3	0.7	71.2	77.8	297.9	0.7	70.7	80.7	0
24-36	4/12/2016 14:12	292.3	0.0	70.5	79.5	274.1	1.5	71.2	78.4	271.3	1.5	70.8	81.5	0
24-36	4/12/2016 14:13	258.6	1.7	70.2	78.4	278.3	1.5	71.0	79.0	271.3	1.5	70.8	81.5	0
24-36	4/12/2016 14:14	261.4	0.0	70.5	80.4	262.8	0.7	71.1	78.2	260.0	0.7	71.0	81.3	0
24-36	4/12/2016 14:15	240.4	0.0	70.9	81.6	246.0	0.7	71.7	80.8	250.2	0.0	71.2	82.8	0
24-36	4/12/2016 14:16	269.9	1.1	71.2	77.1	313.4	3.0	72.2	77.9	304.9	2.2	71.3	80.9	0
24-36	4/12/2016 14:17	314.8	2.8	71.1	77.1	323.2	3.0	72.2	78.6	319.0	2.2	71.5	81.8	0
24-36	4/12/2016 14:18	341.5	1.7	71.1	77.9	359.7	0.7	72.2	78.1	352.7	0.7	71.6	82.5	0
24-36	4/12/2016 14:19	351.3	0.6	71.6	79.3	295.1	2.2	72.6	78.3	286.7	2.2	71.9	81.8	0
24-36	4/12/2016 14:20	226.3	3.4	71.7	79.3	203.9	3.0	72.4	78.7	208.1	2.2	72.2	81.5	0
24-36	4/12/2016 14:21	195.4	3.4	71.3	77.1	202.5	3.0	71.8	77.4	206.7	2.2	72.3	79.5	0
24-36	4/12/2016 14:22	188.4	2.8	70.9	78.2	184.2	2.2	71.7	77.7	196.8	2.2	72.4	80.1	0
24-36	4/12/2016 14:23	182.8	1.7	71.1	80.3	230.5	1.5	72.1	78.6	240.4	1.5	72.5	79.7	0
24-36	4/12/2016 14:24	268.4	0.6	71.4	78.6	293.7	1.5	72.7	77.9	260.0	0.7	72.6	78.1	0
24-36	4/12/2016 14:25	271.3	0.0	72.0	76.7	251.6	1.5	72.8	76.4	237.6	1.5	72.7	78.7	0
24-36	4/12/2016 14:26	222.1	1.7	72.3	78.6	231.9	3.0	73.0	74.4	226.3	2.2	72.9	78.2	0
24-36	4/12/2016 14:27	240.4	3.9	72.0	72.8	248.8	3.7	72.4	75.8	250.2	3.0	72.8	77.6	0
24-36	4/12/2016 14:28	237.6	2.8	71.6	74.4	247.4	3.7	72.1	74.9	248.8	3.0	72.8	77.1	0
24-36	4/12/2016 14:29	243.2	3.4	71.2	73.9	251.6	3.0	71.9	76.2	244.6	2.2	72.8	77.7	0
24-36	4/12/2016 14:30	237.6	1.1	71.2	76.2	239.0	1.5	71.9	75.3	239.0	0.7	72.7	75.4	0
24-36	4/12/2016 14:31	244.6	0.6	71.3	77.5	272.7	2.2	72.2	76.0	271.3	2.2	72.7	77.2	0
24-36	4/12/2016 14:32	299.3	2.3	70.8	74.3	307.8	1.5	72.0	73.7	302.1	1.5	72.3	75.3	0
24-36	4/12/2016 14:33	299.3	0.0	70.8	77.4	274.1	1.5	71.8	74.7	281.1	1.5	72.2	77.6	0
24-36	4/12/2016 14:34	251.6	1.7	71.1	77.0	253.0	3.0	72.1	75.7	255.8	2.2	72.2	78.4	0
24-36	4/12/2016 14:35	253.0	2.8	71.3	76.5	262.8	2.2	72.3	74.9	261.4	2.2	72.3	76.5	0
24-36	4/12/2016 14:36	248.8	0.0	71.4	75.9	271.3	0.7	72.9	76.7	269.9	0.7	72.4	78.6	0
24-36	4/12/2016 14:37	248.8	0.0	72.3	76.8	275.5	0.7	73.4	76.0	338.6	0.7	72.6	78.8	0
24-36	4/12/2016 14:38	247.4	0.0	72.9	75.3	304.9	1.5	73.8	75.1	39.0	0.7	72.9	77.7	0
24-36	4/12/2016 14:39	247.4	0.0	73.2	73.6	16.0	1.5	73.9	75.0	53.1	0.7	73.0	77.5	0
24-36	4/12/2016 14:40	303.5	0.6	72.7	73.1	22.2	1.5	73.3	73.0	33.4	0.7	72.8	75.9	0
24-36	4/12/2016 14:41	320.4	1.1	72.2	74.6	297.9	2.2	73.1	73.0	300.7	2.2	72.7	76.2	0
24-36	4/12/2016 14:42	282.5	3.9	72.1	72.8	275.5	4.5	73.1	73.1	276.9	3.7	72.7	75.6	0
24-36	4/12/2016 14:43	281.1	2.3	72.2	72.7	303.5	1.5	73.5	73.7	296.5	1.5	72.9	77.1	0
24-36	4/12/2016 14:44	292.3	2.3	72.6	75.4	286.7	3.0	74.1	74.5	282.5	2.2	73.3	78.9	0
24-36	4/12/2016 14:45	289.5	3.4	73.0	73.0	289.5	3.0	74.5	73.4	288.1	3.0	73.7	77.5	0
24-36	4/12/2016 14:46	293.7	2.8	73.6	75.1	272.7	4.5	74.6	70.5	268.4	3.7	74.2	75.1	0
24-36	4/12/2016 14:47	292.3	3.9	73.0	71.5	316.2	1.5	74.0	71.1	316.2	1.5	73.9	74.2	0
24-36	4/12/2016 14:48	316.2	2.3	72.6	71.2	275.5	3.0	73.6	70.5	276.9	2.2	73.6	74.3	0
24-36	4/12/2016 14:49	233.3	2.3	72.6	71.6	234.8	2.2	73.9	73.6	243.2	1.5	73.7	74.2	0
24-36	4/12/2016 14:50	219.3	0.0	72.9	74.4	233.3	0.7	74.2	72.7	246.0	0.7	73.8	75.2	0
24-36	4/12/2016 14:51	217.9	0.6	73.5	76.8	244.6	0.7	75.0	74.2	254.4	0.7	74.0	76.8	0
24-36	4/12/2016 14:52	224.9	0.0	74.6	75.4	262.8	1.5	75.7	71.1	269.9	1.5	74.4	74.6	0
24-36	4/12/2016 14:53	254.4	0.6	74.9	71.0	275.5	0.7	76.0	71.2	295.1	0.7	74.5	74.5	0
24-36	4/12/2016 14:54	289.5	1.1	74.9	71.6	348.5	1.5	75.4	69.8	359.7	0.7	74.6	73.6	0
24-36	4/12/2016 14:55	6.7	2.8	74.6	68.0	51.6	2.2	74.5	69.3	60.1	2.2	74.3	75.2	0
24-36	4/12/2016 14:56	39.0	2.8	74.1	70.5	2.5	1.5	74.7	72.7	34.8	1.5	74.5	76.9	0
24-36	4/12/2016 14:57	324.6	4.5	74.0	69.6	323.2	4.5	74.5	70.8	321.8	3.0	74.7	73.5	0
24-36	4/12/2016 14:58	334.4	5.1	73.0	70.2	331.6	2.2	73.5	70.0	334.4	1.5	74.1	72.2	0
24-36	4/12/2016 14:59	347.1	3.9	72.3	71.2	8.1	2.2	72.8	71.1	12.3	1.5	73.6	73.7	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
24-36	4/12/2016 15:00	5.3	2.3	72.4	74.0	348.5	1.5	73.2	73.1	347.1	0.7	73.6	72.9	0
24-36	4/12/2016 15:01	5.3	0.0	73.2	71.1	307.8	0.7	74.3	74.0	295.1	1.5	73.7	76.4	0
24-36	4/12/2016 15:02	355.5	0.6	74.3	72.9	239.0	2.2	75.2	71.9	237.6	1.5	74.2	76.5	0
24-36	4/12/2016 15:03	189.8	2.8	74.8	70.2	164.0	3.0	74.9	70.1	164.0	2.2	74.4	74.0	0
24-36	4/12/2016 15:04	158.3	2.3	74.3	69.9	175.2	2.2	74.3	68.4	175.2	1.5	74.3	72.3	0
24-36	4/12/2016 15:05	205.3	3.4	73.9	71.1	247.4	4.5	74.0	69.5	254.4	3.0	74.3	72.5	0
24-36	4/12/2016 15:06	272.7	3.9	73.3	72.4	296.5	2.2	74.0	71.7	286.7	2.2	74.2	74.3	0
24-36	4/12/2016 15:07	307.8	1.7	73.2	71.3	310.6	2.2	73.9	71.0	300.7	1.5	74.0	73.7	0
24-36	4/12/2016 15:08	310.6	1.7	73.1	72.4	312.0	1.5	74.0	72.5	306.4	1.5	73.9	74.7	0
24-36	4/12/2016 15:09	312.0	0.6	73.4	71.8	299.3	2.2	74.2	72.6	297.9	1.5	73.9	74.9	0
24-36	4/12/2016 15:10	351.3	2.3	73.5	71.9	6.7	1.5	73.9	70.1	20.8	0.7	73.8	72.7	0
24-36	4/12/2016 15:11	320.4	2.3	73.2	71.1	299.3	1.5	73.6	71.5	307.8	0.7	73.6	73.2	0
24-36	4/12/2016 15:12	304.9	0.0	73.1	70.8	300.7	0.7	73.5	71.4	304.9	0.7	73.6	72.4	0
24-36	4/12/2016 15:13	304.9	0.0	73.1	70.6	282.5	1.5	73.7	71.0	299.3	1.5	73.6	73.7	0
24-36	4/12/2016 15:14	222.1	1.7	73.5	71.8	236.2	3.0	74.4	71.7	234.8	2.2	73.9	74.7	0
24-36	4/12/2016 15:15	269.9	3.9	74.2	69.7	271.3	5.2	75.3	70.5	272.7	3.7	74.6	74.5	0
24-36	4/12/2016 15:16	262.8	4.5	74.6	69.3	267.0	3.7	75.6	70.8	269.9	3.0	75.1	74.6	0
24-36	4/12/2016 15:17	274.1	3.9	74.6	69.2	286.7	3.7	75.4	68.0	286.7	3.0	75.1	70.3	0
24-36	4/12/2016 15:18	310.6	2.8	73.7	67.4	295.1	3.0	74.9	67.8	295.1	3.0	74.6	70.6	0
24-36	4/12/2016 15:19	300.7	3.9	73.0	67.8	302.1	3.0	74.4	67.2	288.1	2.2	74.1	70.6	0
24-36	4/12/2016 15:20	310.6	1.1	72.8	68.9	309.2	2.2	74.1	67.7	285.3	1.5	73.9	71.3	0
24-36	4/12/2016 15:21	320.4	2.3	72.7	70.3	314.8	2.2	73.8	68.1	293.7	1.5	73.7	71.5	0
24-36	4/12/2016 15:22	324.6	2.3	72.6	68.8	323.2	2.2	73.5	67.4	303.5	1.5	73.5	70.1	0
24-36	4/12/2016 15:23	320.4	2.3	72.5	69.8	310.6	2.2	73.4	68.2	303.5	1.5	73.3	71.1	0
24-36	4/12/2016 15:24	327.4	1.1	72.6	69.9	321.8	1.5	73.3	69.4	304.9	1.5	73.2	71.9	0
24-36	4/12/2016 15:25	313.4	3.4	72.4	69.7	295.1	3.7	73.0	69.4	293.7	3.0	72.9	71.7	0
24-36	4/12/2016 15:26	286.7	4.5	72.1	69.3	276.9	3.7	72.7	69.3	279.7	3.0	72.6	72.0	0
24-36	4/12/2016 15:27	288.1	2.3	72.0	70.9	306.4	3.0	72.7	70.0	300.7	2.2	72.4	72.8	0
24-36	4/12/2016 15:28	327.4	3.4	71.9	70.2	324.6	2.2	72.5	69.8	317.6	1.5	72.3	72.5	0
24-36	4/12/2016 15:29	319.0	4.5	71.8	70.1	326.0	3.7	72.2	69.7	320.4	2.2	72.1	72.2	0
24-36	4/12/2016 15:30	333.0	4.5	71.6	70.7	326.0	3.0	72.1	71.5	320.4	2.2	71.9	74.1	0
24-36	4/12/2016 15:31	323.2	2.8	71.7	71.4	297.9	3.7	72.1	71.0	296.5	2.2	71.8	73.7	0
24-36	4/12/2016 15:32	302.1	4.5	71.5	70.7	306.4	3.7	72.1	71.0	297.9	3.0	71.7	73.5	0
24-36	4/12/2016 15:33	309.2	3.9	71.5	70.5	312.0	3.7	72.0	70.4	304.9	3.0	71.6	73.2	0
24-36	4/12/2016 15:34	323.2	3.9	71.4	71.3	321.8	3.0	71.9	71.5	312.0	1.5	71.6	74.1	0
24-36	4/12/2016 15:35	307.8	3.9	71.4	71.0	296.5	5.2	71.8	71.0	295.1	3.7	71.4	73.5	0
24-36	4/12/2016 15:36	304.9	5.1	71.2	70.8	307.8	3.7	71.7	71.2	300.7	2.2	71.3	74.0	0
24-36	4/12/2016 15:37	313.4	2.3	71.1	72.0	310.6	3.0	71.6	71.0	299.3	2.2	71.2	73.7	0
24-36	4/12/2016 15:38	314.8	2.8	71.1	71.3	317.6	2.2	71.5	71.8	312.0	1.5	71.1	74.2	0
24-36	4/12/2016 15:39	307.8	2.3	71.1	72.7	296.5	1.5	71.5	73.3	282.5	1.5	71.1	76.0	0
24-36	4/12/2016 15:40	296.5	1.1	71.2	72.6	297.9	1.5	71.6	73.0	275.5	1.5	71.2	75.8	0
24-36	4/12/2016 15:41	295.1	3.4	71.2	71.9	290.9	3.0	71.7	72.3	288.1	2.2	71.1	75.0	0
24-36	4/12/2016 15:42	293.7	1.7	71.2	71.9	297.9	1.5	71.7	71.7	286.7	1.5	71.1	74.5	0
24-36	4/12/2016 15:43	296.5	1.1	71.2	72.1	307.8	3.0	71.7	71.8	295.1	2.2	71.1	74.8	0
24-36	4/12/2016 15:44	309.2	3.4	71.2	72.4	309.2	3.0	71.7	71.7	303.5	2.2	71.1	74.7	0
24-36	4/12/2016 15:45	309.2	2.8	71.2	71.9	310.6	3.0	71.7	73.1	307.8	2.2	71.2	76.2	0
24-36	4/12/2016 15:46	309.2	2.8	71.3	72.8	303.5	2.2	72.0	73.3	297.9	2.2	71.4	76.5	0
24-36	4/12/2016 15:47	307.8	3.4	71.7	71.1	306.4	3.7	72.3	72.3	303.5	3.0	71.6	75.0	0
24-36	4/12/2016 15:48	323.2	3.4	71.9	71.9	321.8	3.7	72.5	71.9	304.9	3.0	71.8	75.1	0
24-36	4/12/2016 15:49	313.4	3.4	72.0	70.6	304.9	2.2	72.7	71.4	303.5	2.2	72.0	74.9	0
24-36	4/12/2016 15:50	309.2	1.1	72.2	71.1	293.7	2.2	73.0	70.7	286.7	2.2	72.2	73.6	0
24-36	4/12/2016 15:51	289.5	1.7	72.4	71.8	304.9	2.2	73.3	69.7	283.9	1.5	72.4	73.2	0
24-36	4/12/2016 15:52	316.2	1.1	72.5	69.4	313.4	1.5	73.4	69.3	283.9	0.7	72.5	72.3	0
24-36	4/12/2016 15:53	316.2	0.0	72.8	70.5	260.0	1.5	73.5	69.9	255.8	0.7	72.7	74.3	0
24-36	4/12/2016 15:54	175.2	0.6	73.1	70.9	223.5	0.7	73.9	70.7	216.5	0.7	72.9	74.0	0
24-36	4/12/2016 15:55	192.6	0.6	73.7	72.4	275.5	2.2	74.6	70.4	261.4	1.5	73.3	73.6	0
24-36	4/12/2016 15:56	326.0	1.1	74.4	69.2	316.2	0.7	75.3	67.8	292.3	0.7	73.7	72.8	0
24-36	4/12/2016 15:57	333.0	0.0	75.2	69.2	310.6	1.5	75.9	69.0	292.3	0.7	74.1	74.5	0
24-36	4/12/2016 15:58	307.8	1.1	75.2	67.3	283.9	2.2	75.9	67.3	276.9	2.2	74.4	72.0	0
24-36	4/12/2016 15:59	258.6	1.7	74.8	68.2	244.6	3.0	75.6	66.4	254.4	2.2	74.6	70.8	0
24-36	4/12/2016 16:00	268.4	5.1	74.9	66.7	285.3	5.2	76.1	68.8	282.5	4.5	75.1	73.0	0
24-36	4/12/2016 16:01	293.7	4.5	75.1	67.4	303.5	3.7	76.3	65.9	290.9	3.0	75.5	69.7	0
24-36	4/12/2016 16:02	317.6	3.4	74.7	66.2	320.4	3.0	75.6	65.6	317.6	2.2	75.3	68.8	0
24-36	4/12/2016 16:03	326.0	3.4	74.2	66.0	313.4	3.0	75.0	66.1	304.9	2.2	75.0	69.6	0
24-36	4/12/2016 16:04	321.8	4.5	73.6	65.7	324.6	3.7	74.7	65.7	319.0	2.2	74.7	69.6	0
24-36	4/12/2016 16:05	320.4	3.9	73.9	65.5	314.8	3.0	75.3	67.2	309.2	2.2	74.9	70.3	0
24-36	4/12/2016 16:06	310.6	1.1	75.1	70.3	300.7	1.5	76.6	66.8	295.1	1.5	75.5	70.5	0
24-36	4/12/2016 16:07	282.5	2.8	75.9	64.6	272.7	3.7	76.9	63.7	274.1	3.0	75.8	69.5	0
24-36	4/12/2016 16:08	265.6	3.9	75.4	62.7	275.5	3.7	76.1	63.6	271.3	3.0	75.7	67.9	0
24-36	4/12/2016 16:09	288.1	3.4	74.7	66.9	272.7	3.7	76.0	64.0	272.7	3.0	75.6	68.5	0
24-36	4/12/2016 16:10	243.2	4.5	74.7	63.3	241.8	6.0	75.6	65.3	241.8	4.5	75.6	69.3	0
24-36	4/12/2016 16:11	255.8	6.2	75.0	65.3	278.3	6.0	76.1	64.3	272.7	4.5	75.9	67.5	0
24-36	4/12/2016 16:12	293.7	5.1	75.2	63.7	299.3	4.5	76.6	64.9	306.4	3.0	76.1	69.3	0
24-36	4/12/2016 16:13	300.7	4.5	75.2	63.0	295.1	4.5	76.8	63.4	290.9	3.7	76.2	68.3	0
24-36	4/12/2016 16:14	312.0	4.5	75.4	64.2	319.0	3.7	76.9	62.8	313.4	3.0	76.5	67.1	0
24-36	4/12/2016 16:15	321.8	3.4	75.6	64.5	321.8	3.0	77.3	65.8	321.8	2.2	76.7	69.5	0
24-36	4/12/2016 16:16	323.2	3.4	76.7	65.8	300.7	4.5	77.7	61.2	292.3	3.7	77.0	65.5	0
24-36	4/12/2016 16:17	312.0	5.1	75.6	61.7	316.2	3.7	77.0	61.1	313.4	3.0	76.8	64.6	0
24-36	4/12/2016 16:18	313.4	3.9	75.2	62.8	314.8	4.5	76.6	61.9	306.4	3.0	76.6	65.0	0
24-36	4/12/2016 16:19	310.6	2.3	75.2	63.2	300.7	1.5	76.6	63.5	299.3	1.5	76.4	67.4	0
24-36	4/12/2016 16:20	286.7	2.8	75.5	63.4	290.9	3.7	76.9	63.5	283.9	3.0	76.5	66.5	0
24-36	4/12/2016 16:21	299.3	5.1	75.6	63.7	293.7	5.2	76.9	61.6	299.3	3.7	76.5	65.2	0
24-36	4/12/2016 16:22	295.1	3.9	75.2	66.0	283.9	3.7	77.0	62.0	285.3	2.2	76.5	66.1	0
24-36	4/12/2016 16:23	281.1	2.3	75.5	62.2	264.2	2.2	76.8	61.3	260.0	2.2	76.5	65.8	0
24-36	4/12/2016 16:24	276.9	3.4	75.4	64.0	303.5	4.5	76.2	61.1	302.1	3.0	76.2	64.1	0
24-36	4/12/2016 16:25	317.6	3.9	74.5	62.5	306.4	3.0	75.7	64.6	300.7	2.2	75.8	68.7	0
24-36	4/12/2016 16:26	299.3	1.7	75.0	65.5	285.3	2.2	76.3	63.2	283.9	2.2	75.9	66.9	0
24-36	4/12/2016 16:27	297.9	2.8	75.3	63.0	286.7	3.7	76.6	64.0	292.3	3.0	76.0	67.7	0
24-36	4/12/2016 16:28	272.7	2.8	75.4	63.4	282.5	3.7	76.5	61.9	289.5	3.0	76.0	65.7	0
24-36	4/12/2016 16:29	267.0	4.5	74.7	63.4	257.2	3.7	75.6	62.8	262.8	2.2	75.7	65.6	0
24-36	4/12/2016 16:30	265.6	1.1	74.5	65.4	262.8	2.2	75.2	64.0	253.0	1.5	75.5	67.0	0
24-36	4/12/2016 16:31	274.1	2.3	74.2	64.6	288.1	3.0	75.1	64.4	285.3	2.2	75.2	67.6	0
24-36	4/12/2016 16:32	295.1	3.4	74.2	64.5	278.3	3.0	75.2	64.6	286.7	2.2	75.1	68.0	0
24-36	4/12/2016 16:33	272.7	1.7	74.3	64.7	269.9	3.0	75.0	63.9	272.7	2.2	74.9	67.4	0
24-36	4/12/2016 16:34	268.4	2.8	74.0	63.6	260.0	3.0	74.6	64.0	254.4	2.2	74.7	66.6	0
24-36	4/12/2016 16:35	267.0	1.7	74.1	66.5	292.3	2.2	75.1	66.9	276.9	1.5	74.8	71.0	0
24-36	4/12/2016 16:36	317.6	3.9	74.8	64.8	319.0	3.0	75.6	63.8	312.0	2.2	75.2	68.4	0
24-36	4/12/2016 16:37	316.2	2.8	74.8	64.6	317.6	3.0	75.6	65.0	312.0	2.2	75.3	68.1	0
24-36	4/12/2016 16:38	319.0	2.8	74.6	64.2	313.4	3.0	75.4	63.9	313.4	2.2	75.2	66.6	0
24-36	4/12/2016 16:39	290.9	2.8	74.3	65.5	275.5	3.7	75.2	65.2	275.5	3.0	75.1	68.9	0
24-36	4/12/2016 16:40	285.3	3.4	74.4	64.5	278.3	4.5	75.6	64.9	278.3	3.0	75.1	68.2	0
24-36	4/12/2016 16:41	271.3	3.4	74.8	64.6	271.3	3.7	75.9	62.9	271.3	2.2	75.3	67.1	0
24-36	4/12/2016 16:42	282.5	2.8	74.9	64.4	272.7	3.0	75.7	62.7	272.7	2.2	75.4	65.5	0
24-36	4/12/2016 16:43	264.2	2.8	74.6	64.5	255.8	3.7	75.0	63.1	254.4	3.0	75.1	66.4	0
24-36	4/12/2016 16:44	230.5	2.8	74.0	64.1	260.0	3.0	74.3	64.1	257.2	2.2	74.8	66.7	0
24-36	4/12/2016 16:45	293.7	1.7	73.6	65.7	262.8	2.2	74.0	66.0	255.8	1.5	74.6	68.2	0
24-36	4/12/2016 16:46	246.0	2.3	73.5	66.1	253.0	4.5	73.9	65.5	251.6	3.7	74.4	67.8	0
24-36	4/12/2016 16:47	267.0	5.1	73.7	67.4	286.7	3.7	74.3	67.6	285.3	3.0	74.4	70.0	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
24-36	4/12/2016 16:48	295.1	2.8	73.9	67.0	279.7	3.0	74.4	64.9	274.1	2.2	74.3	66.9	0
24-36	4/12/2016 16:49	281.1	1.7	73.7	66.2	296.5	2.2	74.2	64.8	278.3	1.5	74.1	67.9	0
24-36	4/12/2016 16:50	313.4	2.3	73.3	66.1	321.8	3.0	73.9	66.7	319.0	1.5	73.8	69.6	0
24-36	4/12/2016 16:51	326.0	2.8	73.1	67.3	304.9	2.2	73.7	67.5	296.5	1.5	73.6	70.3	0
24-36	4/12/2016 16:52	307.8	1.7	73.2	68.0	290.9	2.2	73.8	67.7	282.5	1.5	73.5	70.8	0
24-36	4/12/2016 16:53	282.5	2.3	73.2	67.2	300.7	2.2	73.8	66.8	286.7	1.5	73.5	69.7	0
24-36	4/12/2016 16:54	290.9	1.7	73.4	66.8	276.9	2.2	74.3	66.6	286.7	1.5	73.6	71.1	0
24-36	4/12/2016 16:55	288.1	1.1	74.0	65.4	281.1	0.7	74.9	65.2	286.7	0.7	73.9	69.7	0
24-36	4/12/2016 16:56	288.1	0.0	74.5	66.9	279.7	1.5	75.0	65.6	285.3	1.5	74.1	69.1	0
24-36	4/12/2016 16:57	286.7	2.3	74.3	63.9	293.7	3.7	74.6	63.7	289.5	2.2	73.9	67.0	0
24-36	4/12/2016 16:58	307.8	2.8	73.7	64.5	306.4	3.0	74.1	64.5	299.3	2.2	73.6	68.0	0
24-36	4/12/2016 16:59	297.9	2.8	73.2	64.8	313.4	2.2	73.6	64.7	296.5	1.5	73.4	68.4	0
24-36	4/12/2016 17:00	303.5	1.1	72.9	65.3	313.4	1.5	73.3	65.9	297.9	0.7	73.2	69.5	0
24-36	4/12/2016 17:01	303.5	1.1	72.9	66.4	313.4	1.5	73.4	66.6	297.9	0.7	73.1	70.8	0
24-36	4/12/2016 17:02	303.5	1.1	73.2	67.4	319.0	0.7	73.7	66.8	300.7	0.7	73.2	70.0	0
24-36	4/12/2016 17:03	310.6	0.6	73.8	68.1	326.0	0.0	74.4	69.1	303.5	0.7	73.4	73.1	0
24-36	4/12/2016 17:04	307.8	1.1	74.7	67.4	303.5	2.2	75.3	66.5	297.9	2.2	74.1	70.6	0
24-36	4/12/2016 17:05	303.5	2.3	74.9	65.2	282.5	2.2	75.6	65.6	292.3	2.2	74.4	69.4	0
24-36	4/12/2016 17:06	283.9	2.8	74.6	65.7	303.5	3.0	75.4	65.9	299.3	2.2	74.5	69.5	0
24-36	4/12/2016 17:07	300.7	1.7	74.6	65.5	316.2	1.5	75.8	66.1	300.7	1.5	74.7	70.8	0
24-36	4/12/2016 17:08	313.4	2.3	75.1	64.9	323.2	3.0	76.2	64.6	310.6	1.5	75.2	68.7	0
24-36	4/12/2016 17:09	314.8	2.8	75.3	63.3	300.7	2.2	76.5	63.6	303.5	1.5	75.4	67.5	0
24-36	4/12/2016 17:10	307.8	1.7	75.4	63.4	304.9	2.2	76.7	64.6	300.7	2.2	75.6	69.2	0
24-36	4/12/2016 17:11	312.0	2.3	75.6	64.8	320.4	3.0	76.8	62.7	304.9	2.2	75.8	67.2	0
24-36	4/12/2016 17:12	317.6	3.9	75.4	63.2	319.0	3.0	76.6	62.8	303.5	2.2	75.9	66.1	0
24-36	4/12/2016 17:13	314.8	2.3	75.4	63.6	319.0	2.2	76.6	63.3	306.4	1.5	76.0	67.1	0
24-36	4/12/2016 17:14	313.4	1.7	75.5	64.1	303.5	3.0	76.8	63.2	299.3	2.2	76.1	67.1	0
24-36	4/12/2016 17:15	320.4	2.8	75.7	63.1	331.6	1.5	76.8	62.1	309.2	0.7	76.2	66.5	0
24-36	4/12/2016 17:16	351.3	1.7	75.8	62.3	9.5	1.5	76.4	62.8	22.2	1.5	76.1	66.5	0
24-36	4/12/2016 17:17	333.0	2.8	76.0	63.7	316.2	3.0	76.6	63.4	312.0	1.5	76.2	66.8	0
24-36	4/12/2016 17:18	314.8	3.4	76.1	62.0	303.5	3.7	76.9	60.6	307.8	2.2	76.5	63.7	0
24-36	4/12/2016 17:19	316.2	2.8	75.9	60.8	312.0	3.0	76.9	60.8	309.2	1.5	76.5	64.3	0
24-36	4/12/2016 17:20	275.5	3.4	76.0	60.3	260.0	3.0	76.8	60.7	251.6	2.2	76.6	63.8	0
24-36	4/12/2016 17:21	237.6	2.3	76.1	60.1	216.5	3.0	76.8	60.9	208.1	2.2	76.7	65.1	0
24-36	4/12/2016 17:22	234.8	2.3	76.1	60.3	267.0	3.0	76.8	60.5	268.4	2.2	76.8	63.2	0
24-36	4/12/2016 17:23	261.4	2.8	76.1	59.9	247.4	3.7	76.7	59.3	243.2	3.0	76.8	62.1	0
24-36	4/12/2016 17:24	246.0	1.7	76.0	60.7	258.6	3.0	76.9	61.0	254.4	3.0	76.8	64.0	0
24-36	4/12/2016 17:25	269.9	6.2	76.1	60.1	275.5	6.7	76.6	59.9	271.3	4.5	76.6	63.4	0
24-36	4/12/2016 17:26	264.2	5.1	75.8	62.0	271.3	3.7	76.6	61.6	271.3	3.0	76.6	64.6	0
24-36	4/12/2016 17:27	254.4	1.7	76.2	61.4	241.8	3.0	76.7	59.5	248.8	2.2	76.6	62.9	0
24-36	4/12/2016 17:28	237.6	3.4	76.1	59.6	254.4	3.0	76.6	61.4	251.6	2.2	76.6	64.2	0
24-36	4/12/2016 17:29	253.0	1.7	76.3	60.2	248.8	3.0	76.6	60.9	250.2	2.2	76.8	63.8	0
24-36	4/12/2016 17:30	262.8	3.9	76.2	62.1	274.1	3.7	76.9	61.4	276.9	3.0	76.8	64.4	0
24-36	4/12/2016 17:31	281.1	3.9	76.0	59.2	265.6	4.5	76.5	59.8	264.2	3.7	76.5	63.3	0
24-36	4/12/2016 17:32	240.4	2.3	75.9	61.2	236.2	2.2	76.6	60.3	241.8	1.5	76.5	63.8	0
24-36	4/12/2016 17:33	237.6	2.3	75.9	61.7	258.6	2.2	76.5	61.0	244.6	2.2	76.6	63.4	0
24-36	4/12/2016 17:34	281.1	2.3	75.3	59.2	297.9	3.0	76.2	60.3	303.5	2.2	76.1	63.3	0
24-36	4/12/2016 17:35	304.9	1.7	75.2	60.9	297.9	3.0	76.2	61.5	286.1	2.2	75.9	65.2	0
24-36	4/12/2016 17:36	302.1	2.8	75.3	60.7	299.3	3.0	76.6	61.8	304.9	2.2	76.0	66.1	0
24-36	4/12/2016 17:37	303.5	1.7	75.9	61.3	295.1	3.0	77.1	59.8	296.5	2.2	76.2	63.3	0
24-36	4/12/2016 17:38	300.7	1.7	76.1	61.3	272.7	2.2	77.4	58.4	271.3	2.2	76.4	63.4	0
24-36	4/12/2016 17:39	248.8	1.7	76.4	60.3	246.0	2.2	77.3	58.4	240.4	1.5	76.6	63.3	0
24-36	4/12/2016 17:40	243.2	0.6	76.6	61.3	247.4	1.5	77.5	59.0	240.4	1.5	76.8	63.1	0
24-36	4/12/2016 17:41	262.8	2.8	76.5	58.8	279.7	4.5	77.2	58.3	279.7	3.0	76.7	61.9	0
24-36	4/12/2016 17:42	282.5	2.8	76.2	60.3	297.9	3.0	77.3	57.7	302.1	2.2	76.6	61.4	0
24-36	4/12/2016 17:43	310.6	3.4	76.0	59.9	307.8	3.7	77.2	59.5	307.8	3.0	76.6	63.3	0
24-36	4/12/2016 17:44	282.5	2.8	76.2	60.3	237.6	3.0	77.3	59.2	241.8	2.2	76.7	63.8	0
24-36	4/12/2016 17:45	237.6	3.4	76.2	58.2	253.0	4.5	76.8	59.4	251.6	3.0	76.7	62.8	0
24-36	4/12/2016 17:46	246.0	3.9	76.0	59.4	236.2	3.7	76.5	60.0	234.8	3.0	76.7	63.0	0
24-36	4/12/2016 17:47	229.1	3.4	75.9	59.5	236.2	3.0	76.4	60.3	237.6	2.2	76.7	63.3	0
24-36	4/12/2016 17:48	237.6	1.7	76.1	62.3	278.3	3.7	76.8	60.7	260.0	2.2	76.9	63.4	0
24-36	4/12/2016 17:49	276.9	4.5	76.1	60.6	286.7	3.7	76.9	60.4	285.3	3.0	76.7	63.2	0
24-36	4/12/2016 17:50	303.5	1.7	76.2	60.3	310.6	2.2	77.0	60.7	304.9	2.2	76.7	64.4	0
24-36	4/12/2016 17:51	312.0	2.3	75.9	59.7	324.6	2.2	76.4	58.8	323.2	1.5	76.4	61.7	0
24-36	4/12/2016 17:52	330.2	2.8	75.2	60.6	269.9	3.0	75.6	61.8	265.6	2.2	76.0	64.0	0
24-36	4/12/2016 17:53	216.5	2.3	74.9	61.5	255.8	3.0	75.3	61.0	250.2	2.2	75.8	63.2	0
24-36	4/12/2016 17:54	265.6	3.4	74.6	60.6	271.3	3.0	74.9	60.9	267.0	2.2	75.4	62.8	0
24-36	4/12/2016 17:55	276.9	2.8	74.1	62.3	281.1	3.0	74.4	61.6	281.1	2.2	74.8	63.5	0
24-36	4/12/2016 17:56	281.1	3.4	73.7	62.0	286.7	4.5	73.9	62.5	286.7	3.7	74.1	64.8	0
24-36	4/12/2016 17:57	264.2	3.9	73.5	62.5	234.8	2.2	74.0	63.4	244.6	2.2	73.9	67.2	0
24-36	4/12/2016 17:58	247.4	1.7	74.2	63.5	278.3	3.0	74.8	62.7	276.9	2.2	74.1	65.9	0
24-36	4/12/2016 17:59	255.8	1.7	74.9	62.4	231.9	1.5	75.6	63.1	254.4	1.5	74.5	66.1	0
24-36	4/12/2016 18:00	231.9	0.6	75.7	62.3	255.8	1.5	76.4	62.9	267.0	1.5	74.9	67.0	0
24-36	4/12/2016 18:01	283.9	1.1	76.3	63.5	258.6	1.5	77.0	61.6	253.0	1.5	75.5	66.1	0
24-36	4/12/2016 18:02	230.5	1.7	76.7	60.6	241.8	3.0	77.0	58.2	237.6	2.2	75.9	63.4	0
24-36	4/12/2016 18:03	231.9	2.8	76.6	58.9	237.6	3.7	76.7	58.3	236.2	3.0	76.1	62.9	0
24-36	4/12/2016 18:04	234.8	2.8	76.2	59.6	241.8	2.2	76.7	59.7	244.6	1.5	76.3	62.8	0
24-36	4/12/2016 18:05	254.4	1.7	76.2	58.9	283.9	2.2	76.9	59.2	279.7	1.5	76.4	62.6	0
24-36	4/12/2016 18:06	292.3	1.1	76.2	59.0	292.3	1.5	77.2	58.6	283.9	1.5	76.5	62.4	0
24-36	4/12/2016 18:07	293.7	1.7	76.2	59.1	304.9	2.2	77.3	59.0	290.9	1.5	76.6	63.4	0
24-36	4/12/2016 18:08	293.7	1.1	76.2	58.5	303.5	2.2	77.4	57.9	295.1	1.5	76.7	62.5	0
24-36	4/12/2016 18:09	293.7	1.1	76.2	58.6	288.1	1.5	77.5	57.7	269.9	1.5	76.9	61.4	0
24-36	4/12/2016 18:10	293.7	0.6	76.3	59.4	292.3	3.0	77.3	59.0	271.3	2.2	76.8	62.6	0
24-36	4/12/2016 18:11	296.5	5.1	75.9	59.8	306.4	3.7	76.9	59.2	297.9	3.0	76.5	62.8	0
24-36	4/12/2016 18:12	313.4	2.8	75.6	59.8	331.6	2.2	76.6	58.7	314.8	2.2	76.2	61.7	0
24-36	4/12/2016 18:13	324.6	1.1	75.5	61.3	314.8	1.5	76.6	60.8	313.4	1.5	76.1	64.4	0
24-36	4/12/2016 18:14	307.8	1.7	75.8	61.3	293.7	3.0	76.9	58.7	299.3	2.2	76.1	62.2	0
24-36	4/12/2016 18:15	286.7	3.4	75.8	59.7	265.6	3.7	76.7	57.7	264.2	3.0	76.0	62.1	0
24-36	4/12/2016 18:16	260.0	3.4	75.6	58.3	279.7	3.0	76.5	57.5	276.9	2.2	76.0	62.1	0
24-36	4/12/2016 18:17	279.7	1.7	75.6	57.8	289.5	1.5	76.6	57.6	283.9	1.5	75.9	60.7	0
24-36	4/12/2016 18:18	279.7	0.0	75.9	59.8	282.5	2.2	76.9	58.6	275.5	1.5	76.1	62.8	0
24-36	4/12/2016 18:19	278.3	1.7	76.2	60.1	265.6	2.2	76.9	59.0	258.6	1.5	76.2	62.8	0
24-36	4/12/2016 18:20	254.4	1.7	76.3	58.6	250.2	2.2	76.8	57.8	246.0	1.5	76.5	62.4	0
24-36	4/12/2016 18:21	230.5	2.3	76.2	58.0	239.0	2.2	76.6	59.0	231.9	1.5	76.7	62.9	0
24-36	4/12/2016 18:22	227.7	0.0	76.3	58.0	240.4	1.5	76.8	58.7	231.9	0.7	76.9	60.8	0
24-36	4/12/2016 18:23	233.3	0.6	76.5	60.1	261.4	2.2	76.9	59.4	255.8	2.2	77.0	62.4	0
24-36	4/12/2016 18:24	279.7	3.4	76.3	58.3	289.5	3.7	76.9	59.7	285.3	3.0	76.8	62.6	0
24-36	4/12/2016 18:25	283.9	3.9	76.0	58.6	272.7	3.0	76.8	59.7	268.4	2.2	76.6	63.1	0
24-36	4/12/2016 18:26	247.4	2.8	76.0	59.2	246.8	4.5	76.4	58.9	248.8	3.0	76.6	61.9	0
24-36	4/12/2016 18:27	285.3	3.9	75.8	60.7	304.9	2.2	76.4	59.1	309.2	2.2	76.5	61.2	0
24-36	4/12/2016 18:28	316.2	1.7	75.8	59.3	297.9	3.0	76.5	59.2	297.9	2.2	76.3	62.3	0
24-36	4/12/2016 18:29	286.7	2.3	75.8	61.4	290.9	2.2	76.6	60.4	276.9	1.5	76.2	64.2	0
24-36	4/12/2016 18:30	303.5	2.8	75.8	59.7	290.9	3.7	76.6	58.5	295.1	3.0	76.1	61.7	0
24-36	4/12/2016 18:31	285.3	2.8	75.6	59.4	297.9	3.0	76.5	58.9	300.7	2.2	76.0	62.2	0
24-36	4/12/2016 18:32	321.8	3.4	75.5	61.0	316.2	3.0	76.2	58.9	304.9	2.2	75.8	62.9	0
24-36	4/12/2016 18:33	326.0	3.9	75.2	59.6	324.6	3.7	75.8	58.9	320.4	2.2	75.6	62.1	0
24-36	4/12/2016 18:34	342.9	3.9	75.1	59.0	354.1	1.5	75.4	59.9	9.5	1.5	75.3	63.5	0
24-36	4/12/2016 18:35	330.2	2.8	75.1	59.6	320.4	2.2	75.4	60.3	317.6	1.5	75.2	63.3	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
24-36	4/12/2016 18:36	314.8	2.8	75.2	60.2	317.6	3.0	75.4	61.1	317.6	2.2	75.2	63.8	0
24-36	4/12/2016 18:37	295.1	2.8	75.2	61.3	262.8	3.0	75.5	59.7	262.8	2.2	75.2	62.8	0
24-36	4/12/2016 18:38	239.0	3.4	75.2	60.1	262.8	3.7	75.3	59.9	260.0	3.0	75.2	62.8	0
24-36	4/12/2016 18:39	258.6	3.9	75.1	60.5	261.4	3.0	75.2	61.1	254.4	2.2	75.2	64.3	0
24-36	4/12/2016 18:40	262.8	2.8	75.0	60.9	267.0	3.7	75.2	61.7	262.8	2.2	75.2	64.9	0
24-36	4/12/2016 18:41	267.0	3.4	74.9	61.3	268.4	3.7	75.0	61.4	261.4	3.0	75.0	64.0	0
24-36	4/12/2016 18:42	281.1	2.8	74.4	62.1	272.7	3.0	74.5	61.6	272.7	2.2	74.6	64.5	0
24-36	4/12/2016 18:43	272.7	2.3	74.3	62.0	271.3	2.2	74.6	62.6	260.0	1.5	74.5	65.6	0
24-36	4/12/2016 18:44	264.2	2.3	74.4	63.0	276.9	3.7	74.8	61.2	275.5	2.2	74.5	64.2	0
24-36	4/12/2016 18:45	253.0	2.8	74.6	62.0	253.0	3.0	74.8	60.9	269.9	2.2	74.5	63.6	0
24-36	4/12/2016 18:46	260.0	2.8	74.6	60.8	262.8	3.0	74.8	61.2	255.8	2.2	74.5	64.1	0
24-36	4/12/2016 18:47	268.4	2.8	74.7	62.2	281.1	3.7	74.9	61.7	286.7	2.2	74.5	64.8	0
24-36	4/12/2016 18:48	283.9	4.5	74.7	60.1	285.3	3.7	74.9	60.5	281.1	3.0	74.5	64.0	0
24-36	4/12/2016 18:49	288.1	2.8	74.7	60.5	285.3	3.0	74.9	60.0	285.3	2.2	74.4	63.1	0
24-36	4/12/2016 18:50	281.1	2.3	74.7	60.7	279.7	3.0	74.9	60.6	271.3	2.2	74.4	64.2	0
24-36	4/12/2016 18:51	290.9	2.8	74.7	59.0	296.5	3.0	74.9	60.1	292.3	2.2	74.4	63.5	0
24-36	4/12/2016 18:52	289.5	3.4	74.6	59.4	293.7	3.7	74.9	59.3	297.9	3.0	74.4	62.6	0
24-36	4/12/2016 18:53	303.5	2.8	74.6	58.9	297.9	3.0	74.9	59.0	303.5	2.2	74.3	62.4	0
24-36	4/12/2016 18:54	300.7	2.8	74.5	59.1	306.4	3.0	74.8	58.5	293.7	2.2	74.3	62.1	0
24-36	4/12/2016 18:55	312.0	3.4	74.5	59.2	312.0	3.0	74.6	60.0	309.2	2.2	74.3	63.5	0
24-36	4/12/2016 18:56	310.6	1.7	74.5	60.4	310.6	2.2	74.6	60.0	309.2	1.5	74.3	63.6	0
24-36	4/12/2016 18:57	323.2	2.3	74.5	60.1	312.0	1.5	74.6	60.6	310.6	1.5	74.3	64.0	0
24-36	4/12/2016 18:58	326.0	0.0	74.6	61.2	309.2	0.7	74.7	61.1	310.6	0.7	74.4	64.4	0
24-36	4/12/2016 18:59	323.2	1.1	74.6	59.8	307.8	2.2	74.8	60.2	310.6	1.5	74.4	63.1	0
24-36	4/12/2016 19:00	317.6	1.1	74.7	60.0	299.3	2.2	74.9	60.9	309.2	1.5	74.5	64.8	0
24-36	4/12/2016 19:01	317.6	2.3	74.6	59.6	309.2	2.2	74.9	59.9	307.8	2.2	74.5	63.2	0
24-36	4/12/2016 19:02	317.6	0.6	74.6	60.9	310.6	1.5	75.0	61.2	307.8	0.7	74.5	65.2	0
24-36	4/12/2016 19:03	317.6	0.0	74.7	61.4	310.6	0.7	75.2	61.7	307.8	0.7	74.6	66.0	0
24-36	4/12/2016 19:04	317.6	0.6	74.8	61.4	293.7	1.5	75.2	61.7	286.7	1.5	74.7	65.3	0
24-36	4/12/2016 19:05	317.6	0.0	74.8	61.3	293.7	0.7	75.2	61.2	286.7	0.7	74.7	64.6	0
24-36	4/12/2016 19:06	316.2	0.6	74.8	60.9	292.3	1.5	75.2	60.6	286.7	0.7	74.8	64.3	0
24-36	4/12/2016 19:07	316.2	0.0	74.7	60.8	292.3	0.7	75.0	61.0	286.7	0.7	74.8	64.6	0
24-36	4/12/2016 19:08	316.2	0.0	74.7	61.6	292.3	0.7	74.9	61.9	286.7	0.0	74.8	65.2	0
24-36	4/12/2016 19:09	316.2	0.0	74.7	62.1	292.3	0.7	75.0	62.0	286.7	0.7	74.9	64.4	0
24-36	4/12/2016 19:10	316.2	0.0	74.8	62.5	292.3	1.5	74.9	62.1	286.7	0.7	75.0	64.2	0
24-36	4/12/2016 19:11	316.2	0.0	74.7	61.6	292.3	0.7	74.9	61.2	286.7	0.7	74.9	63.7	0
24-36	4/12/2016 19:12	316.2	0.6	74.6	61.6	283.9	1.5	74.7	62.2	282.5	0.7	74.9	64.6	0
24-36	4/12/2016 19:13	316.2	0.6	74.4	62.6	276.9	1.5	74.6	62.7	274.1	1.5	74.7	65.4	0
24-36	4/12/2016 19:14	316.2	0.6	74.2	63.1	281.1	0.7	74.5	63.1	274.1	0.7	74.6	65.6	0
24-36	4/12/2016 19:15	316.2	0.0	74.1	63.6	281.1	0.7	74.4	64.2	274.1	0.7	74.6	67.0	0
24-36	4/12/2016 19:16	316.2	0.0	74.0	64.2	281.1	0.7	74.4	64.5	274.1	0.0	74.7	67.0	0
24-36	4/12/2016 19:17	316.2	0.0	74.0	64.4	281.1	0.7	74.5	64.3	274.1	0.7	74.6	66.6	0
24-36	4/12/2016 19:18	316.2	0.0	73.9	64.1	281.1	0.7	74.4	64.2	274.1	0.7	74.6	67.0	0
24-36	4/12/2016 19:19	316.2	0.0	73.8	64.5	282.5	0.7	74.4	64.5	274.1	0.7	74.6	66.6	0
24-36	4/12/2016 19:20	319.0	0.6	73.6	63.5	288.1	2.2	74.2	63.5	275.5	1.5	74.3	65.4	0
24-36	4/12/2016 19:21	312.0	0.6	73.5	64.5	286.7	1.5	74.0	63.6	275.5	0.7	74.1	65.9	0
24-36	4/12/2016 19:22	310.6	1.7	73.3	64.1	299.3	2.2	73.8	63.9	295.1	1.5	73.9	66.2	0
24-36	4/12/2016 19:23	310.6	1.7	73.1	64.5	304.9	2.2	73.5	64.8	296.5	0.7	73.6	67.6	0
24-36	4/12/2016 19:24	310.6	0.6	73.0	65.2	306.4	1.5	73.3	65.7	296.5	0.7	73.5	68.2	0
24-36	4/12/2016 19:25	310.6	0.6	72.8	65.0	306.4	0.7	73.1	65.9	296.5	0.0	73.3	68.0	0
24-36	4/12/2016 19:26	310.6	0.6	72.7	64.9	302.1	1.5	72.9	65.9	295.1	0.7	73.1	68.2	0
24-36	4/12/2016 19:27	310.6	0.6	72.6	65.0	299.3	1.5	72.7	65.9	293.7	0.7	73.0	68.1	0
24-36	4/12/2016 19:28	310.6	1.1	72.6	64.9	300.7	1.5	72.7	65.8	293.7	0.7	72.9	68.1	0
24-36	4/12/2016 19:29	310.6	0.0	72.5	65.4	300.7	0.7	72.6	67.2	293.7	0.0	72.7	69.0	0
24-36	4/12/2016 19:30	316.2	0.6	72.4	65.9	303.5	1.5	72.3	66.8	293.7	0.7	72.4	69.2	0
24-36	4/12/2016 19:31	328.8	0.6	72.2	65.7	303.5	1.5	72.2	66.4	293.7	0.7	72.3	68.5	0
24-36	4/12/2016 19:32	328.8	0.6	72.2	65.8	303.5	1.5	72.2	66.7	293.7	0.7	72.3	68.8	0
24-36	4/12/2016 19:33	328.8	0.6	72.1	66.2	303.5	0.7	72.1	67.4	293.7	0.7	72.2	69.9	0
24-36	4/12/2016 19:34	328.8	0.0	72.1	66.2	303.5	0.7	72.1	67.6	293.7	0.7	72.1	69.7	0
24-36	4/12/2016 19:35	328.8	0.0	72.0	66.9	303.5	0.7	72.0	67.5	293.7	0.7	72.1	69.8	0
24-36	4/12/2016 19:36	328.8	0.6	71.9	66.7	303.5	0.7	71.9	67.4	293.7	0.7	72.0	69.5	0
24-36	4/12/2016 19:37	328.8	0.0	71.9	66.3	303.5	0.7	72.0	67.2	293.7	0.7	72.0	69.3	0
24-36	4/12/2016 19:38	328.8	0.0	71.9	66.4	303.5	0.7	72.0	67.1	293.7	0.0	72.0	69.7	0
24-36	4/12/2016 19:39	328.8	0.0	71.9	66.4	303.5	0.0	71.9	67.8	293.7	0.0	71.9	70.7	0
24-36	4/12/2016 19:40	328.8	0.0	71.7	67.9	303.5	0.7	71.6	69.0	293.7	0.0	72.0	71.4	0
24-36	4/12/2016 19:41	328.8	0.0	71.4	68.0	303.5	0.0	71.1	69.5	293.7	0.0	71.9	70.7	0
24-36	4/12/2016 19:42	328.8	0.0	71.2	68.2	303.5	0.0	70.8	70.0	293.7	0.0	71.7	70.7	0
24-36	4/12/2016 19:43	328.8	0.0	70.9	69.0	303.5	0.0	70.5	70.7	293.7	0.0	71.6	70.9	0
24-36	4/12/2016 19:44	328.8	0.0	70.5	70.3	303.5	0.0	70.2	71.0	293.7	0.0	71.2	71.7	0
24-36	4/12/2016 19:45	328.8	0.0	70.1	71.5	303.5	0.0	69.9	72.5	293.7	0.0	70.8	73.0	0
24-36	4/12/2016 19:46	328.8	0.0	69.8	71.7	303.5	0.0	69.6	73.3	293.7	0.0	70.4	73.6	0
24-36	4/12/2016 19:47	328.8	0.0	69.5	72.8	303.5	0.0	69.3	74.1	293.7	0.0	70.1	74.7	0
24-36	4/12/2016 19:48	328.8	0.0	69.3	73.5	303.5	0.0	69.1	76.9	293.7	0.0	69.7	76.0	0
24-36	4/12/2016 19:49	328.8	0.0	69.2	75.5	303.5	0.7	68.9	78.0	293.7	0.7	69.2	78.2	0
24-36	4/12/2016 19:50	328.8	0.0	69.0	76.2	303.5	0.7	68.7	78.8	293.7	0.0	68.8	79.1	0
24-36	4/12/2016 19:51	328.8	0.0	68.9	77.2	303.5	0.7	68.4	79.7	293.7	0.7	68.4	79.9	0
24-36	4/12/2016 19:52	328.8	0.0	68.7	77.0	303.5	0.7	68.3	79.3	293.7	0.7	68.0	80.9	0
24-36	4/12/2016 19:53	328.8	0.0	68.7	78.0	303.5	1.5	68.0	80.3	293.7	0.7	67.6	81.4	0
24-36	4/12/2016 19:54	328.8	0.0	68.4	78.8	303.5	1.5	67.6	81.7	293.7	0.7	67.2	82.5	0
24-36	4/12/2016 19:55	328.8	1.1	68.0	79.9	303.5	1.5	67.1	82.6	293.7	0.7	66.8	83.1	0
24-36	4/12/2016 19:56	328.8	0.6	67.7	80.8	303.5	1.5	66.9	83.5	293.7	0.7	66.4	83.8	0
24-36	4/12/2016 19:57	328.8	0.6	67.4	81.4	303.5	1.5	66.5	83.9	293.7	0.7	66.0	84.4	0
24-36	4/12/2016 19:58	328.8	0.6	67.1	82.5	303.5	1.5	66.3	84.8	293.7	0.7	65.7	85.0	0
24-36	4/12/2016 19:59	328.8	0.6	66.9	82.9	303.5	1.5	66.1	85.2	293.7	0.7	65.4	85.5	0
24-36	4/12/2016 20:00	328.8	0.6	66.7	83.4	303.5	1.5	65.8	85.5	293.7	0.7	65.1	85.9	0
24-36	4/12/2016 20:01	328.8	0.0	66.5	83.9	303.5	0.7	65.5	86.2	293.7	0.7	64.9	86.6	0
24-36	4/12/2016 20:02	328.8	0.0	66.1	84.5	303.5	1.5	65.4	86.9	293.7	0.7	64.7	87.2	0
24-36	4/12/2016 20:03	328.8	0.0	65.9	85.0	303.5	1.5	65.3	87.2	293.7	0.7	64.5	87.6	0
24-36	4/12/2016 20:04	328.8	0.6	65.9	85.1	303.5	1.5	65.4	87.1	293.7	0.7	64.4	87.8	0
24-36	4/12/2016 20:05	328.8	0.0	65.8	85.3	303.5	1.5	65.4	87.0	293.7	0.7	64.2	87.8	0
24-36	4/12/2016 20:06	328.8	0.0	65.7	85.6	303.5	0.7	65.2	86.7	293.7	0.0	64.1	87.8	0
24-36	4/12/2016 20:07	328.8	0.0	65.4	85.8	303.5	0.0	64.9	86.3	293.7	0.0	64.1	88.0	0
24-36	4/12/2016 20:08	328.8	0.0	65.1	86.6	303.5	0.0	64.7	86.4	293.7	0.0	64.0	87.8	0
24-36	4/12/2016 20:09	328.8	0.0	64.9	87.0	303.5	0.0	64.5	87.3	293.7	0.0	63.9	88.3	0
24-36	4/12/2016 20:10	328.8	0.0	64.8	87.8	303.5	0.0	64.4	87.9	293.7	0.0	63.9	88.7	0
24-36	4/12/2016 20:11	328.8	0.0	64.6	88.0	303.5	0.0	64.3	88.9	293.7	0.0	63.8	89.1	0
24-36	4/12/2016 20:12	328.8	0.0	64.6	88.5	303.5	0.7	64.3	89.5	293.7	0.7	63.6	89.0	0
24-36	4/12/2016 20:13	328.8	0.0	64.5	88.8	303.5	0.7	64.3	89.8	293.7	0.7	63.4	89.3	0
24-36	4/12/2016 20:14	328.8	0.0	64.5	88.9	303.5	0.7	64.2	89.6	293.7	0.0	63.3	89.3	0
24-36	4/12/2016 20:15	328.8	0.0	64.5	89.1	303.5	0.7	64.0	89.9	293.7	0.0	63.0	89.4	0
24-36	4/12/2016 20:16	328.8	0.0	64.3	89.4	303.5	0.7	63.9	90.1	293.7	0.0	63.0	90.0	0
24-36	4/12/2016 20:17	328.8	0.0	64.2	89.5	303.5	0.7	63.9	90.1	293.7	0.0	62.9	90.5	0
24-36	4/12/2016 20:18	328.8	0.0	64.2	89.7	303.5	0.0	63.9	89.7	293.7	0.0	62.8	90.6	0
24-36	4/12/2016 20:19	328.8	0.0	64.0	89.8	303.5	0.0	63.8	90.3	293.7	0.0	62.8	91.1	0
24-36	4/12/2016 20:20	328.8	0.0	63.9	90.2	303.5	0.0	63.7	91.0	293.7	0.0	62.7	90.9	0
24-36	4/12/2016 20:21	328.8	0.0	63.9	90.7	303.5	0.0	63.7	91.3	293.7	0.0	62.7	91.3	0
24-36	4/12/2016 20:22	328.8	0.0	63.9	91.0	303.5	0.7	63.7	91.6	293.7	0.0	62.7	91.4	0
24-36	4/12/2016 20:23	328.8	0.0	63.8	91.2	303.5	0.0	63.6	91.6	293.7	0.0	62.7	91.6	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
24-36	4/12/2016 20:24	328.8	0.0	63.7	91.3	303.5	0.0	63.6	91.6	293.7	0.0	62.7	91.7	0
24-36	4/12/2016 20:25	328.8	0.0	63.7	91.3	303.5	0.0	63.5	91.9	293.7	0.0	62.7	92.4	0
24-36	4/12/2016 20:26	328.8	0.0	63.6	91.3	303.5	0.7	63.5	91.8	293.7	0.0	62.8	92.4	0
24-36	4/12/2016 20:27	328.8	0.0	63.6	91.5	303.5	0.7	63.5	91.8	293.7	0.7	62.7	91.9	0
24-36	4/12/2016 20:28	328.8	0.0	63.5	91.8	303.5	0.7	63.3	91.8	293.7	0.0	62.5	91.1	0
24-36	4/12/2016 20:29	328.8	0.0	63.4	92.1	303.5	0.0	63.1	92.3	293.7	0.0	62.4	91.6	0
24-36	4/12/2016 20:30	328.8	0.0	63.3	92.2	303.5	0.0	63.1	92.0	293.7	0.0	62.4	92.1	0
24-36	4/12/2016 20:31	328.8	0.0	63.3	92.4	303.5	0.7	63.0	92.3	293.7	0.7	62.4	92.1	0
24-36	4/12/2016 20:32	328.8	0.0	63.3	92.6	303.5	0.7	63.0	92.7	293.7	0.7	62.1	91.6	0
24-36	4/12/2016 20:33	328.8	0.0	63.2	92.6	303.5	0.7	62.8	92.9	293.7	0.0	61.9	91.6	0
24-36	4/12/2016 20:34	328.8	0.0	63.1	92.8	303.5	0.0	62.8	93.3	293.7	0.0	61.9	92.4	0
24-36	4/12/2016 20:35	328.8	0.0	63.1	92.9	303.5	0.7	62.8	93.6	293.7	0.7	61.9	92.7	0
24-36	4/12/2016 20:36	328.8	0.0	63.1	93.0	306.4	0.7	62.8	93.2	293.7	0.7	61.8	92.5	0
24-36	4/12/2016 20:37	328.8	0.0	63.0	93.0	312.0	0.7	62.6	93.6	293.7	0.0	61.6	92.1	0
24-36	4/12/2016 20:38	328.8	0.0	63.0	93.0	312.0	0.7	62.7	93.9	293.7	0.0	61.5	92.3	0
24-36	4/12/2016 20:39	328.8	0.0	63.0	93.2	312.0	0.7	62.7	94.2	293.7	0.0	61.4	92.6	0
24-36	4/12/2016 20:40	328.8	0.0	63.0	93.5	312.0	0.7	62.7	94.2	293.7	0.0	61.4	93.1	0
24-36	4/12/2016 20:41	328.8	0.0	62.9	93.6	312.0	0.7	62.7	94.2	293.7	0.0	61.4	93.2	0
24-36	4/12/2016 20:42	328.8	0.0	62.8	93.7	312.0	0.7	62.6	93.9	293.7	0.0	61.3	93.2	0
24-36	4/12/2016 20:43	328.8	0.0	62.7	93.8	312.0	0.7	62.5	94.2	293.7	0.0	61.2	93.0	0
24-36	4/12/2016 20:44	328.8	0.0	62.7	94.1	312.0	0.7	62.5	94.6	293.7	0.7	61.1	93.0	0
NS	4/12/2016 20:45	328.8	0.0	62.7	94.3	312.0	0.7	62.5	94.7	293.7	0.0	61.0	93.3	0
NS	4/12/2016 20:46	328.8	0.0	62.6	94.4	313.4	0.7	62.4	94.7	293.7	0.0	60.9	93.3	0
NS	4/12/2016 20:47	328.8	0.0	62.6	94.5	314.8	0.7	62.4	94.8	293.7	0.0	60.9	93.5	0
NS	4/12/2016 20:48	328.8	0.0	62.5	94.6	314.8	0.7	62.4	94.7	293.7	0.0	60.9	93.8	0
NS	4/12/2016 20:49	328.8	0.0	62.4	94.6	314.8	0.7	62.3	94.6	293.7	0.0	60.8	93.7	0
NS	4/12/2016 20:50	328.8	0.0	62.4	94.6	314.8	0.0	62.2	94.5	293.7	0.0	60.9	94.0	0
NS	4/12/2016 20:51	328.8	0.0	62.3	94.8	314.8	0.0	62.1	94.3	293.7	0.0	60.9	94.1	0
NS	4/12/2016 20:52	328.8	0.0	62.2	94.7	327.4	0.0	62.0	94.6	293.7	0.0	61.0	94.3	0
NS	4/12/2016 20:53	328.8	0.0	62.1	95.1	333.0	0.7	62.0	95.2	293.7	0.0	61.0	94.3	0
NS	4/12/2016 20:54	328.8	0.0	62.1	95.3	333.0	0.7	62.0	95.6	293.7	0.0	60.9	94.3	0
NS	4/12/2016 20:55	328.8	0.0	62.1	95.6	333.0	0.7	62.1	95.8	293.7	0.0	60.9	94.2	0
NS	4/12/2016 20:56	328.8	0.0	62.1	95.6	333.0	1.5	62.0	95.7	293.7	0.0	60.6	93.6	0
NS	4/12/2016 20:57	328.8	0.0	62.1	95.5	333.0	0.7	61.9	95.7	293.7	0.0	60.5	94.1	0
NS	4/12/2016 20:58	328.8	0.0	62.1	95.2	333.0	0.7	61.9	96.0	293.7	0.0	60.6	94.5	0
NS	4/12/2016 20:59	328.8	0.0	62.1	95.6	333.0	0.7	62.0	96.1	293.7	0.0	60.6	94.4	0
NS	4/12/2016 21:00	328.8	0.0	62.1	95.5	333.0	0.7	62.0	96.1	293.7	0.0	60.5	94.3	0
NS	4/12/2016 21:01	328.8	0.0	62.0	95.4	333.0	0.7	61.8	96.0	293.7	0.0	60.4	94.5	0
NS	4/12/2016 21:02	328.8	0.0	62.0	95.6	333.0	0.7	61.8	96.1	293.7	0.0	60.3	94.6	0
NS	4/12/2016 21:03	328.8	0.0	61.9	95.8	333.0	0.0	61.8	96.3	293.7	0.0	60.4	94.9	0
NS	4/12/2016 21:04	328.8	0.0	61.8	96.0	333.0	0.0	61.7	96.0	293.7	0.0	60.6	95.1	0
NS	4/12/2016 21:05	328.8	0.0	61.8	96.1	333.0	0.0	61.7	95.8	293.7	0.0	60.6	94.8	0
36-48	4/12/2016 21:06	328.8	0.0	61.7	95.9	333.0	0.0	61.5	95.7	293.7	0.0	60.6	95.0	0
36-48	4/12/2016 21:07	328.8	0.0	61.6	96.2	333.0	0.0	61.5	95.6	293.7	0.0	60.6	95.1	0
36-48	4/12/2016 21:08	328.8	0.0	61.6	96.3	333.0	0.0	61.5	95.7	293.7	0.0	60.6	95.0	0
36-48	4/12/2016 21:09	328.8	0.0	61.5	96.4	335.8	0.0	61.4	96.1	293.7	0.0	60.5	95.0	0
36-48	4/12/2016 21:10	328.8	0.0	61.5	96.6	335.8	0.7	61.5	96.4	293.7	0.0	60.5	95.1	0
36-48	4/12/2016 21:11	328.8	0.0	61.5	96.6	335.8	0.7	61.4	96.5	293.7	0.0	60.3	95.0	0
36-48	4/12/2016 21:12	328.8	0.0	61.5	96.7	335.8	0.0	61.3	96.4	293.7	0.0	60.3	95.0	0
36-48	4/12/2016 21:13	328.8	0.0	61.4	96.8	335.8	0.0	61.3	96.3	293.7	0.0	60.3	95.0	0
36-48	4/12/2016 21:14	328.8	0.0	61.4	96.8	335.8	0.0	61.2	96.0	293.7	0.0	60.3	95.1	0
36-48	4/12/2016 21:15	328.8	0.0	61.3	96.7	335.8	0.0	61.2	95.9	293.7	0.0	60.4	95.2	0
36-48	4/12/2016 21:16	328.8	0.0	61.3	96.8	335.8	0.0	61.2	95.9	293.7	0.0	60.5	95.3	0
36-48	4/12/2016 21:17	328.8	0.0	61.2	97.0	335.8	0.0	61.1	95.9	293.7	0.0	60.5	95.4	0
36-48	4/12/2016 21:18	328.8	0.0	61.2	97.0	335.8	0.0	61.1	96.0	293.7	0.0	60.5	95.4	0
36-48	4/12/2016 21:19	328.8	0.0	61.2	97.0	335.8	0.0	61.1	96.3	293.7	0.0	60.5	95.3	0
36-48	4/12/2016 21:20	328.8	0.0	61.2	97.0	335.8	0.0	61.1	96.5	293.7	0.0	60.6	95.6	0
36-48	4/12/2016 21:21	328.8	0.0	61.2	97.1	335.8	0.0	61.1	96.8	293.7	0.0	60.6	95.6	0
36-48	4/12/2016 21:22	328.8	0.0	61.2	97.3	335.8	0.0	61.1	97.0	293.7	0.0	60.5	95.4	0
36-48	4/12/2016 21:23	328.8	0.0	61.2	97.4	335.8	0.7	61.1	97.2	293.7	0.0	60.2	95.0	0
36-48	4/12/2016 21:24	328.8	0.0	61.2	97.4	335.8	0.7	61.2	97.3	293.7	0.0	60.0	95.0	0
36-48	4/12/2016 21:25	328.8	0.0	61.2	97.4	335.8	0.7	61.2	97.4	293.7	0.0	59.9	95.3	0
36-48	4/12/2016 21:26	328.8	0.0	61.2	97.4	335.8	0.7	61.1	97.4	293.7	0.0	59.8	95.3	0
36-48	4/12/2016 21:27	328.8	0.0	61.2	97.4	335.8	0.7	61.1	97.4	293.7	0.0	59.8	95.5	0
36-48	4/12/2016 21:28	328.8	0.0	61.2	97.4	335.8	0.7	61.0	97.5	293.7	0.0	59.7	95.5	0
36-48	4/12/2016 21:29	328.8	0.0	61.1	97.4	335.8	0.7	61.0	97.5	293.7	0.0	59.7	95.8	0
36-48	4/12/2016 21:30	328.8	0.0	61.1	97.5	335.8	0.0	61.0	97.7	293.7	0.0	59.8	95.8	0
36-48	4/12/2016 21:31	328.8	0.0	61.0	97.4	335.8	0.0	60.9	97.7	293.7	0.0	59.8	95.8	0
36-48	4/12/2016 21:32	328.8	0.0	60.9	97.2	335.8	0.0	60.9	97.6	293.7	0.0	59.8	95.9	0
36-48	4/12/2016 21:33	328.8	0.0	60.9	97.1	335.8	0.0	60.8	97.4	293.7	0.0	59.8	95.8	0
36-48	4/12/2016 21:34	328.8	0.0	60.8	96.9	335.8	0.0	60.7	97.3	293.7	0.0	59.7	95.8	0
36-48	4/12/2016 21:35	328.8	0.0	60.6	96.7	335.8	0.0	60.6	97.2	293.7	0.0	59.7	95.7	0
36-48	4/12/2016 21:36	328.8	0.0	60.5	96.7	335.8	0.0	60.4	97.1	293.7	0.0	59.7	95.8	0
36-48	4/12/2016 21:37	328.8	0.0	60.5	96.6	335.8	0.0	60.4	97.1	293.7	0.0	59.8	96.0	0
36-48	4/12/2016 21:38	328.8	0.0	60.5	96.7	335.8	0.0	60.5	97.1	293.7	0.0	59.9	96.1	0
36-48	4/12/2016 21:39	328.8	0.0	60.6	96.7	335.8	0.0	60.5	97.1	293.7	0.0	59.8	95.8	0
36-48	4/12/2016 21:40	328.8	0.0	60.6	96.7	335.8	0.0	60.5	97.1	293.7	0.0	59.8	96.0	0
36-48	4/12/2016 21:41	328.8	0.0	60.6	96.6	335.8	0.0	60.6	97.2	293.7	0.0	59.8	96.2	0
36-48	4/12/2016 21:42	328.8	0.0	60.6	96.6	335.8	0.0	60.6	97.4	293.7	0.0	60.0	96.3	0
36-48	4/12/2016 21:43	328.8	0.0	60.6	96.6	335.8	0.0	60.6	97.5	293.7	0.0	60.0	96.3	0
36-48	4/12/2016 21:44	328.8	0.0	60.7	97.1	335.8	0.0	60.6	97.3	293.7	0.0	60.0	96.5	0
36-48	4/12/2016 21:45	328.8	0.0	60.7	97.6	335.8	0.0	60.6	97.1	293.7	0.0	60.2	96.5	0
36-48	4/12/2016 21:46	328.8	0.0	60.7	97.6	335.8	0.0	60.6	97.1	293.7	0.0	60.2	96.5	0
36-48	4/12/2016 21:47	328.8	0.0	60.6	97.6	335.8	0.0	60.5	96.9	293.7	0.0	60.2	96.3	0
36-48	4/12/2016 21:48	328.8	0.0	60.5	97.7	335.8	0.0	60.3	96.9	293.7	0.0	60.1	96.3	0
36-48	4/12/2016 21:49	328.8	0.0	60.4	97.6	335.8	0.0	60.3	97.0	293.7	0.0	60.0	96.0	0
36-48	4/12/2016 21:50	328.8	0.0	60.4	97.6	335.8	0.0	60.2	97.3	293.7	0.0	59.7	95.7	0
36-48	4/12/2016 21:51	328.8	0.0	60.4	97.4	335.8	0.0	60.1	97.3	293.7	0.0	59.4	95.7	0
36-48	4/12/2016 21:52	328.8	0.0	60.3	97.3	335.8	0.0	60.2	97.5	293.7	0.0	59.4	96.1	0
36-48	4/12/2016 21:53	328.8	0.0	60.3	97.3	335.8	0.0	60.3	97.8	293.7	0.0	59.5	96.4	0
36-48	4/12/2016 21:54	328.8	0.0	60.4	97.6	335.8	0.0	60.4	98.0	293.7	0.0	59.5	96.4	0
36-48	4/12/2016 21:55	328.8	0.0	60.5	98.1	335.8	0.7	60.5	98.2	293.7	0.0	59.4	96.2	0
36-48	4/12/2016 21:56	328.8	0.0	60.6	98.2	335.8	0.7	60.6	98.3	293.7	0.0	59.4	96.3	0
36-48	4/12/2016 21:57	328.8	0.0	60.7	98.4	335.8	0.7	60.7	98.5	293.7	0.0	59.3	96.2	0
36-48	4/12/2016 21:58	328.8	0.0	60.8	98.4	335.8	0.7	60.8	98.6	293.7	0.0	59.3	96.4	0
36-48	4/12/2016 21:59	328.8	0.0	60.9	98.4	335.8	0.7	60.9	98.7	293.7	0.0	59.4	96.5	0
36-48	4/12/2016 22:00	328.8	0.0	60.9	98.5	335.8	0.0	60.8	98.6	293.7	0.0	59.4	96.5	0
36-48	4/12/2016 22:01	328.8	0.0	60.7	98.3	335.8	0.7	60.7	98.6	293.7	0.0	59.4	96.6	0
36-48	4/12/2016 22:02	328.8	0.0	60.7	98.3	335.8	0.0	60.6	98.5	293.7	0.0	59.5	96.7	0
36-48	4/12/2016 22:03	328.8	0.0	60.6	98.3	335.8	0.0	60.6	98.5	293.7	0.0	59.5	96.6	0
36-48	4/12/2016 22:04	328.8	0.0	60.6	98.4	335.8	0.0	60.6	98.5	293.7	0.0	59.5	96.6	0
36-48	4/12/2016 22:05	328.8	0.0	60.6	98.4	335.8	0.0	60.6	98.5	293.7	0.0	59.5	96.6	0
36-48	4/12/2016 22:06	328.8	0.0	60.6	98.4	335.8	0.0	60.6	98.5	293.7	0.0	59.5	96.6	0
36-48	4/12/2016 22:07	328.8	0.0	60.5	98.4	335.8	0.0	60.5	98.4	293.7	0.0	59.6	96.5	0
36-48	4/12/2016 22:08	328.8	0.0	60.5	98.3	335.8	0.0	60.5	98.4	293.7	0.0	59.7	96.7	0
36-48	4/12/2016 22:09	328.8	0.0	60.5	98.4	335.8	0.0	60.5	98.3	293.7	0.0	59.7	96.7	0
36-48	4/12/2016 22:10	328.8	0.0	60.5	98.5	335.8	0.0	60.5	98.4	293.7	0.0	59.8	96.7	0
36-48	4/12/2016 22:11	328.8	0.0	60.5	98.6	335.8	0.0	60.5	98.4	293.7	0.0	59.8	96.6	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
36-48	4/12/2016 22:12	328.8	0.0	60.4	98.6	335.8	0.0	60.5	98.3	293.7	0.0	59.9	96.6	0
36-48	4/12/2016 22:13	328.8	0.0	60.4	98.6	335.8	0.0	60.5	98.3	293.7	0.0	59.9	96.5	0
36-48	4/12/2016 22:14	328.8	0.0	60.4	98.5	335.8	0.0	60.5	98.2	293.7	0.0	59.9	96.5	0
36-48	4/12/2016 22:15	328.8	0.0	60.5	98.4	335.8	0.0	60.5	98.2	293.7	0.0	59.9	96.5	0
36-48	4/12/2016 22:16	328.8	0.0	60.4	98.3	335.8	0.0	60.5	98.1	293.7	0.0	59.9	96.5	0
36-48	4/12/2016 22:17	328.8	0.0	60.5	98.3	335.8	0.0	60.5	98.1	293.7	0.0	60.0	96.7	0
36-48	4/12/2016 22:18	328.8	0.0	60.5	98.3	335.8	0.7	60.5	98.3	293.7	0.0	60.0	96.8	0
36-48	4/12/2016 22:19	328.8	0.0	60.6	98.3	335.8	0.0	60.5	98.4	293.7	0.0	60.1	96.8	0
36-48	4/12/2016 22:20	328.8	0.0	60.6	98.2	335.8	0.0	60.6	98.4	293.7	0.0	60.0	96.6	0
36-48	4/12/2016 22:21	328.8	0.0	60.6	98.4	335.8	0.0	60.6	98.4	293.7	0.0	60.1	96.6	0
36-48	4/12/2016 22:22	328.8	0.0	60.7	98.3	335.8	0.0	60.6	98.4	293.7	0.0	60.1	96.6	0
36-48	4/12/2016 22:23	328.8	0.0	60.6	98.2	335.8	0.0	60.5	98.4	293.7	0.0	60.1	96.6	0
36-48	4/12/2016 22:24	328.8	0.0	60.6	98.1	335.8	0.0	60.4	98.3	293.7	0.0	60.1	96.6	0
36-48	4/12/2016 22:25	328.8	0.0	60.4	98.1	335.8	0.0	60.3	98.3	293.7	0.0	60.1	96.6	0
36-48	4/12/2016 22:26	328.8	0.0	60.3	98.0	335.8	0.0	60.2	98.3	293.7	0.0	60.1	96.6	0
36-48	4/12/2016 22:27	328.8	0.0	60.2	98.0	335.8	0.0	60.1	98.3	293.7	0.0	60.0	96.6	0
36-48	4/12/2016 22:28	328.8	0.0	60.1	97.8	335.8	0.0	60.0	98.2	293.7	0.0	60.0	96.5	0
36-48	4/12/2016 22:29	328.8	0.0	60.0	97.8	335.8	0.0	60.0	98.2	293.7	0.0	60.0	96.5	0
36-48	4/12/2016 22:30	328.8	0.0	60.0	97.9	335.8	0.0	59.9	98.2	293.7	0.0	59.9	96.4	0
36-48	4/12/2016 22:31	328.8	0.0	59.9	97.9	335.8	0.0	59.9	98.3	293.7	0.0	59.9	96.4	0
36-48	4/12/2016 22:32	328.8	0.0	59.9	97.9	335.8	0.0	59.9	98.3	293.7	0.0	59.8	96.4	0
36-48	4/12/2016 22:33	328.8	0.0	59.9	97.8	335.8	0.0	59.9	98.3	293.7	0.0	59.8	96.4	0
36-48	4/12/2016 22:34	328.8	0.0	59.9	97.8	335.8	0.0	59.8	98.2	293.7	0.0	59.7	96.3	0
36-48	4/12/2016 22:35	328.8	0.0	59.9	97.9	335.8	0.0	59.9	98.2	293.7	0.0	59.7	96.4	0
36-48	4/12/2016 22:36	328.8	0.0	59.9	97.9	335.8	0.0	59.9	98.1	293.7	0.0	59.7	96.4	0
36-48	4/12/2016 22:37	328.8	0.0	59.9	97.8	335.8	0.0	59.9	98.2	293.7	0.0	59.7	96.4	0
36-48	4/12/2016 22:38	328.8	0.0	59.9	97.8	335.8	0.0	59.8	98.2	293.7	0.0	59.7	96.2	0
36-48	4/12/2016 22:39	328.8	0.0	59.9	97.8	335.8	0.0	59.8	98.2	293.7	0.0	59.6	96.1	0
36-48	4/12/2016 22:40	328.8	0.0	59.8	97.9	335.8	0.0	59.7	98.1	293.7	0.0	59.5	96.2	0
36-48	4/12/2016 22:41	328.8	0.0	59.7	97.8	335.8	0.0	59.6	98.2	293.7	0.0	59.5	96.2	0
36-48	4/12/2016 22:42	328.8	0.0	59.7	97.8	335.8	0.0	59.5	98.2	293.7	0.0	59.4	96.2	0
36-48	4/12/2016 22:43	328.8	0.0	59.7	98.0	335.8	0.0	59.5	98.2	293.7	0.0	59.3	96.2	0
36-48	4/12/2016 22:44	328.8	0.0	59.6	98.1	335.8	0.0	59.5	98.2	293.7	0.0	59.2	96.2	0
36-48	4/12/2016 22:45	328.8	0.0	59.6	98.0	335.8	0.0	59.4	98.1	293.7	0.0	59.2	96.1	0
36-48	4/12/2016 22:46	328.8	0.0	59.6	98.0	335.8	0.0	59.3	98.0	293.7	0.0	59.1	96.0	0
36-48	4/12/2016 22:47	328.8	0.0	59.6	98.1	335.8	0.0	59.4	98.0	293.7	0.0	59.0	96.3	0
36-48	4/12/2016 22:48	328.8	0.0	59.7	98.6	335.8	0.0	59.5	98.2	293.7	0.0	59.0	96.3	0
36-48	4/12/2016 22:49	328.8	0.0	59.8	98.9	335.8	0.0	59.5	98.3	293.7	0.0	58.8	96.3	0
36-48	4/12/2016 22:50	328.8	0.0	59.8	98.9	335.8	0.0	59.5	98.2	293.7	0.0	58.7	96.3	0
36-48	4/12/2016 22:51	328.8	0.0	59.8	98.9	335.8	0.0	59.4	98.2	293.7	0.0	58.5	96.1	0
36-48	4/12/2016 22:52	328.8	0.0	59.7	98.7	335.8	0.0	59.4	98.3	293.7	0.0	58.3	96.3	0
36-48	4/12/2016 22:53	328.8	0.0	59.7	98.7	335.8	0.0	59.4	98.4	293.7	0.0	58.3	96.5	0
36-48	4/12/2016 22:54	328.8	0.0	59.7	98.6	335.8	0.0	59.5	98.5	293.7	0.0	58.4	96.8	0
36-48	4/12/2016 22:55	328.8	0.0	59.7	98.6	335.8	0.0	59.6	98.6	293.7	0.0	58.5	96.7	0
36-48	4/12/2016 22:56	328.8	0.0	59.6	98.5	335.8	0.0	59.6	98.7	293.7	0.0	58.5	96.8	0
36-48	4/12/2016 22:57	328.8	0.0	59.6	98.4	335.8	0.0	59.6	98.9	293.7	0.0	58.5	96.7	0
36-48	4/12/2016 22:58	328.8	0.0	59.6	98.4	335.8	0.0	59.6	99.0	293.7	0.0	58.5	96.7	0
36-48	4/12/2016 22:59	328.8	0.0	59.6	98.4	335.8	0.0	59.6	99.1	293.7	0.0	58.4	96.8	0
36-48	4/12/2016 23:00	328.8	0.0	59.6	98.4	335.8	0.0	59.6	99.1	293.7	0.0	58.4	96.9	0
36-48	4/12/2016 23:01	328.8	0.0	59.6	98.4	335.8	0.0	59.7	99.3	293.7	0.0	58.4	97.0	0
36-48	4/12/2016 23:02	328.8	0.0	59.7	98.5	335.8	0.0	59.7	99.2	293.7	0.0	58.4	97.0	0
36-48	4/12/2016 23:03	328.8	0.0	59.6	98.5	335.8	0.0	59.7	99.3	293.7	0.0	58.4	97.0	0
36-48	4/12/2016 23:04	328.8	0.0	59.7	98.5	335.8	0.0	59.7	99.3	293.7	0.0	58.5	97.1	0
36-48	4/12/2016 23:05	328.8	0.0	59.7	98.6	335.8	0.0	59.7	99.3	293.7	0.0	58.5	97.2	0
36-48	4/12/2016 23:06	328.8	0.0	59.7	98.7	335.8	0.0	59.7	99.3	293.7	0.0	58.6	97.1	0
36-48	4/12/2016 23:07	328.8	0.0	59.7	98.9	335.8	0.0	59.6	99.4	293.7	0.0	58.5	97.0	0
36-48	4/12/2016 23:08	328.8	0.0	59.7	98.9	335.8	0.0	59.5	99.2	293.7	0.0	58.4	97.0	0
36-48	4/12/2016 23:09	328.8	0.0	59.6	99.0	335.8	0.7	59.5	99.4	293.7	0.0	58.4	97.0	0
36-48	4/12/2016 23:10	328.8	0.0	59.7	99.2	335.8	0.0	59.5	99.4	293.7	0.0	58.4	97.1	0
36-48	4/12/2016 23:11	328.8	0.0	59.7	99.2	335.8	0.0	59.5	99.3	293.7	0.0	58.4	97.1	0
36-48	4/12/2016 23:12	328.8	0.0	59.6	99.0	335.8	0.0	59.5	99.3	293.7	0.0	58.5	97.2	0
36-48	4/12/2016 23:13	328.8	0.0	59.6	99.0	335.8	0.0	59.4	99.2	293.7	0.0	58.5	97.3	0
36-48	4/12/2016 23:14	328.8	0.0	59.5	98.9	335.8	0.0	59.4	99.2	293.7	0.0	58.5	97.2	0
36-48	4/12/2016 23:15	328.8	0.0	59.4	98.9	335.8	0.0	59.4	99.2	293.7	0.0	58.5	97.3	0
36-48	4/12/2016 23:16	328.8	0.0	59.4	98.9	335.8	0.0	59.3	99.2	293.7	0.0	58.5	97.2	0
36-48	4/12/2016 23:17	328.8	0.0	59.3	98.9	335.8	0.0	59.3	99.2	293.7	0.0	58.5	97.2	0
36-48	4/12/2016 23:18	328.8	0.0	59.2	98.9	335.8	0.0	59.2	99.1	293.7	0.0	58.5	97.1	0
36-48	4/12/2016 23:19	328.8	0.0	59.1	98.8	335.8	0.0	59.1	99.2	293.7	0.0	58.5	97.1	0
36-48	4/12/2016 23:20	328.8	0.0	59.1	98.8	335.8	0.0	59.1	99.2	293.7	0.0	58.5	97.1	0
36-48	4/12/2016 23:21	328.8	0.0	59.0	98.8	335.8	0.0	59.0	99.3	293.7	0.0	58.5	97.1	0
36-48	4/12/2016 23:22	328.8	0.0	58.9	98.7	335.8	0.0	58.8	99.2	293.7	0.0	58.5	97.1	0
36-48	4/12/2016 23:23	328.8	0.0	58.8	98.7	335.8	0.0	58.7	99.2	293.7	0.0	58.3	97.0	0
36-48	4/12/2016 23:24	328.8	0.0	58.7	98.8	335.8	0.0	58.6	99.1	293.7	0.0	58.2	97.0	0
36-48	4/12/2016 23:25	328.8	0.0	58.7	99.1	335.8	0.0	58.5	99.1	293.7	0.0	58.1	97.0	0
36-48	4/12/2016 23:26	328.8	0.0	58.7	99.3	335.8	0.7	58.6	99.3	293.7	0.0	57.8	96.7	0
36-48	4/12/2016 23:27	328.8	0.0	58.8	99.5	335.8	0.7	58.7	99.4	293.7	0.0	57.7	96.9	0
36-48	4/12/2016 23:28	328.8	0.0	58.8	99.5	335.8	0.7	58.8	99.5	293.7	0.0	57.5	96.9	0
36-48	4/12/2016 23:29	328.8	0.0	58.8	99.5	335.8	0.7	58.7	99.5	293.7	0.0	57.4	96.8	0
36-48	4/12/2016 23:30	328.8	0.0	58.7	99.5	335.8	0.7	58.7	99.5	293.7	0.0	57.3	96.9	0
36-48	4/12/2016 23:31	328.8	0.0	58.7	99.6	335.8	0.7	58.6	99.5	293.7	0.0	57.2	96.9	0
36-48	4/12/2016 23:32	328.8	0.0	58.6	99.6	335.8	0.7	58.5	99.5	293.7	0.0	57.2	97.1	0
36-48	4/12/2016 23:33	328.8	0.0	58.5	99.5	335.8	0.7	58.5	99.5	293.7	0.0	57.2	97.0	0
36-48	4/12/2016 23:34	328.8	0.0	58.5	99.6	335.8	0.7	58.5	99.5	293.7	0.0	57.2	97.1	0
36-48	4/12/2016 23:35	328.8	0.0	58.4	99.6	335.8	0.7	58.1	99.2	293.7	0.0	56.9	96.6	0
36-48	4/12/2016 23:36	328.8	0.0	58.4	99.7	335.8	0.7	58.2	99.3	293.7	0.0	56.9	96.9	0
36-48	4/12/2016 23:37	328.8	0.0	58.4	99.7	335.8	0.7	58.3	99.4	293.7	0.0	56.9	97.1	0
36-48	4/12/2016 23:38	328.8	0.0	58.4	99.7	335.8	0.7	58.3	99.5	293.7	0.0	56.9	97.1	0
36-48	4/12/2016 23:39	328.8	0.0	58.4	99.8	335.8	0.0	58.3	99.5	293.7	0.0	56.9	97.2	0
36-48	4/12/2016 23:40	328.8	0.0	58.3	99.8	335.8	0.0	58.2	99.5	293.7	0.0	57.0	97.3	0
36-48	4/12/2016 23:41	328.8	0.0	58.3	99.8	335.8	0.0	58.2	99.6	293.7	0.0	57.1	97.3	0
36-48	4/12/2016 23:42	328.8	0.0	58.3	99.8	335.8	0.0	58.2	99.6	293.7	0.0	57.1	97.3	0
36-48	4/12/2016 23:43	328.8	0.0	58.2	99.8	335.8	0.0	58.1	99.6	293.7	0.0	57.0	97.2	0
36-48	4/12/2016 23:44	328.8	0.0	58.2	99.8	335.8	0.0	58.1	99.6	293.7	0.0	57.0	97.3	0
36-48	4/12/2016 23:45	328.8	0.0	58.1	99.8	335.8	0.0	58.0	99.6	293.7	0.0	57.0	97.4	0
36-48	4/12/2016 23:46	328.8	0.0	58.2	99.8	335.8	0.0	58.0	99.6	293.7	0.0	57.0	97.3	0
36-48	4/12/2016 23:47	328.8	0.0	58.1	99.7	335.8	0.0	57.9	99.5	293.7	0.0	56.9	97.3	0
36-48	4/12/2016 23:48	328.8	0.0	58.0	99.7	335.8	0.0	57.8	99.4	293.7	0.0	56.9	97.2	0
36-48	4/12/2016 23:49	328.8	0.0	57.9	99.6	335.8	0.0	57.8	99.3	293.7	0.0	56.9	97.3	0
36-48	4/12/2016 23:50	328.8	0.0	57.9	99.5	335.8	0.0	57.8	99.5	293.7	0.0	57.0	97.4	0
36-48	4/12/2016 23:51	328.8	0.0	57.9	99.5	335.8	0.0	57.7	99.5	293.7	0.0	57.1	97.4	0
36-48	4/12/2016 23:52	328.8	0.0	57.8	99.4	335.8	0.0	57.6	99.6	293.7	0.0	57.1	97.3	0
36-48	4/12/2016 23:53	328.8	0.0	57.6	99.4	335.8	0.0	57.5	99.6	293.7	0.0	57.0	97.2	0
36-48	4/12/2016 23:54	328.8	0.0	57.5	99.4	335.8	0.0	57.3	99.5	293.7	0.0	56.9	97.1	0
36-48	4/12/2016 23:55	328.8	0.0	57.3	99.3	335.8	0.0	57.1	99.5	293.7	0.0	56.7	97.1	0
36-48	4/12/2016 23:56	328.8	0.0	57.2	99.2	335.8	0.0	57.0	99.5	293.7	0.0	56.6	96.8	0
36-48	4/12/2016 23:57	328.8	0.0	57.1	99.4	335.8	0.0	57.0	99.5	293.7	0.0	56.6	97.0	0
36-48	4/12/2016 23:58	328.8	0.0	57.1	99.6	335.8	0.0	57.0	99.5	293.7	0.0	56.5	97.0	0
36-48	4/12/2016 23:59	328.8	0.0	57.2	99.7	335.8	0.0	57.1	99.6	293.7	0.0	56.4	97.1	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
36-48	4/13/2016 0:00	328.8	0.0	57.2	99.7	335.8	0.0	57.1	99.6	293.7	0.0	56.4	97.2	0
36-48	4/13/2016 0:01	328.8	0.0	57.2	99.7	335.8	0.0	57.1	99.6	293.7	0.0	56.6	97.3	0
36-48	4/13/2016 0:02	328.8	0.0	57.2	99.7	335.8	0.0	57.2	99.6	293.7	0.0	56.7	97.4	0
36-48	4/13/2016 0:03	328.8	0.0	57.3	99.7	335.8	0.0	57.2	99.6	293.7	0.0	56.6	97.3	0
36-48	4/13/2016 0:04	328.8	0.0	57.3	99.6	335.8	0.0	57.3	99.7	293.7	0.0	56.7	97.3	0
36-48	4/13/2016 0:05	328.8	0.0	57.3	99.7	335.8	0.7	57.2	99.8	293.7	0.0	56.7	97.3	0
36-48	4/13/2016 0:06	328.8	0.0	57.3	99.6	335.8	0.0	57.2	99.7	293.7	0.0	56.6	97.2	0
36-48	4/13/2016 0:07	328.8	0.0	57.2	99.6	335.8	0.0	57.1	99.7	293.7	0.0	56.6	97.2	0
36-48	4/13/2016 0:08	328.8	0.0	57.2	99.5	335.8	0.0	57.1	99.8	293.7	0.0	56.6	97.3	0
36-48	4/13/2016 0:09	328.8	0.0	57.2	99.5	335.8	0.0	57.0	99.8	293.7	0.0	56.6	97.2	0
36-48	4/13/2016 0:10	328.8	0.0	57.1	99.5	335.8	0.0	56.9	99.8	293.7	0.0	56.4	97.0	0
36-48	4/13/2016 0:11	328.8	0.0	57.0	99.4	335.8	0.0	56.7	99.8	293.7	0.0	56.2	96.9	0
36-48	4/13/2016 0:12	328.8	0.0	56.8	99.4	335.8	0.0	56.6	99.8	293.7	0.0	55.9	96.7	0
36-48	4/13/2016 0:13	328.8	0.0	56.7	99.4	335.8	0.0	56.6	99.8	293.7	0.0	55.6	96.7	0
36-48	4/13/2016 0:14	328.8	0.0	56.8	99.5	335.8	0.0	56.7	100.0	293.7	0.0	55.5	96.9	0
36-48	4/13/2016 0:15	328.8	0.0	56.9	99.7	335.8	0.0	56.8	100.0	293.7	0.0	55.3	96.6	0
36-48	4/13/2016 0:16	328.8	0.0	57.1	99.7	335.8	0.7	57.0	100.0	293.7	0.0	55.3	97.0	0
36-48	4/13/2016 0:17	328.8	0.0	57.2	99.8	335.8	0.0	57.0	99.9	293.7	0.0	55.3	97.1	0
36-48	4/13/2016 0:18	328.8	0.0	57.2	99.8	335.8	0.0	57.0	100.0	293.7	0.0	55.3	97.2	0
36-48	4/13/2016 0:19	328.8	0.0	57.2	99.8	335.8	0.0	57.1	100.0	293.7	0.0	55.2	97.2	0
36-48	4/13/2016 0:20	328.8	0.0	57.2	99.7	335.8	0.0	57.1	100.0	293.7	0.0	55.3	97.4	0
36-48	4/13/2016 0:21	328.8	0.0	57.2	99.7	335.8	0.0	57.1	100.0	293.7	0.0	55.3	97.4	0
36-48	4/13/2016 0:22	328.8	0.0	57.2	99.7	335.8	0.0	57.2	100.0	293.7	0.0	55.4	97.6	0
36-48	4/13/2016 0:23	328.8	0.0	57.2	99.7	335.8	0.0	57.2	100.0	293.7	0.0	55.6	97.9	0
36-48	4/13/2016 0:24	328.8	0.0	57.2	99.7	335.8	0.0	57.1	100.0	293.7	0.0	55.7	97.9	0
36-48	4/13/2016 0:25	328.8	0.0	57.1	99.7	335.8	0.0	57.2	100.0	293.7	0.0	55.9	97.9	0
36-48	4/13/2016 0:26	328.8	0.0	57.2	99.8	335.8	0.0	57.2	100.0	293.7	0.0	55.8	97.7	0
36-48	4/13/2016 0:27	328.8	0.0	57.2	99.8	335.8	0.0	57.1	100.0	293.7	0.0	55.8	97.7	0
36-48	4/13/2016 0:28	328.8	0.0	57.2	100.0	335.8	0.7	57.1	100.0	293.7	0.0	55.7	97.6	0
36-48	4/13/2016 0:29	328.8	0.0	57.2	99.9	335.8	0.0	57.1	100.0	293.7	0.0	55.7	97.7	0
36-48	4/13/2016 0:30	328.8	0.0	57.1	100.0	335.8	0.7	57.0	100.0	293.7	0.0	55.8	97.7	0
36-48	4/13/2016 0:31	328.8	0.0	57.1	100.0	335.8	0.7	57.0	100.0	293.7	0.0	55.7	97.7	0
36-48	4/13/2016 0:32	328.8	0.0	57.0	100.0	335.8	0.7	57.0	100.0	293.7	0.0	55.6	97.7	0
36-48	4/13/2016 0:33	328.8	0.0	56.9	100.0	335.8	0.7	56.8	99.9	293.7	0.0	55.5	97.5	0
36-48	4/13/2016 0:34	328.8	0.0	56.9	100.0	335.8	0.7	56.8	99.9	293.7	0.0	55.5	97.6	0
36-48	4/13/2016 0:35	328.8	0.0	56.8	100.0	335.8	0.0	56.7	99.9	293.7	0.0	55.5	97.6	0
36-48	4/13/2016 0:36	328.8	0.0	56.7	100.0	335.8	0.0	56.4	99.8	293.7	0.0	55.5	97.5	0
36-48	4/13/2016 0:37	328.8	0.0	56.5	100.0	335.8	0.0	56.1	99.9	293.7	0.0	55.4	97.5	0
36-48	4/13/2016 0:38	328.8	0.0	56.3	100.0	335.8	0.0	56.0	99.8	293.7	0.0	55.3	97.5	0
36-48	4/13/2016 0:39	328.8	0.0	56.3	100.0	335.8	0.0	56.1	100.0	293.7	0.0	55.2	97.5	0
36-48	4/13/2016 0:40	328.8	0.0	56.4	100.0	335.8	0.0	56.2	100.0	293.7	0.0	55.2	97.5	0
36-48	4/13/2016 0:41	328.8	0.0	56.5	100.0	335.8	0.0	56.3	100.0	293.7	0.0	55.2	97.8	0
36-48	4/13/2016 0:42	328.8	0.0	56.5	100.0	335.8	0.0	56.4	100.0	293.7	0.0	55.4	98.0	0
36-48	4/13/2016 0:43	328.8	0.0	56.5	100.0	335.8	0.0	56.5	100.0	293.7	0.0	55.5	98.0	0
36-48	4/13/2016 0:44	328.8	0.0	56.5	100.0	335.8	0.0	56.4	100.0	293.7	0.0	55.6	97.9	0
36-48	4/13/2016 0:45	328.8	0.0	56.4	100.0	335.8	0.0	56.3	100.0	293.7	0.0	55.6	97.9	0
36-48	4/13/2016 0:46	328.8	0.0	56.3	100.0	335.8	0.0	56.3	100.0	293.7	0.0	55.6	97.9	0
36-48	4/13/2016 0:47	328.8	0.0	56.3	100.0	335.8	0.0	56.3	100.0	293.7	0.0	55.6	97.8	0
36-48	4/13/2016 0:48	328.8	0.0	56.3	100.0	335.8	0.0	56.3	100.0	293.7	0.0	55.4	97.8	0
36-48	4/13/2016 0:49	328.8	0.0	56.3	100.0	335.8	0.0	56.3	100.0	293.7	0.0	55.5	97.8	0
36-48	4/13/2016 0:50	328.8	0.0	56.3	100.0	335.8	0.0	56.3	100.0	293.7	0.0	55.5	97.8	0
36-48	4/13/2016 0:51	328.8	0.0	56.3	100.0	335.8	0.0	56.2	100.0	293.7	0.0	55.3	97.6	0
36-48	4/13/2016 0:52	328.8	0.0	56.3	100.0	335.8	0.0	56.1	100.0	293.7	0.0	55.3	97.6	0
36-48	4/13/2016 0:53	328.8	0.0	56.2	100.0	335.8	0.0	56.0	100.0	293.7	0.0	55.2	97.7	0
36-48	4/13/2016 0:54	328.8	0.0	56.2	100.0	335.8	0.0	56.0	100.0	293.7	0.0	55.3	97.8	0
36-48	4/13/2016 0:55	328.8	0.0	56.2	100.0	335.8	0.0	55.9	100.0	293.7	0.0	55.2	97.6	0
36-48	4/13/2016 0:56	328.8	0.0	56.0	100.0	335.8	0.0	55.9	100.0	293.7	0.0	55.1	97.7	0
36-48	4/13/2016 0:57	328.8	0.0	56.2	100.0	335.8	0.7	56.2	100.0	293.7	0.0	55.2	97.8	0
36-48	4/13/2016 0:58	328.8	0.0	56.4	100.0	335.8	0.7	55.9	100.0	293.7	0.0	55.0	97.6	0
36-48	4/13/2016 0:59	328.8	0.0	56.3	100.0	335.8	0.7	55.7	100.0	293.7	0.0	54.9	97.5	0
36-48	4/13/2016 1:00	328.8	0.0	56.3	100.0	335.8	0.7	55.9	100.0	293.7	0.0	55.0	97.8	0
36-48	4/13/2016 1:01	330.2	0.6	56.6	100.0	344.3	1.5	56.1	100.0	295.1	0.0	55.1	97.9	0
36-48	4/13/2016 1:02	344.3	0.6	56.9	100.0	352.7	0.7	56.3	100.0	295.1	0.0	55.2	98.1	0
36-48	4/13/2016 1:03	345.7	0.0	56.8	100.0	352.7	1.5	56.4	100.0	309.2	0.0	55.3	98.0	0
36-48	4/13/2016 1:04	345.7	0.6	57.1	100.0	1.1	1.5	56.9	100.0	338.6	0.0	55.7	98.3	0
36-48	4/13/2016 1:05	6.7	2.3	57.5	100.0	25.0	2.2	57.2	100.0	32.0	0.7	56.1	98.4	0
36-48	4/13/2016 1:06	20.8	2.3	57.9	100.0	29.2	3.0	57.7	100.0	39.0	2.2	56.6	98.5	0
36-48	4/13/2016 1:07	19.4	1.7	58.2	100.0	29.2	2.2	57.8	100.0	40.4	1.5	56.9	98.4	0
36-48	4/13/2016 1:08	18.0	2.3	58.4	99.5	34.8	2.2	57.9	99.5	55.9	0.7	57.2	98.3	0
36-48	4/13/2016 1:09	22.2	1.7	58.4	98.9	22.2	1.5	58.1	99.0	44.6	1.5	57.3	98.2	0
36-48	4/13/2016 1:10	9.5	2.3	58.6	98.7	20.8	2.2	58.4	98.5	36.2	1.5	57.6	98.2	0
36-48	4/13/2016 1:11	16.5	3.4	59.1	98.2	16.5	2.2	58.8	97.7	36.2	1.5	57.9	98.0	0
36-48	4/13/2016 1:12	6.7	1.1	59.2	97.6	13.7	1.5	58.8	97.2	26.4	0.7	58.0	97.5	0
36-48	4/13/2016 1:13	1.1	1.7	59.3	97.1	2.5	1.5	59.0	96.9	8.1	0.7	58.1	97.3	0
36-48	4/13/2016 1:14	9.5	1.7	59.4	96.7	16.5	1.5	59.2	96.4	29.2	0.7	58.2	96.8	0
36-48	4/13/2016 1:15	18.0	2.3	59.5	96.0	23.6	2.2	59.4	96.0	36.2	1.5	58.3	96.6	0
36-48	4/13/2016 1:16	12.3	1.7	59.6	95.8	18.0	1.5	59.4	95.6	29.2	1.5	58.4	96.4	0
36-48	4/13/2016 1:17	3.9	0.6	59.5	95.7	15.1	0.7	59.4	95.5	22.2	0.0	58.4	96.1	0
36-48	4/13/2016 1:18	5.3	0.6	59.5	95.4	20.8	1.5	59.4	95.3	23.6	0.7	58.4	96.0	0
36-48	4/13/2016 1:19	6.7	1.7	59.7	95.3	8.1	0.7	59.6	94.8	6.7	0.7	58.4	95.9	0
36-48	4/13/2016 1:20	2.5	2.8	59.9	94.7	23.6	1.5	59.7	94.5	16.5	0.7	58.5	95.7	0
36-48	4/13/2016 1:21	15.1	0.0	59.8	94.5	26.4	0.7	59.7	94.5	22.2	0.7	58.5	95.7	0
36-48	4/13/2016 1:22	15.1	0.0	59.8	94.5	26.4	0.0	59.6	94.4	22.2	0.0	58.5	95.5	0
36-48	4/13/2016 1:23	15.1	0.0	59.7	94.4	13.7	0.7	59.5	94.2	6.7	0.7	58.5	95.4	0
36-48	4/13/2016 1:24	358.3	0.6	59.6	94.5	356.9	0.7	59.4	94.5	347.1	0.7	58.4	95.5	0
36-48	4/13/2016 1:25	1.1	0.0	59.5	94.5	356.9	0.0	59.3	94.5	347.1	0.0	58.3	95.4	0
36-48	4/13/2016 1:26	1.1	0.0	59.4	94.4	1.1	0.7	59.2	94.5	352.7	0.7	58.3	95.4	0
36-48	4/13/2016 1:27	1.1	0.0	59.2	94.6	5.3	0.7	59.1	94.7	355.5	0.7	58.2	95.4	0
36-48	4/13/2016 1:28	1.1	1.1	59.2	94.6	10.9	0.7	59.1	94.6	2.5	0.7	58.2	95.3	0
36-48	4/13/2016 1:29	1.1	0.6	59.1	94.6	8.1	0.0	58.9	94.8	3.9	0.0	58.1	95.2	0
36-48	4/13/2016 1:30	1.1	0.6	59.0	94.8	8.1	0.0	58.9	95.1	3.9	0.0	58.0	95.4	0
36-48	4/13/2016 1:31	1.1	0.6	58.9	94.9	8.1	0.7	58.8	95.1	3.9	0.0	57.9	95.3	0
36-48	4/13/2016 1:32	1.1	0.0	58.8	94.9	6.7	0.7	58.6	95.1	3.9	0.0	57.8	95.5	0
36-48	4/13/2016 1:33	1.1	0.0	58.7	94.9	5.3	0.7	58.5	95.3	3.9	0.0	57.6	95.5	0
36-48	4/13/2016 1:34	1.1	0.6	58.7	95.0	10.9	1.5	58.5	95.6	10.9	0.7	57.6	95.6	0
36-48	4/13/2016 1:35	9.5	1.1	58.8	95.0	27.8	1.5	58.6	95.6	32.0	0.7	57.6	95.8	0
36-48	4/13/2016 1:36	25.0	1.1	59.1	94.9	32.0	1.5	58.8	95.2	33.4	0.7	57.7	95.8	0
36-48	4/13/2016 1:37	19.4	1.7	59.2	94.4	22.2	1.5	59.1	94.6	27.8	1.5	57.9	95.7	0
36-48	4/13/2016 1:38	13.7	2.3	59.3	94.0	30.6	2.2	59.1	94.1	32.0	1.5	58.0	95.3	0
36-48	4/13/2016 1:39	44.6	0.6	59.3	93.7	41.8	2.2	59.1	94.1	39.0	1.5	58.0	95.1	0
36-48	4/13/2016 1:40	33.4	2.3	59.3	93.6	30.6	3.0	59.2	94.0	44.6	2.2	58.1	95.1	0
36-48	4/13/2016 1:41	25.0	1.7	59.4	93.6	22.2	1.5	59.2	93.8	33.4	0.7	58.1	95.0	0
36-48	4/13/2016 1:42	13.7	1.1	59.4	93.3	34.8	2.2	59.3	93.7	43.2	1.5	58.1	94.8	0
36-48	4/13/2016 1:43	22.2	2.3	59.5	93.3	16.5	1.5	59.3	93.6	16.5	1.5	58.2	94.8	0
36-48	4/13/2016 1:44	27.8	1.1	59.4	93.3	30.6	1.5	59.2	93.7	32.0	1.5	58.2	94.8	0
36-48	4/13/2016 1:45	13.7	2.3	59.5	93.3	19.4	2.2	59.4	93.6	32.0	1.5	58.2	94.7	0
36-48	4/13/2016 1:46	15.1	1.1	59.5	93.3	12.3	1.5	59.4	93.5	27.8	0.7	58.2	94.7	0
36-48	4/13/2016 1:47	358.3	1.7	59.5	93.2	8.1	1.5	59.3	93.4	16.5	0.7	58.2	94.6	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
36-48	4/13/2016 1:48	13.7	1.7	59.4	93.3	19.4	1.5	59.3	93.5	23.6	1.5	58.2	94.5	0
36-48	4/13/2016 1:49	22.2	2.8	59.4	93.3	26.4	2.2	59.3	93.6	25.0	1.5	58.2	94.5	0
36-48	4/13/2016 1:50	19.4	1.7	59.4	93.3	25.0	2.2	59.3	93.5	37.6	1.5	58.3	94.5	0
36-48	4/13/2016 1:51	18.0	1.7	59.4	93.2	25.0	2.2	59.3	93.6	36.2	1.5	58.3	94.5	0
36-48	4/13/2016 1:52	16.5	2.3	59.4	93.2	23.6	1.5	59.2	93.5	34.8	0.7	58.2	94.2	0
36-48	4/13/2016 1:53	15.1	0.6	59.2	93.1	23.6	1.5	59.1	93.5	34.8	1.5	58.2	94.2	0
36-48	4/13/2016 1:54	16.5	0.6	59.1	93.2	30.6	1.5	59.1	93.6	40.4	0.7	58.2	94.5	0
36-48	4/13/2016 1:55	27.8	1.1	59.2	93.2	40.4	1.5	59.0	93.6	48.8	1.5	58.1	94.2	0
36-48	4/13/2016 1:56	33.4	1.1	59.1	93.2	29.2	1.5	59.1	93.6	43.2	1.5	58.1	94.5	0
36-48	4/13/2016 1:57	19.4	0.6	59.1	93.3	20.8	1.5	58.9	93.6	29.2	1.5	58.1	94.2	0
36-48	4/13/2016 1:58	13.7	1.1	58.9	93.3	27.8	1.5	58.8	93.8	32.0	1.5	58.0	94.4	0
36-48	4/13/2016 1:59	19.4	1.1	58.9	93.3	34.8	2.2	58.8	93.7	36.2	1.5	58.0	94.3	0
36-48	4/13/2016 2:00	26.4	1.1	59.1	93.3	32.0	1.5	58.9	93.5	40.4	0.7	58.0	94.1	0
36-48	4/13/2016 2:01	16.5	1.7	59.2	93.0	23.6	1.5	59.1	93.3	46.0	1.5	58.1	94.2	0
36-48	4/13/2016 2:02	22.2	0.6	59.1	92.8	36.2	1.5	59.0	93.2	43.2	0.7	58.0	94.1	0
36-48	4/13/2016 2:03	29.2	0.6	59.0	92.9	53.1	1.5	58.8	93.3	54.5	0.7	57.9	94.0	0
36-48	4/13/2016 2:04	34.8	1.7	58.9	93.0	29.2	2.2	58.8	93.5	39.0	1.5	57.9	94.1	0
36-48	4/13/2016 2:05	12.3	1.1	59.0	93.0	29.2	1.5	58.8	93.4	36.2	0.7	57.9	94.1	0
36-48	4/13/2016 2:06	19.4	0.6	58.9	93.0	40.4	2.2	58.8	93.3	44.6	1.5	57.9	94.1	0
36-48	4/13/2016 2:07	33.4	1.7	59.1	93.0	40.4	1.5	59.0	93.0	51.6	1.5	58.0	93.9	0
36-48	4/13/2016 2:08	27.8	0.0	59.0	92.8	40.4	0.7	58.8	93.0	51.6	0.0	57.9	93.9	0
36-48	4/13/2016 2:09	27.8	1.1	59.0	92.8	34.8	1.5	58.8	93.1	51.6	1.5	57.9	93.8	0
36-48	4/13/2016 2:10	27.8	0.6	58.9	92.8	33.4	0.7	58.7	93.3	51.6	0.7	57.9	93.8	0
36-48	4/13/2016 2:11	18.0	0.6	58.8	92.7	8.1	0.7	58.7	93.3	44.6	0.7	57.8	93.9	0
36-48	4/13/2016 2:12	359.7	0.0	58.8	93.0	5.3	1.5	58.6	93.3	43.2	0.7	57.7	93.9	0
36-48	4/13/2016 2:13	13.7	0.0	58.8	92.7	15.1	0.7	58.7	93.2	43.2	0.7	57.7	93.8	0
36-48	4/13/2016 2:14	12.3	0.6	58.8	92.5	15.1	0.7	58.5	93.1	43.2	0.0	57.6	93.8	0
36-48	4/13/2016 2:15	16.5	0.6	58.6	92.7	40.4	2.2	58.5	93.4	44.6	1.5	57.5	93.9	0
36-48	4/13/2016 2:16	27.8	0.6	58.8	92.7	44.6	1.5	58.6	93.1	46.0	0.7	57.6	93.9	0
36-48	4/13/2016 2:17	25.0	1.1	58.8	92.5	32.0	1.5	58.7	92.9	44.6	0.7	57.7	93.8	0
36-48	4/13/2016 2:18	3.9	1.1	58.8	92.4	27.8	1.5	58.7	92.8	50.2	0.7	57.7	93.6	0
36-48	4/13/2016 2:19	16.5	0.6	58.7	92.4	37.6	0.7	58.5	92.8	51.6	0.7	57.6	93.6	0
36-48	4/13/2016 2:20	16.5	0.0	58.6	92.5	37.6	0.7	58.4	93.0	51.6	0.0	57.5	93.6	0
36-48	4/13/2016 2:21	16.5	0.0	58.6	92.7	37.6	0.7	58.4	93.2	51.6	0.0	57.5	93.8	0
36-48	4/13/2016 2:22	26.4	0.0	58.5	92.3	46.0	0.7	58.3	93.0	55.9	0.7	57.5	93.6	0
36-48	4/13/2016 2:23	47.4	0.0	58.4	92.6	50.2	0.0	58.2	92.9	57.3	0.0	57.4	93.6	0
36-48	4/13/2016 2:24	47.4	0.0	58.3	92.7	50.2	0.7	58.0	93.0	57.3	0.0	57.2	93.5	0
36-48	4/13/2016 2:25	46.0	0.6	58.4	92.7	50.2	1.5	58.2	92.9	57.3	0.7	57.2	93.6	0
36-48	4/13/2016 2:26	40.4	0.6	58.4	92.4	43.2	0.7	58.1	92.9	57.3	0.7	57.1	93.5	0
36-48	4/13/2016 2:27	33.4	0.0	58.3	92.4	41.8	0.7	58.0	92.9	57.3	0.7	57.0	93.7	0
36-48	4/13/2016 2:28	37.6	1.1	58.3	92.4	46.0	2.2	58.2	92.9	72.7	1.5	57.2	93.7	0
36-48	4/13/2016 2:29	43.2	0.0	58.3	92.3	43.2	0.7	58.1	92.6	78.3	0.7	57.1	93.5	0
36-48	4/13/2016 2:30	43.2	0.0	58.3	92.2	46.0	1.5	58.1	92.8	78.3	0.7	57.1	93.6	0
36-48	4/13/2016 2:31	43.2	0.0	58.4	92.1	47.4	0.0	58.1	92.6	78.3	0.0	57.1	93.6	0
36-48	4/13/2016 2:32	43.2	0.0	58.3	91.8	47.4	0.7	58.1	92.4	78.3	0.7	57.0	93.4	0
36-48	4/13/2016 2:33	43.2	0.0	58.2	91.9	47.4	0.0	57.9	92.4	78.3	0.0	56.9	93.5	0
36-48	4/13/2016 2:34	43.2	0.0	58.1	91.8	47.4	0.0	57.9	92.4	78.3	0.0	56.9	93.5	0
36-48	4/13/2016 2:35	43.2	0.0	58.0	91.6	47.4	0.7	57.7	92.7	78.3	0.7	56.7	93.4	0
36-48	4/13/2016 2:36	43.2	0.0	58.2	91.5	47.4	0.7	57.8	92.2	76.9	0.7	56.6	93.2	0
36-48	4/13/2016 2:37	37.6	0.0	58.1	91.5	32.0	1.5	57.9	92.3	62.9	1.5	56.7	93.6	0
36-48	4/13/2016 2:38	8.1	0.6	58.2	91.5	22.2	0.7	57.8	92.3	54.5	0.7	56.7	93.3	0
36-48	4/13/2016 2:39	8.1	0.0	58.1	91.7	22.2	0.7	57.8	92.3	54.5	0.7	56.6	93.5	0
36-48	4/13/2016 2:40	9.5	0.6	58.1	91.5	32.0	2.2	57.9	92.1	53.1	1.5	56.7	93.5	0
36-48	4/13/2016 2:41	20.8	1.7	58.2	91.1	30.6	1.5	58.0	91.7	37.6	1.5	56.8	93.2	0
36-48	4/13/2016 2:42	27.8	0.6	58.3	90.8	30.6	2.2	58.1	91.3	37.6	0.7	56.8	93.0	0
36-48	4/13/2016 2:43	27.8	0.0	58.2	90.7	29.2	0.7	57.9	91.4	37.6	0.7	56.7	92.9	0
36-48	4/13/2016 2:44	27.8	0.0	58.0	90.9	29.2	1.5	57.8	91.5	37.6	0.7	56.6	93.0	0
36-48	4/13/2016 2:45	27.8	1.1	58.1	90.8	27.8	1.5	57.9	91.4	36.2	1.5	56.8	92.8	0
36-48	4/13/2016 2:46	20.8	0.6	58.2	90.6	29.2	1.5	58.0	90.9	39.0	0.7	56.8	92.5	0
36-48	4/13/2016 2:47	20.8	0.0	58.1	90.2	30.6	1.5	57.9	91.0	40.4	0.7	56.8	92.4	0
36-48	4/13/2016 2:48	20.8	0.6	58.3	90.0	30.6	1.5	58.2	90.5	40.4	1.5	56.9	92.2	0
36-48	4/13/2016 2:49	18.0	1.7	58.5	89.5	26.4	1.5	58.3	90.0	40.4	1.5	57.0	92.0	0
36-48	4/13/2016 2:50	30.6	1.1	58.4	89.4	30.6	1.5	58.2	90.1	30.6	0.7	56.9	91.9	0
36-48	4/13/2016 2:51	41.8	0.0	58.3	89.4	34.8	2.2	58.2	89.5	34.8	1.5	57.0	91.5	0
36-48	4/13/2016 2:52	30.6	2.8	58.7	88.5	34.8	3.0	58.6	88.6	39.0	2.2	57.3	90.8	0
36-48	4/13/2016 2:53	26.4	1.7	58.8	88.0	34.8	2.2	58.5	88.5	40.4	1.5	57.3	90.6	0
36-48	4/13/2016 2:54	16.5	1.7	58.8	87.7	26.4	2.2	58.5	88.4	39.0	1.5	57.3	90.5	0
36-48	4/13/2016 2:55	34.8	1.7	58.7	87.8	36.2	2.2	58.3	89.2	48.8	1.5	57.3	90.7	0
36-48	4/13/2016 2:56	33.4	0.6	58.3	88.6	39.0	2.2	58.1	89.2	48.8	1.5	57.2	90.8	0
36-48	4/13/2016 2:57	15.1	1.1	58.4	88.5	23.6	1.5	58.1	89.1	44.6	0.7	57.1	90.7	0
36-48	4/13/2016 2:58	349.9	0.0	58.3	88.2	34.8	1.5	58.0	89.1	51.6	1.5	57.1	90.5	0
36-48	4/13/2016 2:59	37.6	1.1	58.2	88.4	48.8	3.0	58.0	88.7	51.6	2.2	57.0	90.5	0
36-48	4/13/2016 3:00	30.6	2.3	58.4	87.8	39.0	2.2	58.2	88.4	48.8	2.2	57.2	90.1	0
36-48	4/13/2016 3:01	32.0	1.7	58.5	87.4	32.0	2.2	58.3	87.9	40.4	1.5	57.2	89.8	0
36-48	4/13/2016 3:02	25.0	0.6	58.5	86.9	23.6	1.5	58.2	87.6	16.5	0.7	57.2	89.5	0
36-48	4/13/2016 3:03	1.1	0.0	58.5	87.3	15.1	0.7	58.2	87.6	1.1	0.7	57.2	89.4	0
36-48	4/13/2016 3:04	12.3	1.1	58.4	87.1	27.8	2.2	58.3	87.3	36.2	1.5	57.3	89.2	0
36-48	4/13/2016 3:05	18.0	0.0	58.4	87.2	40.4	0.7	58.2	87.9	36.2	0.0	57.3	89.4	0
36-48	4/13/2016 3:06	19.4	0.0	58.2	87.4	40.4	0.0	58.0	87.9	36.2	0.0	57.2	89.3	0
36-48	4/13/2016 3:07	19.4	0.0	58.0	87.5	40.4	0.7	57.9	88.0	36.2	0.0	57.1	89.3	0
36-48	4/13/2016 3:08	19.4	0.0	58.0	86.8	40.4	1.5	57.7	87.2	36.2	0.7	57.0	88.7	0
36-48	4/13/2016 3:09	25.0	0.0	58.0	86.7	41.8	0.7	57.7	87.4	36.2	0.0	56.9	88.8	0
36-48	4/13/2016 3:10	27.8	0.0	57.9	86.2	41.8	0.7	57.7	87.1	39.0	0.7	56.8	88.7	0
36-48	4/13/2016 3:11	27.8	0.0	57.9	86.6	41.8	0.0	57.5	87.6	39.0	0.0	56.7	88.8	0
36-48	4/13/2016 3:12	27.8	0.0	57.7	86.9	41.8	0.0	57.3	87.8	39.0	0.0	56.6	89.0	0
36-48	4/13/2016 3:13	27.8	0.0	57.6	86.9	41.8	0.0	57.3	87.8	39.0	0.0	56.6	89.0	0
36-48	4/13/2016 3:14	27.8	0.0	57.5	86.8	41.8	0.7	57.2	87.8	39.0	0.0	56.5	88.8	0
36-48	4/13/2016 3:15	29.2	0.0	57.3	87.5	46.0	0.7	57.1	87.9	50.2	0.7	56.4	89.1	0
36-48	4/13/2016 3:16	46.0	0.0	57.5	86.8	48.8	0.7	57.3	87.7	58.7	0.7	56.6	88.8	0
36-48	4/13/2016 3:17	46.0	0.0	57.4	86.9	48.8	0.7	57.0	87.9	58.7	0.0	56.4	88.9	0
36-48	4/13/2016 3:18	43.2	0.0	57.3	86.9	46.0	1.5	57.1	87.4	58.7	0.7	56.3	88.5	0
36-48	4/13/2016 3:19	20.8	0.0	57.5	86.7	44.6	1.5	57.1	87.8	58.7	0.7	56.2	88.8	0
36-48	4/13/2016 3:20	22.2	0.0	57.5	86.5	44.6	0.7	57.1	87.8	58.7	0.7	56.0	89.2	0
36-48	4/13/2016 3:21	22.2	0.0	57.5	86.8	44.6	0.0	57.0	88.0	58.7	0.0	55.9	89.5	0
36-48	4/13/2016 3:22	22.2	0.0	57.5	86.7	44.6	0.7	57.1	87.9	58.7	0.7	55.9	89.7	0
36-48	4/13/2016 3:23	22.2	0.0	57.6	86.4	44.6	0.7	57.0	88.1	58.7	0.7	55.9	89.6	0
36-48	4/13/2016 3:24	22.2	0.0	57.5	86.6	44.6	0.7	57.0	88.0	58.7	0.7	55.7	90.0	0
36-48	4/13/2016 3:25	22.2	0.6	57.4	86.8	39.0	1.5	56.8	88.4	55.9	0.7	55.6	90.1	0
36-48	4/13/2016 3:26	22.2	0.0	57.2	87.0	37.6	1.5	56.6	89.3	55.9	0.7	55.5	90.5	0
36-48	4/13/2016 3:27	22.2	0.0	57.1	87.5	37.6	1.5	56.5	89.2	55.9	0.7	55.3	91.0	0
36-48	4/13/2016 3:28	22.2	0.0	57.2	87.0	37.6	0.7	56.7	88.3	55.9	0.7	55.3	90.5	0
36-48	4/13/2016 3:29	22.2	0.0	57.4	86.8	37.6	0.7	56.7	88.4	55.9	0.0	55.3	90.2	0
36-48	4/13/2016 3:30	22.2	0.0	57.2	86.8	47.4	1.5	56.6	88.2	62.9	0.7	55.2	90.5	0
36-48	4/13/2016 3:31	33.4	1.1	57.4	86.3	47.4	1.5	56.8	88.0	76.9	0.7	55.3	90.3	0
36-48	4/13/2016 3:32	23.6	0.0	57.3	86.6	44.6	1.5	56.7	88.6	76.9	0.7	55.3	90.6	0
36-48	4/13/2016 3:33	23.6	0.0	57.0	87.0	44.6	1.5	56.6	87.7	69.9	1.5	55.3	90.3	0
36-48	4/13/2016 3:34	22.2	1.1	57.4	85.9	41.8	1.5	57.2	86.7	58.7	1.5	55.6	89.6	0
36-48	4/13/2016 3:35	22.2	0.6	57.7	85.7	36.2	0.7	57.4	86.3	58.7	0.7	55.7	89.3	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
36-48	4/13/2016 3:36	18.0	1.1	57.9	84.6	36.2	1.5	57.7	85.5	51.6	1.5	55.9	88.6	0
36-48	4/13/2016 3:37	13.7	0.0	57.9	84.6	37.6	0.7	57.5	85.4	51.6	0.0	55.9	88.6	0
36-48	4/13/2016 3:38	13.7	0.0	57.7	84.5	37.6	0.7	57.4	85.8	51.6	0.0	55.9	88.7	0
36-48	4/13/2016 3:39	13.7	0.0	57.5	85.5	37.6	0.7	56.9	87.0	51.6	0.0	55.7	89.4	0
36-48	4/13/2016 3:40	13.7	0.0	57.1	86.0	37.6	0.0	56.6	87.5	51.6	0.0	55.6	89.6	0
36-48	4/13/2016 3:41	13.7	0.0	56.6	87.1	37.6	0.7	56.2	88.3	51.6	0.0	55.4	89.9	0
36-48	4/13/2016 3:42	13.7	0.0	56.4	87.4	37.6	0.7	56.0	88.8	51.6	0.0	55.3	90.1	0
36-48	4/13/2016 3:43	13.7	0.0	56.1	88.8	37.6	0.0	55.7	89.4	51.6	0.0	55.2	90.4	0
36-48	4/13/2016 3:44	13.7	0.0	55.7	89.3	37.6	0.0	55.4	90.9	51.6	0.0	55.1	90.6	0
36-48	4/13/2016 3:45	13.7	0.0	55.3	90.9	37.6	0.0	55.1	91.7	51.6	0.0	55.0	90.9	0
36-48	4/13/2016 3:46	13.7	0.0	55.2	90.9	37.6	0.7	55.0	91.6	51.6	0.0	54.7	91.1	0
36-48	4/13/2016 3:47	13.7	0.0	55.1	92.3	37.6	0.0	54.7	91.9	51.6	0.0	54.5	91.3	0
36-48	4/13/2016 3:48	13.7	0.0	54.8	91.8	37.6	0.0	54.4	92.1	51.6	0.0	54.4	91.8	0
36-48	4/13/2016 3:49	13.7	0.0	54.6	92.5	37.6	0.0	54.3	92.9	51.6	0.0	54.3	92.1	0
36-48	4/13/2016 3:50	13.7	0.0	54.4	92.4	37.6	0.0	54.2	93.0	51.6	0.0	54.3	92.2	0
36-48	4/13/2016 3:51	13.7	0.0	54.3	92.5	37.6	0.0	54.0	93.4	51.6	0.0	54.1	91.8	0
36-48	4/13/2016 3:52	13.7	0.0	54.0	92.6	37.6	0.0	53.8	93.9	51.6	0.0	53.9	91.8	0
36-48	4/13/2016 3:53	13.7	0.0	53.9	92.8	37.6	0.0	53.7	94.9	51.6	0.0	53.6	92.5	0
36-48	4/13/2016 3:54	13.7	0.0	53.8	93.1	37.6	0.0	53.7	95.4	51.6	0.0	53.5	92.8	0
36-48	4/13/2016 3:55	13.7	0.0	53.8	93.3	37.6	0.0	53.8	95.4	51.6	0.0	53.3	93.0	0
36-48	4/13/2016 3:56	13.7	0.0	53.8	93.6	37.6	0.0	53.7	95.7	51.6	0.0	53.2	93.3	0
36-48	4/13/2016 3:57	13.7	0.0	53.8	93.8	37.6	0.0	53.6	95.2	51.6	0.0	53.0	93.4	0
36-48	4/13/2016 3:58	13.7	0.0	53.7	94.7	37.6	0.7	53.5	95.8	51.6	0.0	52.8	93.4	0
36-48	4/13/2016 3:59	13.7	0.0	53.9	95.3	37.6	0.7	53.6	96.4	51.6	0.0	52.7	93.8	0
36-48	4/13/2016 4:00	13.7	0.0	54.0	95.6	37.6	0.7	53.7	96.7	51.6	0.0	52.6	94.1	0
36-48	4/13/2016 4:01	13.7	0.0	54.0	95.7	37.6	0.7	53.9	96.7	51.6	0.0	52.8	94.8	0
36-48	4/13/2016 4:02	13.7	0.0	54.4	94.1	37.6	0.7	54.2	95.0	51.6	0.0	52.9	94.6	0
36-48	4/13/2016 4:03	13.7	0.0	54.7	93.1	37.6	0.7	54.5	94.3	51.6	0.0	53.0	94.7	0
36-48	4/13/2016 4:04	13.7	0.0	54.9	92.7	37.6	0.0	54.4	94.0	51.6	0.0	52.9	94.4	0
36-48	4/13/2016 4:05	13.7	0.0	54.8	92.6	37.6	0.7	54.4	93.6	51.6	0.0	52.9	94.5	0
36-48	4/13/2016 4:06	13.7	0.0	55.0	92.2	37.6	0.0	54.4	93.5	51.6	0.0	52.9	94.4	0
36-48	4/13/2016 4:07	13.7	0.0	54.9	92.0	39.0	0.7	54.6	93.2	51.6	0.0	52.9	94.8	0
36-48	4/13/2016 4:08	20.8	0.6	55.6	90.3	34.8	0.7	55.2	91.2	57.3	0.7	53.2	94.0	0
36-48	4/13/2016 4:09	26.4	0.0	55.8	89.5	36.2	0.7	55.5	89.5	55.9	0.7	53.4	93.1	0
36-48	4/13/2016 4:10	27.8	0.6	56.1	88.3	39.0	0.7	55.7	89.4	57.3	0.7	53.6	92.6	0
36-48	4/13/2016 4:11	25.0	0.0	56.2	88.0	39.0	0.0	55.6	89.6	57.3	0.0	53.6	92.7	0
36-48	4/13/2016 4:12	25.0	0.0	56.0	88.3	39.0	0.0	55.4	89.9	57.3	0.0	53.6	92.8	0
36-48	4/13/2016 4:13	25.0	0.0	55.7	88.4	39.0	0.0	55.2	90.0	57.3	0.0	53.6	92.8	0
36-48	4/13/2016 4:14	25.0	0.0	55.6	88.5	39.0	0.0	55.1	90.0	57.3	0.0	53.5	92.7	0
36-48	4/13/2016 4:15	25.0	0.0	55.4	88.5	39.0	0.0	54.9	90.0	57.3	0.0	53.5	92.6	0
36-48	4/13/2016 4:16	25.0	0.0	55.1	88.7	39.0	0.0	54.6	90.2	57.3	0.0	53.4	92.6	0
36-48	4/13/2016 4:17	25.0	0.0	54.9	89.1	39.0	0.0	54.3	90.6	57.3	0.0	53.3	92.6	0
36-48	4/13/2016 4:18	25.0	0.0	54.6	89.4	39.0	0.0	54.0	91.8	57.3	0.0	53.2	92.8	0
36-48	4/13/2016 4:19	25.0	0.0	54.3	90.7	39.0	0.0	53.6	92.3	57.3	0.0	53.1	92.8	0
36-48	4/13/2016 4:20	25.0	0.0	53.9	91.1	39.0	0.0	53.4	92.5	57.3	0.0	52.9	93.0	0
36-48	4/13/2016 4:21	25.0	0.0	53.6	91.7	39.0	0.0	53.2	93.8	57.3	0.0	52.9	93.2	0
36-48	4/13/2016 4:22	25.0	0.0	53.5	92.2	39.0	0.0	53.1	94.1	57.3	0.0	52.9	93.2	0
36-48	4/13/2016 4:23	25.0	0.0	53.3	92.7	39.0	0.0	53.0	94.0	57.3	0.0	52.8	93.5	0
36-48	4/13/2016 4:24	25.0	0.0	53.2	93.0	39.0	0.0	52.9	94.2	57.3	0.0	52.7	93.1	0
36-48	4/13/2016 4:25	25.0	0.0	53.0	93.5	39.0	0.0	52.7	94.5	57.3	0.0	52.5	93.3	0
36-48	4/13/2016 4:26	25.0	0.0	52.9	93.7	39.0	0.0	52.6	95.5	57.3	0.0	52.2	93.1	0
36-48	4/13/2016 4:27	25.0	0.0	52.8	93.8	39.0	0.0	52.6	96.0	57.3	0.0	52.0	93.7	0
36-48	4/13/2016 4:28	25.0	0.0	52.8	94.2	39.0	0.0	52.6	96.2	57.3	0.0	51.9	94.3	0
36-48	4/13/2016 4:29	25.0	0.0	52.7	94.4	39.0	0.0	52.6	96.6	57.3	0.0	51.9	94.6	0
36-48	4/13/2016 4:30	25.0	0.0	52.8	95.6	39.0	0.0	52.7	96.9	57.3	0.0	51.9	94.9	0
36-48	4/13/2016 4:31	25.0	0.0	52.9	96.4	39.0	0.0	52.6	96.9	57.3	0.0	51.9	94.9	0
36-48	4/13/2016 4:32	25.0	0.0	52.9	96.6	39.0	0.7	52.7	96.8	57.3	0.7	51.8	95.1	0
36-48	4/13/2016 4:33	25.0	0.0	52.9	97.0	39.0	0.7	52.7	96.7	57.3	0.7	51.9	95.4	0
36-48	4/13/2016 4:34	25.0	0.0	53.0	96.9	39.0	0.7	52.7	96.9	57.3	0.7	52.0	95.5	0
36-48	4/13/2016 4:35	25.0	0.0	53.0	97.1	39.0	0.7	52.8	97.0	57.3	0.7	51.9	95.4	0
36-48	4/13/2016 4:36	25.0	0.0	53.1	97.1	39.0	1.5	52.8	97.2	57.3	0.7	51.8	95.4	0
36-48	4/13/2016 4:37	25.0	0.0	53.0	96.6	39.0	1.5	52.6	97.0	57.3	0.7	51.7	95.3	0
36-48	4/13/2016 4:38	25.0	0.0	53.0	96.4	39.0	1.5	52.5	97.0	57.3	0.7	51.5	95.3	0
36-48	4/13/2016 4:39	25.0	0.0	53.1	95.3	39.0	0.7	52.7	97.0	57.3	0.7	51.5	95.5	0
36-48	4/13/2016 4:40	25.0	0.0	53.3	95.2	39.0	0.7	52.7	96.7	57.3	0.0	51.5	95.5	0
36-48	4/13/2016 4:41	25.0	0.0	53.3	95.5	39.0	0.7	52.7	97.1	57.3	0.0	51.4	95.6	0
36-48	4/13/2016 4:42	25.0	0.0	53.3	95.8	39.0	0.7	52.6	96.9	57.3	0.7	51.4	95.8	0
36-48	4/13/2016 4:43	25.0	0.0	53.2	96.1	39.0	1.5	52.6	97.2	57.3	0.7	51.3	95.7	0
36-48	4/13/2016 4:44	25.0	0.0	53.1	96.4	39.0	1.5	52.6	97.7	57.3	0.7	51.3	96.1	0
36-48	4/13/2016 4:45	25.0	0.0	53.1	96.7	39.0	0.7	52.6	97.6	57.3	0.7	51.4	96.3	0
36-48	4/13/2016 4:46	25.0	0.0	53.2	95.7	39.0	0.7	52.8	97.2	57.3	0.0	51.5	96.4	0
36-48	4/13/2016 4:47	25.0	0.0	53.3	95.5	39.0	0.7	52.7	97.0	57.3	0.0	51.5	96.2	0
36-48	4/13/2016 4:48	25.0	0.0	53.1	95.7	39.0	0.7	52.6	96.9	57.3	0.0	51.4	96.1	0
36-48	4/13/2016 4:49	25.0	0.0	53.0	96.0	39.0	0.7	52.6	97.1	57.3	0.7	51.5	96.3	0
36-48	4/13/2016 4:50	25.0	0.0	52.9	96.1	39.0	0.7	52.6	97.2	57.3	0.7	51.5	96.3	0
36-48	4/13/2016 4:51	25.0	0.0	52.9	96.2	39.0	0.7	52.6	97.0	57.3	0.0	51.5	96.3	0
36-48	4/13/2016 4:52	25.0	0.0	53.2	94.7	39.0	0.7	52.7	96.1	57.3	0.7	51.5	96.1	0
36-48	4/13/2016 4:53	25.0	0.0	53.2	95.4	39.0	0.7	52.7	96.5	57.3	0.0	51.5	96.0	0
36-48	4/13/2016 4:54	25.0	0.0	53.1	95.6	39.0	0.0	52.7	97.1	57.3	0.0	51.5	96.0	0
36-48	4/13/2016 4:55	25.0	0.0	52.9	95.5	39.0	0.0	52.5	96.6	57.3	0.0	51.4	95.7	0
36-48	4/13/2016 4:56	25.0	0.0	52.7	95.3	39.0	0.0	52.4	96.7	57.3	0.0	51.3	95.9	0
36-48	4/13/2016 4:57	25.0	0.0	52.6	95.3	39.0	0.0	52.2	96.9	57.3	0.0	51.2	95.9	0
36-48	4/13/2016 4:58	25.0	0.0	52.5	95.5	39.0	0.0	52.2	96.9	57.3	0.0	51.2	95.9	0
36-48	4/13/2016 4:59	25.0	0.0	52.4	95.6	39.0	0.0	52.2	97.2	57.3	0.0	51.2	96.2	0
36-48	4/13/2016 5:00	25.0	0.0	52.3	95.9	39.0	0.0	52.2	97.3	57.3	0.0	51.4	96.6	0
36-48	4/13/2016 5:01	25.0	0.0	52.3	96.6	39.0	0.0	52.2	97.4	57.3	0.0	51.5	96.6	0
36-48	4/13/2016 5:02	25.0	0.0	52.2	97.1	39.0	0.0	52.2	97.4	57.3	0.0	51.6	96.7	0
36-48	4/13/2016 5:03	25.0	0.0	52.2	97.0	39.0	0.7	52.2	97.7	57.3	0.7	51.6	96.7	0
36-48	4/13/2016 5:04	25.0	0.0	52.2	96.9	39.0	0.7	52.1	97.6	57.3	0.0	51.5	96.6	0
36-48	4/13/2016 5:05	25.0	0.0	52.2	96.8	39.0	0.7	51.9	97.6	57.3	0.0	51.3	96.3	0
36-48	4/13/2016 5:06	26.4	0.0	52.1	96.9	39.0	0.7	51.6	97.7	57.3	0.0	51.1	96.2	0
36-48	4/13/2016 5:07	26.4	0.0	51.9	97.0	39.0	0.7	51.5	97.6	57.3	0.0	51.0	96.2	0
36-48	4/13/2016 5:08	26.4	0.0	51.9	97.0	39.0	0.7	51.4	97.7	57.3	0.0	50.9	96.2	0
36-48	4/13/2016 5:09	26.4	0.0	51.9	98.0	39.0	0.0	51.5	97.6	57.3	0.0	50.8	96.2	0
36-48	4/13/2016 5:10	26.4	0.0	51.9	98.1	39.0	0.0	51.5	98.0	57.3	0.0	50.8	96.4	0
36-48	4/13/2016 5:11	26.4	0.0	51.9	98.1	39.0	0.0	51.5	98.2	57.3	0.0	50.6	96.0	0
36-48	4/13/2016 5:12	26.4	0.0	51.9	97.9	39.0	0.0	51.3	98.2	57.3	0.0	50.5	96.0	0
36-48	4/13/2016 5:13	26.4	0.0	51.7	97.6	39.0	0.7	51.2	98.3	57.3	0.0	50.4	96.3	0
36-48	4/13/2016 5:14	26.4	0.0	51.6	97.7	39.0	0.7	51.2	98.3	57.3	0.0	50.3	96.6	0
36-48	4/13/2016 5:15	26.4	0.0	51.5	98.2	39.0	0.7	51.2	98.4	57.3	0.0	50.3	96.7	0
36-48	4/13/2016 5:16	26.4	0.0	51.6	98.5	39.0	0.7	51.2	98.4	57.3	0.0	50.3	96.8	0
36-48	4/13/2016 5:17	26.4	0.0	51.6	98.7	39.0	0.0	51.2	98.4	57.3	0.0	50.4	97.2	0
36-48	4/13/2016 5:18	26.4	0.0	51.5	98.6	39.0	0.0	51.2	98.4	57.3	0.0	50.4	97.1	0
36-48	4/13/2016 5:19	26.4	0.0	51.5	98.6	39.0	0.0	51.2	98.2	57.3	0.0	50.4	97.2	0
36-48	4/13/2016 5:20	26.4	0.0	51.5	98.8	39.0	0.0	51.4	98.6	57.3	0.0	50.4	97.1	0
36-48	4/13/2016 5:21	26.4	0.0	51.5	98.9	39.0	0.0	51.5	98.7	57.3	0.0	50.4	97.1	0
36-48	4/13/2016 5:22	26.4	0.0	51.5	98.7	39.0	0.0	51.5	98.7	57.3	0.0	50.4	97.1	0
36-48	4/13/2016 5:23	26.4	0.0	51.5	98.8	39.0	0.0	51.5	98.7	57.3	0.0	50.4	97.1	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
36-48	4/13/2016 5:24	26.4	0.0	51.5	98.6	39.0	0.0	51.4	98.7	57.3	0.0	50.5	97.3	0
36-48	4/13/2016 5:25	26.4	0.0	51.5	98.4	39.0	0.7	51.5	99.0	57.3	0.0	50.4	96.9	0
36-48	4/13/2016 5:26	26.4	0.0	51.5	98.6	39.0	1.5	51.5	99.1	57.3	0.0	50.1	96.6	0
36-48	4/13/2016 5:27	26.4	0.0	51.5	98.8	39.0	0.7	51.5	99.4	57.3	0.0	50.0	96.8	0
36-48	4/13/2016 5:28	26.4	0.0	51.6	99.1	39.0	0.7	51.6	99.5	57.3	0.0	50.0	97.1	0
36-48	4/13/2016 5:29	26.4	0.0	51.7	99.0	39.0	0.7	51.7	99.6	57.3	0.0	50.0	97.3	0
36-48	4/13/2016 5:30	26.4	0.0	51.8	99.1	39.0	0.0	51.7	99.7	57.3	0.0	50.1	97.3	0
36-48	4/13/2016 5:31	26.4	0.0	51.7	99.1	39.0	0.0	51.6	99.6	57.3	0.0	50.0	97.3	0
36-48	4/13/2016 5:32	26.4	0.0	51.7	99.1	39.0	0.0	51.5	99.7	57.3	0.0	50.1	97.3	0
36-48	4/13/2016 5:33	26.4	0.0	51.6	99.1	39.0	0.0	51.5	99.6	57.3	0.0	50.2	97.5	0
36-48	4/13/2016 5:34	26.4	0.0	51.6	99.0	39.0	0.0	51.5	99.7	57.3	0.0	50.2	97.5	0
36-48	4/13/2016 5:35	26.4	0.0	51.5	99.1	39.0	0.0	51.5	99.7	57.3	0.0	50.2	97.5	0
36-48	4/13/2016 5:36	26.4	0.0	51.5	99.0	39.0	0.0	51.5	99.7	57.3	0.0	50.2	97.5	0
36-48	4/13/2016 5:37	26.4	0.0	51.5	99.0	39.0	0.0	51.6	99.7	57.3	0.0	50.3	97.5	0
36-48	4/13/2016 5:38	26.4	0.0	51.5	99.0	39.0	0.0	51.5	99.7	57.3	0.0	50.4	97.7	0
36-48	4/13/2016 5:39	26.4	0.0	51.5	98.9	39.0	0.0	51.5	99.7	57.3	0.0	50.4	97.7	0
36-48	4/13/2016 5:40	26.4	0.0	51.5	98.9	39.0	0.0	51.5	99.7	57.3	0.0	50.5	97.9	0
36-48	4/13/2016 5:41	26.4	0.0	51.7	99.2	39.0	0.7	51.5	99.7	57.3	0.0	50.6	97.9	0
36-48	4/13/2016 5:42	26.4	0.0	51.7	99.3	39.0	0.7	51.5	99.6	57.3	0.0	50.5	97.5	0
36-48	4/13/2016 5:43	26.4	0.0	51.8	99.4	39.0	0.0	51.5	99.7	57.3	0.0	50.4	97.5	0
36-48	4/13/2016 5:44	26.4	0.0	51.8	99.3	39.0	0.0	51.6	99.7	57.3	0.0	50.3	97.5	0
36-48	4/13/2016 5:45	26.4	0.0	51.8	99.2	39.0	0.0	51.6	99.7	57.3	0.0	50.4	97.7	0
36-48	4/13/2016 5:46	26.4	0.0	51.7	99.2	39.0	0.0	51.5	99.7	57.3	0.0	50.3	97.6	0
36-48	4/13/2016 5:47	26.4	0.0	51.5	99.2	39.0	0.0	51.3	99.7	57.3	0.0	50.2	97.6	0
36-48	4/13/2016 5:48	26.4	0.0	51.4	99.2	39.0	0.0	51.1	99.7	57.3	0.0	50.1	97.5	0
36-48	4/13/2016 5:49	26.4	0.0	51.3	99.1	39.0	0.0	51.1	99.7	57.3	0.0	50.1	97.5	0
36-48	4/13/2016 5:50	26.4	0.0	51.2	99.1	39.0	0.0	51.0	99.6	57.3	0.0	50.1	97.6	0
36-48	4/13/2016 5:51	26.4	0.0	51.1	99.0	39.0	0.0	51.0	99.6	57.3	0.0	50.1	97.6	0
36-48	4/13/2016 5:52	26.4	0.0	51.1	99.1	39.0	0.0	51.0	99.6	57.3	0.0	50.1	97.6	0
36-48	4/13/2016 5:53	26.4	0.0	51.1	99.1	39.0	0.0	51.0	99.6	57.3	0.0	50.1	97.6	0
36-48	4/13/2016 5:54	26.4	0.0	51.1	99.1	39.0	0.0	51.0	99.7	57.3	0.0	50.1	97.5	0
36-48	4/13/2016 5:55	26.4	0.0	51.1	99.0	39.0	0.0	51.0	99.7	57.3	0.0	50.1	97.5	0
36-48	4/13/2016 5:56	26.4	0.0	51.1	99.3	39.0	0.0	51.1	99.6	57.3	0.0	50.2	97.8	0
36-48	4/13/2016 5:57	26.4	0.0	51.2	99.4	39.0	0.0	51.1	99.7	57.3	0.0	50.0	97.6	0
36-48	4/13/2016 5:58	26.4	0.0	51.2	99.3	39.0	0.0	51.1	99.7	57.3	0.0	49.8	97.4	0
36-48	4/13/2016 5:59	26.4	0.0	51.1	99.5	39.0	0.0	51.1	99.8	57.3	0.0	49.7	97.4	0
36-48	4/13/2016 6:00	26.4	0.0	51.1	99.7	39.0	0.7	51.1	99.8	57.3	0.0	49.6	97.5	0
36-48	4/13/2016 6:01	26.4	0.0	51.1	99.7	39.0	0.7	51.1	99.8	57.3	0.0	49.6	97.5	0
36-48	4/13/2016 6:02	26.4	0.0	51.1	99.7	39.0	0.7	51.1	99.9	57.3	0.0	49.6	97.6	0
36-48	4/13/2016 6:03	26.4	0.0	51.1	99.8	39.0	0.7	51.0	99.9	57.3	0.0	49.6	97.7	0
36-48	4/13/2016 6:04	26.4	0.0	51.1	99.8	39.0	0.7	50.9	99.9	57.3	0.0	49.6	97.7	0
36-48	4/13/2016 6:05	26.4	0.0	51.0	99.8	39.0	0.7	50.8	99.7	57.3	0.0	49.6	97.7	0
36-48	4/13/2016 6:06	26.4	0.0	50.9	99.8	39.0	0.0	50.8	99.7	57.3	0.0	49.6	97.7	0
36-48	4/13/2016 6:07	26.4	0.0	50.8	99.8	39.0	0.0	50.7	99.7	57.3	0.0	49.6	97.7	0
36-48	4/13/2016 6:08	26.4	0.0	50.7	99.7	39.0	0.0	50.6	99.8	57.3	0.0	49.7	97.7	0
36-48	4/13/2016 6:09	26.4	0.0	50.6	99.6	39.0	0.7	50.5	100.0	57.3	0.0	49.7	97.7	0
36-48	4/13/2016 6:10	26.4	0.0	50.5	99.6	39.0	0.7	50.4	99.9	57.3	0.0	49.6	97.7	0
36-48	4/13/2016 6:11	26.4	0.0	50.4	99.5	39.0	0.7	50.1	99.8	57.3	0.0	49.6	97.6	0
36-48	4/13/2016 6:12	26.4	0.0	50.4	99.6	39.0	0.0	50.0	99.9	57.3	0.0	49.6	97.5	0
36-48	4/13/2016 6:13	26.4	0.0	50.4	99.7	39.0	0.0	50.0	99.8	57.3	0.0	49.5	97.5	0
36-48	4/13/2016 6:14	26.4	0.0	50.4	99.8	39.0	0.0	50.0	99.8	57.3	0.0	49.4	97.5	0
36-48	4/13/2016 6:15	26.4	0.0	50.4	99.8	39.0	0.0	50.0	99.9	57.3	0.0	49.3	97.4	0
36-48	4/13/2016 6:16	26.4	0.0	50.4	99.7	39.0	0.0	50.0	100.0	57.3	0.0	49.0	97.1	0
36-48	4/13/2016 6:17	26.4	0.0	50.4	99.6	39.0	0.7	50.0	100.0	57.3	0.0	48.9	97.2	0
36-48	4/13/2016 6:18	26.4	0.0	50.3	99.6	39.0	0.7	50.1	100.0	57.3	0.0	48.8	97.5	0
36-48	4/13/2016 6:19	26.4	0.0	50.4	99.8	39.0	0.7	50.3	100.0	57.3	0.0	48.8	97.6	0
36-48	4/13/2016 6:20	26.4	0.0	50.4	99.9	39.0	0.7	50.3	100.0	57.3	0.0	48.8	97.8	0
36-48	4/13/2016 6:21	26.4	0.0	50.4	99.9	39.0	0.0	50.4	100.0	57.3	0.0	48.9	98.0	0
36-48	4/13/2016 6:22	26.4	0.0	50.4	99.9	39.0	0.0	50.4	100.0	57.3	0.0	49.0	98.1	0
36-48	4/13/2016 6:23	26.4	0.0	50.4	99.8	39.0	0.0	50.4	100.0	57.3	0.0	49.1	98.0	0
36-48	4/13/2016 6:24	26.4	0.0	50.4	99.8	39.0	0.0	50.4	100.0	57.3	0.0	49.1	98.1	0
36-48	4/13/2016 6:25	26.4	0.0	50.4	99.8	39.0	0.0	50.3	100.0	57.3	0.0	49.2	98.2	0
36-48	4/13/2016 6:26	26.4	0.0	50.4	99.8	39.0	0.0	50.3	100.0	57.3	0.0	49.3	98.2	0
36-48	4/13/2016 6:27	26.4	0.0	50.4	99.7	39.0	0.0	50.3	100.0	57.3	0.0	49.4	98.3	0
36-48	4/13/2016 6:28	26.4	0.0	50.4	99.8	39.0	0.0	50.4	100.0	57.3	0.0	49.6	98.4	0
36-48	4/13/2016 6:29	26.4	0.0	50.5	99.8	39.0	0.0	50.5	100.0	57.3	0.0	49.7	98.3	0
36-48	4/13/2016 6:30	26.4	0.0	50.7	99.9	39.0	0.0	50.7	100.0	57.3	0.0	49.7	98.2	0
36-48	4/13/2016 6:31	26.4	0.0	50.7	99.9	39.0	0.0	50.6	100.0	57.3	0.0	49.6	98.1	0
36-48	4/13/2016 6:32	26.4	0.0	50.5	99.9	39.0	0.7	50.5	100.0	57.3	0.0	49.3	97.9	0
36-48	4/13/2016 6:33	26.4	0.0	50.6	100.0	39.0	0.0	50.6	100.0	57.3	0.0	49.2	97.8	0
36-48	4/13/2016 6:34	26.4	0.0	50.6	100.0	39.0	0.0	50.6	100.0	57.3	0.0	49.1	97.9	0
36-48	4/13/2016 6:35	26.4	0.0	50.6	100.0	39.0	0.7	50.5	100.0	57.3	0.0	49.1	98.0	0
36-48	4/13/2016 6:36	26.4	0.0	50.5	100.0	39.0	0.7	50.4	100.0	57.3	0.0	49.1	98.0	0
36-48	4/13/2016 6:37	26.4	0.0	50.4	100.0	39.0	0.7	50.3	100.0	57.3	0.0	49.2	98.0	0
36-48	4/13/2016 6:38	26.4	0.0	50.3	100.0	39.0	0.0	50.2	100.0	57.3	0.0	49.2	98.0	0
36-48	4/13/2016 6:39	26.4	0.0	50.2	100.0	39.0	0.0	50.1	100.0	57.3	0.0	49.1	98.0	0
36-48	4/13/2016 6:40	26.4	0.0	50.1	100.0	39.0	0.0	50.0	100.0	57.3	0.0	49.1	98.0	0
36-48	4/13/2016 6:41	26.4	0.0	50.1	100.0	39.0	0.0	50.0	100.0	57.3	0.0	49.2	98.1	0
36-48	4/13/2016 6:42	26.4	0.0	50.1	100.0	39.0	0.0	50.0	100.0	57.3	0.0	49.1	98.0	0
36-48	4/13/2016 6:43	26.4	0.0	50.1	100.0	39.0	0.0	50.0	100.0	57.3	0.0	49.0	98.0	0
36-48	4/13/2016 6:44	26.4	0.0	50.2	100.0	39.0	0.0	50.1	100.0	57.3	0.0	48.9	98.0	0
36-48	4/13/2016 6:45	26.4	0.0	50.3	100.0	39.0	0.7	50.2	100.0	57.3	0.0	48.8	97.9	0
36-48	4/13/2016 6:46	26.4	0.0	50.4	100.0	39.0	0.7	50.3	100.0	57.3	0.0	48.8	98.0	0
36-48	4/13/2016 6:47	26.4	0.0	50.4	100.0	39.0	0.7	50.1	100.0	57.3	0.0	48.8	98.1	0
36-48	4/13/2016 6:48	26.4	0.0	50.4	100.0	39.0	0.7	50.1	100.0	57.3	0.0	48.8	98.2	0
36-48	4/13/2016 6:49	26.4	0.0	50.3	100.0	39.0	0.7	50.1	100.0	57.3	0.0	48.8	98.2	0
36-48	4/13/2016 6:50	26.4	0.0	50.2	100.0	39.0	0.7	50.1	100.0	57.3	0.0	48.8	98.2	0
36-48	4/13/2016 6:51	26.4	0.0	50.2	100.0	39.0	0.7	50.1	100.0	57.3	0.0	48.8	98.2	0
36-48	4/13/2016 6:52	26.4	0.0	50.2	100.0	39.0	0.7	50.2	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 6:53	26.4	0.0	50.2	100.0	39.0	0.0	50.1	100.0	57.3	0.0	48.9	98.2	0
36-48	4/13/2016 6:54	26.4	0.0	50.1	100.0	39.0	0.0	50.0	100.0	57.3	0.0	48.9	98.2	0
36-48	4/13/2016 6:55	26.4	0.0	50.0	100.0	39.0	0.0	50.0	100.0	57.3	0.0	49.0	98.3	0
36-48	4/13/2016 6:56	26.4	0.0	50.0	100.0	39.0	0.0	50.0	100.0	57.3	0.0	49.1	98.3	0
36-48	4/13/2016 6:57	26.4	0.0	50.0	100.0	39.0	0.0	49.9	100.0	57.3	0.0	49.1	98.3	0
36-48	4/13/2016 6:58	26.4	0.0	50.0	100.0	39.0	0.0	49.9	100.0	57.3	0.0	49.1	98.2	0
36-48	4/13/2016 6:59	26.4	0.0	50.0	100.0	39.0	0.7	49.8	100.0	57.3	0.0	49.0	98.2	0
36-48	4/13/2016 7:00	26.4	0.0	49.9	100.0	39.0	0.7	49.7	100.0	57.3	0.0	48.9	98.2	0
36-48	4/13/2016 7:01	26.4	0.0	49.9	100.0	39.0	0.7	49.6	100.0	57.3	0.0	48.8	98.1	0
36-48	4/13/2016 7:02	26.4	0.0	49.9	100.0	39.0	0.7	49.7	100.0	57.3	0.0	48.8	98.2	0
36-48	4/13/2016 7:03	26.4	0.0	49.8	100.0	39.0	0.7	49.7	100.0	57.3	0.0	48.8	98.2	0
36-48	4/13/2016 7:04	26.4	0.0	49.8	100.0	39.0	0.7	49.7	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:05	26.4	0.0	49.9	100.0	39.0	0.7	49.8	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:06	26.4	0.0	49.8	100.0	39.0	0.7	49.8	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:07	26.4	0.0	49.8	100.0	39.0	0.0	49.7	100.0	57.3	0.0	49.0	98.4	0
36-48	4/13/2016 7:08	26.4	0.0	49.7	100.0	39.0	0.0	49.6	100.0	57.3	0.0	49.0	98.3	0
36-48	4/13/2016 7:09	26.4	0.0	49.6	100.0	39.0	0.0	49.6	100.0	57.3	0.0	49.0	98.3	0
36-48	4/13/2016 7:10	26.4	0.0	49.6	100.0	39.0	0.0	49.5	100.0	57.3	0.0	49.0	98.3	0
36-48	4/13/2016 7:11	26.4	0.0	49.4	100.0	39.0	0.0	49.3	100.0	57.3	0.0	48.9	98.3	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
36-48	4/13/2016 7:12	26.4	0.0	49.5	100.0	39.0	1.5	49.3	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:13	26.4	0.0	49.6	100.0	39.0	0.7	49.3	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:14	26.4	0.0	49.6	100.0	39.0	0.7	49.3	100.0	57.3	0.0	48.8	98.3	0
36-48	4/13/2016 7:15	26.4	0.0	49.7	100.0	39.0	0.7	49.4	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:16	26.4	0.0	49.6	100.0	39.0	0.0	49.3	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:17	26.4	0.0	49.6	100.0	39.0	0.0	49.4	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:18	26.4	0.0	49.6	100.0	39.0	0.7	49.5	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:19	26.4	0.0	49.7	100.0	39.0	1.5	49.5	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:20	26.4	0.0	49.7	100.0	39.0	0.7	49.5	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:21	26.4	0.0	49.6	100.0	39.0	0.7	49.5	100.0	57.3	0.0	48.9	98.3	0
36-48	4/13/2016 7:22	26.4	0.0	49.6	100.0	39.0	0.7	49.5	100.0	57.3	0.0	48.9	98.4	0
36-48	4/13/2016 7:23	26.4	0.0	49.6	100.0	39.0	0.7	49.6	100.0	57.3	0.0	49.0	98.4	0
36-48	4/13/2016 7:24	26.4	0.0	49.8	100.0	39.0	0.7	49.7	100.0	57.3	0.0	49.1	98.4	0
36-48	4/13/2016 7:25	26.4	0.0	49.9	100.0	39.0	0.7	49.8	100.0	57.3	0.0	49.2	98.5	0
36-48	4/13/2016 7:26	26.4	0.0	50.0	100.0	39.0	0.7	49.8	100.0	57.3	0.0	49.2	98.4	0
36-48	4/13/2016 7:27	26.4	0.0	49.9	100.0	39.0	0.7	49.8	100.0	57.3	0.0	49.2	98.4	0
36-48	4/13/2016 7:28	26.4	0.0	49.9	100.0	39.0	0.7	49.8	100.0	57.3	0.0	49.2	98.4	0
36-48	4/13/2016 7:29	26.4	0.0	50.0	100.0	39.0	0.7	49.9	100.0	57.3	0.0	49.3	98.4	0
36-48	4/13/2016 7:30	26.4	0.0	50.0	100.0	39.0	0.7	49.8	100.0	57.3	0.0	49.2	98.4	0
36-48	4/13/2016 7:31	26.4	0.0	50.0	100.0	39.0	1.5	49.9	100.0	57.3	0.0	49.3	98.4	0
36-48	4/13/2016 7:32	26.4	0.0	50.2	100.0	39.0	0.7	50.0	100.0	57.3	0.0	49.3	98.4	0
36-48	4/13/2016 7:33	26.4	0.0	50.3	100.0	39.0	0.7	50.1	100.0	57.3	0.0	49.4	98.4	0
36-48	4/13/2016 7:34	26.4	0.0	50.3	100.0	39.0	0.7	50.0	100.0	57.3	0.0	49.4	98.5	0
36-48	4/13/2016 7:35	26.4	0.0	50.3	100.0	39.0	0.7	50.0	100.0	57.3	0.0	49.4	98.5	0
36-48	4/13/2016 7:36	26.4	0.0	50.4	100.0	39.0	1.5	50.1	100.0	57.3	0.0	49.6	98.5	0
36-48	4/13/2016 7:37	26.4	0.6	50.5	100.0	48.8	1.5	50.3	100.0	53.1	0.7	49.7	98.6	0
36-48	4/13/2016 7:38	26.4	0.0	50.8	100.0	48.8	0.7	50.7	100.0	54.5	0.0	49.9	98.6	0
36-48	4/13/2016 7:39	25.0	0.0	51.3	100.0	54.5	1.5	51.1	100.0	54.5	0.7	50.1	98.7	0
36-48	4/13/2016 7:40	26.4	0.6	51.6	99.1	72.7	1.5	51.4	100.0	86.7	0.7	50.4	98.7	0
36-48	4/13/2016 7:41	26.4	0.0	51.8	98.5	72.7	0.7	51.5	99.6	86.7	0.7	50.5	98.6	0
36-48	4/13/2016 7:42	26.4	0.0	51.9	98.1	72.7	0.7	51.4	99.3	86.7	0.0	50.5	98.4	0
36-48	4/13/2016 7:43	26.4	0.0	51.5	97.6	72.7	0.7	51.1	99.0	86.7	0.0	50.4	98.2	0
36-48	4/13/2016 7:44	29.2	0.0	51.3	97.8	64.3	1.5	51.4	99.1	74.1	0.7	50.4	98.4	0
36-48	4/13/2016 7:45	39.0	0.0	52.0	97.7	58.7	0.7	51.7	98.5	64.3	0.0	50.6	98.3	0
36-48	4/13/2016 7:46	39.0	0.0	52.1	97.2	58.7	0.7	51.8	98.2	64.3	0.0	50.6	98.3	0
36-48	4/13/2016 7:47	39.0	0.0	52.1	96.9	58.7	0.0	51.8	98.0	64.3	0.0	50.7	98.2	0
36-48	4/13/2016 7:48	39.0	0.0	52.0	96.9	58.7	0.0	51.9	98.1	64.3	0.0	50.7	98.2	0
36-48	4/13/2016 7:49	39.0	0.0	52.3	96.9	58.7	0.0	52.3	97.9	64.3	0.0	50.9	98.3	0
36-48	4/13/2016 7:50	39.0	0.0	52.5	96.4	58.7	0.7	52.8	97.2	64.3	0.0	51.1	98.4	0
36-48	4/13/2016 7:51	39.0	0.0	53.0	95.7	55.9	0.7	53.3	95.8	62.9	0.7	51.5	98.4	0
36-48	4/13/2016 7:52	40.4	0.6	53.6	94.8	54.5	0.7	53.8	95.4	58.7	0.7	51.8	98.2	0
36-48	4/13/2016 7:53	40.4	0.0	53.8	93.8	54.5	0.7	54.1	94.5	58.7	0.7	52.1	98.1	0
36-48	4/13/2016 7:54	40.4	0.0	54.1	93.4	54.5	1.5	54.5	93.5	58.7	0.7	52.4	98.1	0
36-48	4/13/2016 7:55	40.4	0.0	54.5	92.8	55.9	0.7	54.8	93.5	58.7	0.7	52.6	97.6	0
36-48	4/13/2016 7:56	40.4	0.0	54.6	92.7	55.9	0.0	55.2	93.1	58.7	0.0	52.9	97.5	0
36-48	4/13/2016 7:57	40.4	0.0	54.8	92.1	55.9	0.7	55.5	91.8	60.1	0.7	53.1	97.5	0
36-48	4/13/2016 7:58	40.4	0.0	55.1	91.5	57.3	0.7	55.6	91.7	64.3	0.7	53.3	97.2	0
36-48	4/13/2016 7:59	40.4	0.0	55.1	90.9	57.3	0.7	55.8	92.0	64.3	0.0	53.5	97.1	0
36-48	4/13/2016 8:00	40.4	0.0	55.1	91.2	57.3	0.7	55.9	91.4	64.3	0.0	53.6	97.1	0
36-48	4/13/2016 8:01	40.4	0.6	55.4	90.0	53.1	1.5	56.2	89.1	64.3	0.7	53.9	96.2	0
36-48	4/13/2016 8:02	39.0	0.0	55.7	90.1	50.2	1.5	56.3	89.1	64.3	0.7	54.0	95.5	0
36-48	4/13/2016 8:03	39.0	0.0	55.7	89.6	51.6	0.7	56.3	89.2	68.5	0.7	54.1	95.0	0
36-48	4/13/2016 8:04	32.0	0.6	55.9	89.0	32.0	2.2	56.5	88.8	46.0	1.5	54.3	94.4	0
36-48	4/13/2016 8:05	22.2	0.6	56.0	89.0	41.8	1.5	56.6	88.4	61.5	0.7	54.5	94.3	0
36-48	4/13/2016 8:06	26.4	0.0	56.1	89.4	44.6	0.7	56.7	89.2	61.5	0.7	54.7	94.6	0
36-48	4/13/2016 8:07	30.6	0.0	56.1	89.2	50.2	0.7	56.7	89.1	61.5	0.7	54.8	94.4	0
36-48	4/13/2016 8:08	30.6	0.0	56.2	88.5	48.8	1.5	56.9	88.2	61.5	0.7	55.0	93.6	0
36-48	4/13/2016 8:09	29.2	0.6	56.5	87.3	33.4	2.2	57.2	86.3	50.2	1.5	55.3	92.0	0
36-48	4/13/2016 8:10	19.4	2.8	56.9	86.6	43.2	2.2	57.4	87.3	60.1	1.5	55.5	92.0	0
36-48	4/13/2016 8:11	48.8	0.6	56.9	87.2	48.8	1.5	57.5	86.1	88.1	0.7	55.7	91.1	0
36-48	4/13/2016 8:12	34.8	0.6	57.1	86.3	64.3	1.5	57.7	86.1	75.5	1.5	55.9	90.9	0
36-48	4/13/2016 8:13	46.0	0.6	57.2	85.4	75.5	1.5	57.9	86.7	81.1	0.7	56.2	91.6	0
36-48	4/13/2016 8:14	44.6	0.0	57.3	86.2	75.5	0.7	58.2	86.5	81.1	0.0	56.4	91.3	0
36-48	4/13/2016 8:15	44.6	0.0	57.4	86.2	75.5	0.7	58.4	85.4	81.1	0.7	56.6	90.9	0
36-48	4/13/2016 8:16	44.6	0.6	57.5	85.7	72.7	1.5	58.5	85.4	81.1	0.7	56.8	90.4	0
36-48	4/13/2016 8:17	48.8	0.0	57.6	85.2	68.5	0.7	58.6	85.6	81.1	0.7	57.0	90.4	0
36-48	4/13/2016 8:18	23.6	0.6	57.8	85.5	33.4	0.7	58.8	85.3	40.4	0.7	57.1	89.8	0
36-48	4/13/2016 8:19	13.7	0.0	58.1	85.9	33.4	0.0	59.0	85.3	39.0	0.0	57.3	90.1	0
36-48	4/13/2016 8:20	8.1	1.7	58.4	84.3	12.3	1.5	58.9	84.7	22.2	1.5	57.5	88.6	0
36-48	4/13/2016 8:21	18.0	1.1	58.5	83.7	33.4	2.2	59.0	83.1	39.0	1.5	57.6	87.8	0
36-48	4/13/2016 8:22	32.0	1.1	58.6	82.6	40.4	1.5	59.1	84.0	40.4	1.5	57.8	87.8	0
36-48	4/13/2016 8:23	30.6	1.1	58.7	82.8	29.2	2.2	59.1	82.6	40.4	1.5	57.9	86.3	0
36-48	4/13/2016 8:24	34.8	0.6	58.8	82.2	46.0	2.2	59.2	82.3	50.2	1.5	58.1	86.2	0
36-48	4/13/2016 8:25	48.8	1.1	58.8	82.9	40.4	3.0	59.3	82.8	48.8	2.2	58.2	86.2	0
36-48	4/13/2016 8:26	46.0	2.3	58.8	82.9	67.1	1.5	59.3	82.9	55.9	1.5	58.4	86.6	0
36-48	4/13/2016 8:27	57.3	0.0	59.0	82.7	67.1	1.5	59.6	83.3	61.5	0.7	58.6	86.8	0
36-48	4/13/2016 8:28	43.2	1.1	59.2	81.6	34.8	3.0	59.7	81.0	47.4	2.2	58.8	84.7	0
36-48	4/13/2016 8:29	12.3	2.8	59.3	81.9	25.0	2.2	59.7	82.2	29.2	1.5	58.8	85.6	0
36-48	4/13/2016 8:30	26.4	1.1	59.4	82.6	23.6	1.5	59.9	83.0	34.8	0.7	59.0	86.5	0
36-48	4/13/2016 8:31	37.6	1.7	59.6	81.4	54.5	3.0	59.9	81.9	60.1	2.2	59.1	85.4	0
36-48	4/13/2016 8:32	37.6	1.7	59.6	82.0	36.2	2.2	60.0	81.7	53.1	1.5	59.3	85.0	0
NS	4/13/2016 8:33	26.4	3.4	59.7	81.1	53.1	4.5	59.9	81.1	57.3	3.0	59.3	84.5	0
NS	4/13/2016 8:34	29.2	4.5	59.6	81.3	19.4	3.0	59.8	80.7	30.6	2.2	59.3	83.8	0
NS	4/13/2016 8:35	40.4	3.4	59.7	80.3	76.9	2.2	60.0	81.7	68.5	2.2	59.4	84.8	0
NS	4/13/2016 8:36	54.5	0.6	59.9	81.9	54.5	2.2	60.1	81.4	67.1	1.5	59.4	84.1	0
NS	4/13/2016 8:37	53.1	2.8	59.9	81.0	60.1	3.0	60.1	81.4	60.1	2.2	59.5	84.0	0
NS	4/13/2016 8:38	41.8	0.6	60.0	81.4	62.9	1.5	60.4	81.7	66.5	1.5	59.7	84.3	0
NS	4/13/2016 8:39	39.0	2.3	60.1	81.5	16.5	1.5	60.4	81.7	44.6	1.5	59.7	84.6	0
NS	4/13/2016 8:40	16.5	2.3	60.2	80.9	41.8	3.0	60.4	81.4	64.3	3.0	59.8	84.0	0
NS	4/13/2016 8:41	43.2	3.9	60.1	79.6	50.2	3.7	60.3	80.5	53.1	3.0	59.8	83.6	0
NS	4/13/2016 8:42	39.0	2.8	60.1	79.8	55.9	3.7	60.4	80.6	62.9	2.2	59.9	83.6	0
NS	4/13/2016 8:43	53.1	2.8	60.1	79.7	54.5	3.0	60.5	80.3	62.9	2.2	60.0	83.0	0
NS	4/13/2016 8:44	20.6	2.8	60.3	79.8	18.0	1.5	60.6	80.9	23.6	1.5	60.0	83.5	0
NS	4/13/2016 8:45	6.7	0.6	60.6	81.3	33.4	2.2	60.9	80.1	29.2	1.5	60.2	82.8	0
NS	4/13/2016 8:46	29.2	3.4	60.7	79.9	34.8	5.2	60.8	80.0	41.8	3.7	60.3	82.7	0
NS	4/13/2016 8:47	33.4	5.1	60.5	79.5	36.2	5.2	60.6	80.1	40.4	3.7	60.2	82.8	0
NS	4/13/2016 8:48	23.6	4.5	60.5	80.5	13.7	2.2	60.7	81.4	50.2	1.5	60.2	83.6	0
NS	4/13/2016 8:49	10.9	2.3	60.7	80.6	37.6	2.2	60.9	80.9	37.6	1.5	60.3	83.4	0
NS	4/13/2016 8:50	64.3	1.7	60.9	79.8	57.3	3.7	61.1	80.5	62.9	3.0	60.5	83.4	0
NS	4/13/2016 8:51	27.8	3.9	60.8	79.3	29.2	3.0	61.0	79.8	34.8	2.2	60.5	82.3	0
NS	4/13/2016 8:52	27.6	3.4	60.9	79.1	39.0	4.5	61.0	80.4	43.2	3.0	60.6	82.7	0
NS	4/13/2016 8:53	33.4	3.9	60.9	79.2	32.0	3.7	61.2	80.4	40.4	2.2	60.6	82.9	0
NS	4/13/2016 8:54	68.5	2.3	61.1	79.6	74.1	2.2	61.4	81.3	83.9	2.2	60.8	83.4	0
NS	4/13/2016 8:55	34.8	0.6	61.5	80.2	92.4	2.2	61.8	80.7	86.7	1.5	61.0	83.2	0
NS	4/13/2016 8:56	58.7	2.3	61.6	79.9	50.2	3.0	61.9	80.3	68.5	2.2	61.2	83.0	0
NS	4/13/2016 8:57	23.6	2.8	61.6	79.2	55.9	3.7	61.8	80.6	71.3	3.0	61.3	82.7	0
NS	4/13/2016 8:58	44.6	3.4	61.7	80.7	27.8	3.0	61.9	80.6	50.2	2.2	61.4	82.7	0
NS	4/13/2016 8:59	40.4	2.8	61.7	79.8	74.1	4.5	61.9	81.1	72.7	3.0	61.5	83.1	0

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)
NS	4/13/2016 9:00	43.2	3.4	61.8	80.2	41.8	2.2	62.1	80.8	71.3	2.2	61.5	83.0	0
NS	4/13/2016 9:01	78.3	1.1	62.0	80.5	86.7	2.2	62.5	81.1	107.6	1.5	61.8	83.3	0
NS	4/13/2016 9:02	47.4	1.7	62.2	80.0	40.4	2.2	62.7	80.7	51.6	1.5	62.0	82.9	0
NS	4/13/2016 9:03	29.2	0.6	62.6	80.7	39.0	1.5	63.0	80.7	47.4	0.7	62.2	83.3	0
NS	4/13/2016 9:04	57.3	3.4	62.7	79.3	67.1	5.2	62.7	79.7	74.1	3.7	62.3	82.0	0
NS	4/13/2016 9:05	60.1	4.5	62.4	79.2	78.3	3.7	62.6	80.1	72.7	3.0	62.3	82.1	0
NS	4/13/2016 9:06	58.7	1.7	62.5	81.0	65.7	2.2	63.0	80.6	69.9	1.5	62.5	83.1	0
NS	4/13/2016 9:07	68.5	1.7	62.7	79.0	83.9	3.0	63.0	80.1	92.4	2.2	62.6	82.2	0
NS	4/13/2016 9:08	86.7	1.1	62.8	79.5	109.2	1.5	63.4	80.5	103.6	0.7	62.8	82.4	0
NS	4/13/2016 9:09	76.9	0.6	63.2	80.4	57.3	1.5	63.8	80.4	71.3	1.5	63.1	83.3	0
NS	4/13/2016 9:10	46.0	0.6	63.5	79.4	13.7	1.5	63.9	79.6	20.8	0.7	63.2	81.8	0
NS	4/13/2016 9:11	44.6	1.1	63.6	78.8	64.3	3.7	63.8	78.3	64.3	3.0	63.3	81.2	0
NS	4/13/2016 9:12	46.0	3.4	63.3	79.6	37.6	3.0	63.6	80.2	51.6	2.2	63.3	82.1	0
NS	4/13/2016 9:13	27.8	3.9	63.3	79.7	22.2	3.7	63.5	79.6	32.0	3.0	63.2	81.6	0
NS	4/13/2016 9:14	25.0	3.9	63.0	79.2	27.8	3.7	63.2	80.4	34.8	3.0	63.1	82.2	0
NS	4/13/2016 9:15	43.2	3.9	62.9	80.6	65.7	4.5	63.1	80.8	67.1	3.0	63.0	82.5	0
NS	4/13/2016 9:16	46.0	4.5	62.7	79.7	34.8	4.5	63.0	80.4	41.8	3.0	63.0	82.3	0
NS	4/13/2016 9:17	40.4	2.3	62.8	80.8	41.8	2.2	63.3	82.0	67.1	1.5	63.0	83.7	0
NS	4/13/2016 9:18	20.8	2.3	63.2	81.6	25.0	2.2	63.6	80.9	47.4	1.5	63.2	83.1	0
NS	4/13/2016 9:19	58.7	1.7	63.4	80.0	95.2	3.7	63.6	81.2	96.6	3.0	63.3	82.8	0
NS	4/13/2016 9:20	85.3	3.4	63.3	79.7	81.1	3.7	63.6	80.1	82.5	3.0	63.4	81.6	0
NS	4/13/2016 9:21	92.4	1.1	63.4	80.6	106.4	3.7	63.7	81.2	100.8	2.2	63.5	82.9	0
NS	4/13/2016 9:22	86.7	3.9	63.4	81.1	79.7	3.7	63.8	81.0	81.1	3.0	63.6	82.7	0
NS	4/13/2016 9:23	75.5	2.3	63.5	80.5	92.4	2.2	64.0	81.2	91.0	1.5	63.6	82.9	0
NS	4/13/2016 9:24	91.0	0.6	63.8	81.2	83.9	3.0	64.1	79.7	82.5	2.2	63.8	82.2	0
NS	4/13/2016 9:25	62.9	2.3	63.6	79.7	53.1	1.5	64.2	80.2	53.1	1.5	63.8	82.5	0
NS	4/13/2016 9:26	60.1	0.0	63.9	81.1	65.7	0.7	64.5	81.7	53.1	0.7	64.0	82.8	0
NS	4/13/2016 9:27	58.7	0.0	64.5	81.5	64.3	1.5	64.9	81.3	53.1	1.5	64.2	82.7	0
NS	4/13/2016 9:28	39.0	2.8	64.2	79.3	36.2	4.5	64.3	79.6	41.8	3.0	64.1	81.6	0
NS	4/13/2016 9:29	34.8	3.9	63.7	79.8	44.6	3.0	64.0	81.0	34.8	2.2	63.9	82.2	0
NS	4/13/2016 9:30	40.4	2.8	63.6	80.5	50.2	3.7	63.9	81.7	65.7	3.0	63.9	83.1	0
NS	4/13/2016 9:31	50.2	3.4	63.6	81.2	46.0	4.5	63.7	80.8	47.4	3.0	63.7	81.9	0
NS	4/13/2016 9:32	37.6	3.9	63.3	81.1	51.6	3.0	63.6	82.1	51.6	2.2	63.6	83.1	0
NS	4/13/2016 9:33	61.5	1.1	63.6	82.3	78.3	3.0	63.9	82.1	78.3	2.2	63.8	83.5	0
NS	4/13/2016 9:34	72.7	2.8	63.6	81.2	69.9	3.0	63.9	81.4	72.7	2.2	63.7	82.9	0
NS	4/13/2016 9:35	55.9	2.3	63.6	81.4	48.8	3.0	64.1	81.9	51.6	2.2	63.8	83.2	0
NS	4/13/2016 9:36	41.8	0.6	63.9	81.6	60.1	1.5	64.5	82.7	57.3	0.7	63.9	84.7	0
NS	4/13/2016 9:37	46.0	0.0	64.5	81.7	54.5	1.5	65.0	82.7	50.2	1.5	64.2	84.6	0
NS	4/13/2016 9:38	60.1	1.1	64.9	80.7	83.9	3.7	65.1	80.9	85.3	3.0	64.5	82.7	0
NS	4/13/2016 9:39	68.5	3.4	64.8	80.8	54.5	4.5	65.1	81.2	58.7	3.0	64.6	83.4	0
NS	4/13/2016 9:40	65.7	3.9	64.5	80.6	82.5	4.5	64.9	80.6	82.5	3.0	64.7	82.5	0
NS	4/13/2016 9:41	85.3	3.4	64.5	80.7	91.0	3.7	65.0	81.4	96.6	3.0	64.8	83.1	0
NS	4/13/2016 9:42	81.1	2.8	64.6	80.8	79.7	4.5	64.9	81.3	85.3	3.0	64.8	83.4	0
NS	4/13/2016 9:43	88.1	4.5	64.5	81.1	99.4	4.5	65.0	81.8	105.0	3.0	64.9	83.3	0
NS	4/13/2016 9:44	58.7	2.8	64.6	81.9	60.1	3.0	65.1	81.4	64.3	2.2	64.9	82.7	0
NS	4/13/2016 9:45	67.1	3.4	64.7	80.8	78.3	5.2	65.0	81.0	82.5	3.7	64.9	82.1	0
NS	4/13/2016 9:46	75.5	4.5	64.4	81.3	60.1	3.7	64.9	82.1	75.5	3.7	64.8	83.6	0
NS	4/13/2016 9:47	26.4	1.7	64.8	81.5	48.8	2.2	65.2	82.3	51.6	2.2	64.9	83.6	0
NS	4/13/2016 9:48	79.7	2.3	64.9	81.2	83.9	3.7	65.3	81.1	86.7	3.0	65.1	82.1	0
NS	4/13/2016 9:49	54.5	3.9	64.8	81.4	54.5	5.2	65.2	81.4	62.9	3.7	65.1	82.6	0
NS	4/13/2016 9:50	43.2	4.5	64.8	82.0	53.1	3.7	65.2	81.3	55.9	3.0	65.1	82.7	0
NS	4/13/2016 9:51	71.3	3.9	64.7	81.2	58.7	5.2	65.0	81.4	62.9	3.7	65.0	82.5	0
NS	4/13/2016 9:52	33.4	4.5	64.5	81.7	51.6	3.0	65.0	83.0	64.3	2.2	64.9	83.7	0
NS	4/13/2016 9:53	68.5	2.8	64.7	82.0	89.6	5.2	64.9	81.5	95.2	4.5	64.8	82.3	0
NS	4/13/2016 9:54	74.1	3.4	64.6	81.8	54.5	2.2	65.0	81.9	74.1	1.5	64.8	82.9	0
NS	4/13/2016 9:55	54.5	2.3	64.8	82.0	60.1	3.0	65.1	82.4	69.9	2.2	64.9	83.7	0
NS	4/13/2016 9:56	50.2	2.3	64.8	81.6	64.3	4.5	65.2	82.1	61.5	3.0	65.0	83.3	0
NS	4/13/2016 9:57	64.3	4.5	64.8	82.3	72.7	3.7	65.4	82.2	69.9	3.0	65.1	83.3	0
NS	4/13/2016 9:58	75.5	0.6	65.1	82.0	64.3	3.0	65.5	81.7	74.1	2.2	65.1	83.0	0

[1]Sample periods based on sample location I-0.2 m, all other sample location have start times and collection times that are approximately ±20 min. NS = No Sampling Occuring (Sampling may be occuring on some pumps since this is representative and only acurately depicts sample station I-2.0 m acurately); NI = Instrument Not Installed at the time.

Site 2E

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/10/2016 20:14	155.5	0.7	57.9	53.9	278.3	0.7	57.3	55.5	306.4	0.0	55.8	61.2	NI	0.6
NS	4/10/2016 20:15	155.5	0.0	58.0	52.2	309.2	0.7	57.3	55.5	309.2	0.0	55.6	61.4	NI	0.6
NS	4/10/2016 20:16	155.5	0.0	57.9	53.2	309.2	0.7	57.1	56.8	309.2	0.0	55.3	61.8	NI	0.6
NS	4/10/2016 20:17	155.5	0.0	57.7	54.7	309.2	0.7	56.9	56.0	309.2	0.0	55.2	62.0	NI	0.6
NS	4/10/2016 20:18	155.5	0.0	57.5	54.8	309.2	0.0	56.9	57.6	309.2	0.0	55.0	61.5	NI	0.6
NS	4/10/2016 20:19	155.5	0.0	57.5	54.2	309.2	0.0	56.8	56.9	309.2	0.0	54.9	61.3	NI	0.6
NS	4/10/2016 20:20	155.5	0.0	57.4	54.9	309.2	0.0	56.8	56.9	309.2	0.0	54.5	62.1	NI	0.6
NS	4/10/2016 20:21	155.5	0.0	57.4	54.4	309.2	0.0	56.9	56.0	309.2	0.0	54.3	62.2	NI	0.6
NS	4/10/2016 20:22	155.5	0.0	57.5	53.9	309.2	0.0	56.9	55.6	309.2	0.0	54.1	62.2	NI	0.6
NS	4/10/2016 20:23	155.5	0.0	57.5	53.7	309.2	0.0	56.8	55.6	309.2	0.0	53.9	62.4	NI	0.6
NS	4/10/2016 20:24	155.5	0.0	57.3	54.0	309.2	0.0	56.6	55.9	309.2	0.0	53.9	62.4	NI	0.6
NS	4/10/2016 20:25	155.5	0.0	57.1	54.9	309.2	0.0	56.3	56.6	309.2	0.0	53.7	61.9	NI	0.6
NS	4/10/2016 20:26	155.5	0.0	56.8	56.1	309.2	0.7	56.0	58.3	309.2	0.0	53.5	63.2	NI	0.6
NS	4/10/2016 20:27	155.5	0.0	56.5	57.0	309.2	0.0	55.8	59.1	309.2	0.0	53.3	63.5	NI	0.6
NS	4/10/2016 20:28	155.5	0.0	56.2	58.1	309.2	0.0	55.5	59.7	309.2	0.0	53.2	63.0	NI	0.6
NS	4/10/2016 20:29	155.5	0.0	55.9	58.8	309.2	0.0	55.2	61.1	309.2	0.0	53.0	64.5	NI	0.6
NS	4/10/2016 20:30	155.5	0.0	55.8	58.5	309.2	0.0	55.0	61.5	309.2	0.0	52.7	65.7	NI	0.6
NS	4/10/2016 20:31	155.5	0.0	55.6	59.9	309.2	0.0	54.8	62.9	309.2	0.0	52.6	67.7	NI	0.6
NS	4/10/2016 20:32	155.5	0.0	55.4	61.9	309.2	0.0	54.7	64.3	309.2	0.0	52.5	66.3	NI	0.6
NS	4/10/2016 20:33	155.5	0.0	55.2	62.5	309.2	0.0	54.5	65.0	309.2	0.0	52.2	66.7	NI	0.6
NS	4/10/2016 20:34	155.5	0.0	55.0	62.5	309.2	0.0	54.3	65.4	309.2	0.0	52.0	66.7	NI	0.6
NS	4/10/2016 20:35	155.5	0.0	54.7	62.8	309.2	0.0	53.9	65.8	309.2	0.0	51.6	66.1	NI	0.6
NS	4/10/2016 20:36	155.5	0.0	54.3	63.4	309.2	0.0	53.5	66.0	309.2	0.0	51.2	67.9	NI	0.6
NS	4/10/2016 20:37	155.5	0.0	54.0	63.7	309.2	0.0	53.0	66.1	309.2	0.0	50.8	67.9	NI	0.6
NS	4/10/2016 20:38	155.5	0.0	53.8	64.0	309.2	0.0	52.6	66.7	309.2	0.0	50.4	68.6	NI	0.6
NS	4/10/2016 20:39	155.5	0.0	53.7	64.3	309.2	0.0	52.4	67.4	309.2	0.0	50.2	71.0	NI	0.6
NS	4/10/2016 20:40	155.5	0.0	53.6	64.4	309.2	0.0	52.7	67.7	309.2	0.0	50.1	72.9	NI	0.6
NS	4/10/2016 20:41	155.5	0.0	53.9	64.9	309.2	0.0	52.7	67.9	309.2	0.0	50.1	73.1	NI	0.6
NS	4/10/2016 20:42	155.5	0.0	53.6	65.5	309.2	0.0	52.8	68.4	309.2	0.0	50.1	73.5	NI	0.6
NS	4/10/2016 20:43	155.5	0.0	53.7	66.0	309.2	0.0	52.7	68.5	309.2	0.0	50.1	72.9	NI	0.6
NS	4/10/2016 20:44	155.5	0.0	53.6	66.3	309.2	0.0	52.6	68.7	309.2	0.0	50.0	72.1	NI	0.6
NS	4/10/2016 20:45	155.5	0.0	53.4	65.6	309.2	0.0	52.5	68.2	309.2	0.0	49.9	71.8	NI	0.6
NS	4/10/2016 20:46	155.5	0.0	53.3	65.7	309.2	0.0	52.5	68.2	309.2	0.0	50.0	71.9	NI	0.6
NS	4/10/2016 20:47	155.5	0.0	53.2	65.6	309.2	0.0	52.5	68.2	309.2	0.0	50.0	72.1	NI	0.6
NS	4/10/2016 20:48	155.5	0.0	53.0	65.2	309.2	0.0	52.4	67.7	309.2	0.0	50.0	71.7	NI	0.6
NS	4/10/2016 20:49	155.5	0.0	52.9	65.2	309.2	0.0	52.3	67.4	309.2	0.0	49.8	71.2	NI	0.6
NS	4/10/2016 20:50	155.5	0.0	52.7	65.1	309.2	0.0	52.2	67.3	309.2	0.0	49.7	71.0	NI	0.6
NS	4/10/2016 20:51	155.5	0.0	52.6	65.2	309.2	0.0	52.1	67.8	309.2	0.0	49.7	71.2	NI	0.6
NS	4/10/2016 20:52	155.5	0.0	52.4	66.0	309.2	0.0	52.1	68.2	309.2	0.0	49.6	72.5	NI	0.6
NS	4/10/2016 20:53	155.5	0.0	52.4	66.9	309.2	0.0	52.1	68.7	309.2	0.0	49.6	73.0	NI	0.6
NS	4/10/2016 20:54	155.5	0.0	52.3	66.5	309.2	0.0	52.1	68.1	309.2	0.0	49.6	72.1	NI	0.6
NS	4/10/2016 20:55	155.5	0.0	52.3	66.8	309.2	0.0	52.0	67.5	309.2	0.0	49.4	71.6	NI	0.6
NS	4/10/2016 20:56	155.5	0.0	52.3	67.2	309.2	0.0	51.9	67.5	309.2	0.0	49.3	71.7	NI	0.6
NS	4/10/2016 20:57	155.5	0.0	52.2	66.8	309.2	0.0	51.9	67.3	309.2	0.0	49.4	71.7	NI	0.6
NS	4/10/2016 20:58	155.5	0.0	52.1	66.5	309.2	0.0	51.8	67.3	309.2	0.0	49.6	72.3	NI	0.6
NS	4/10/2016 20:59	155.5	0.0	52.0	66.5	309.2	0.0	51.7	67.2	309.2	0.0	49.8	72.9	NI	0.6
NS	4/10/2016 21:00	155.5	0.0	51.9	67.0	309.2	0.0	51.6	67.5	309.2	0.0	49.7	72.7	NI	0.6
NS	4/10/2016 21:01	155.5	0.0	51.9	68.0	309.2	0.0	51.6	68.9	309.2	0.0	49.5	72.7	NI	0.6
NS	4/10/2016 21:02	155.5	0.0	52.0	68.6	309.2	0.0	51.6	69.4	309.2	0.0	49.2	74.1	NI	0.6
NS	4/10/2016 21:03	155.5	0.0	52.1	69.3	309.2	0.0	51.6	69.8	309.2	0.0	49.1	75.2	NI	0.6
NS	4/10/2016 21:04	155.5	0.0	52.2	70.5	309.2	0.0	51.7	71.1	309.2	0.0	49.1	75.7	NI	0.6
NS	4/10/2016 21:05	155.5	0.0	52.2	70.0	309.2	0.0	51.7	71.0	309.2	0.0	48.9	75.6	NI	0.6
NS	4/10/2016 21:06	155.5	0.0	52.2	69.7	309.2	0.0	51.6	70.5	309.2	0.0	48.9	75.5	NI	0.6
NS	4/10/2016 21:07	155.5	0.0	52.2	70.4	309.2	0.0	51.5	71.4	309.2	0.0	48.8	75.8	NI	0.6
NS	4/10/2016 21:08	155.5	0.0	52.1	70.3	309.2	0.0	51.5	71.5	309.2	0.0	48.8	76.4	NI	0.6
NS	4/10/2016 21:09	155.5	0.0	52.1	70.5	309.2	0.0	51.4	72.0	309.2	0.0	48.7	77.1	NI	0.6
NS	4/10/2016 21:10	155.5	0.0	52.1	70.6	309.2	0.0	51.3	72.6	309.2	0.0	48.5	77.0	NI	0.6
NS	4/10/2016 21:11	155.5	0.0	52.1	70.7	309.2	0.0	51.2	72.9	309.2	0.0	48.3	77.3	NI	0.6
NS	4/10/2016 21:12	155.5	0.0	52.1	70.9	309.2	0.0	51.2	73.4	309.2	0.0	48.0	77.3	NI	0.6
NS	4/10/2016 21:13	155.5	0.0	52.0	70.9	309.2	0.0	51.1	73.2	309.2	0.0	47.9	77.4	NI	0.6
NS	4/10/2016 21:14	155.5	0.0	51.9	70.2	309.2	0.0	51.1	72.4	309.2	0.0	47.7	77.0	NI	0.6
NS	4/10/2016 21:15	155.5	0.0	51.7	70.1	309.2	0.0	51.0	72.0	309.2	0.0	47.5	77.0	NI	0.6
NS	4/10/2016 21:16	155.5	0.0	51.5	70.3	309.2	0.0	50.9	72.1	309.2	0.0	47.4	77.7	NI	0.6
NS	4/10/2016 21:17	155.5	0.0	51.5	70.9	309.2	0.0	50.9	72.7	309.2	0.0	47.4	78.6	NI	0.6
NS	4/10/2016 21:18	155.5	0.0	51.5	71.3	309.2	0.0	50.8	73.0	309.2	0.0	47.4	79.5	NI	0.6
NS	4/10/2016 21:19	155.5	0.0	51.4	71.9	309.2	0.0	50.8	73.5	309.2	0.0	47.4	79.6	NI	0.6
NS	4/10/2016 21:20	155.5	0.0	51.3	72.4	309.2	0.0	50.8	74.0	309.2	0.0	47.5	80.2	NI	0.6
NS	4/10/2016 21:21	155.5	0.0	51.1	73.2	309.2	0.0	50.6	74.7	309.2	0.0	47.7	81.1	NI	0.6
NS	4/10/2016 21:22	155.5	0.0	51.0	73.4	309.2	0.0	50.5	74.9	309.2	0.0	47.9	81.5	NI	0.6
NS	4/10/2016 21:23	155.5	0.0	50.8	73.9	309.2	0.0	50.3	75.2	309.2	0.0	48.0	80.9	NI	0.6
NS	4/10/2016 21:24	155.5	0.0	50.5	74.4	309.2	0.0	50.0	75.4	309.2	0.0	48.0	80.6	NI	0.6
NS	4/10/2016 21:25	155.5	0.0	50.4	75.7	309.2	0.0	49.8	75.9	309.2	0.0	47.9	80.4	NI	0.6
NS	4/10/2016 21:26	155.5	0.0	50.5	76.2	309.2	0.0	49.7	76.8	309.2	0.0	47.8	80.3	NI	0.6
NS	4/10/2016 21:27	155.5	0.0	50.7	76.5	309.2	0.0	49.7	77.3	309.2	0.0	47.7	81.0	NI	0.6
NS	4/10/2016 21:28	155.5	0.0	50.6	76.8	309.2	0.0	49.6	77.7	309.2	0.0	47.6	81.3	NI	0.6
NS	4/10/2016 21:29	LOGGING STOPPED FOR MAINTENANCE				309.2	0.0	49.6	77.7	307.8	0.0	47.5	81.2	NI	MAINTENANCE
NS	4/10/2016 21:30	155.5	0.0	50.7	76.8	309.2	0.0	49.6	78.1	307.8	0.0	47.5	81.4	NI	0.6
NS	4/10/2016 21:31	155.5	0.0	50.8	78.0	309.2	0.0	49.6	78.4	309.2	0.0	47.5	81.6	NI	0.6
NS	4/10/2016 21:32	155.5	0.0	50.7	77.6	LOGGING STOPPED FOR MAINTENANCE								NI	0.6
NS	4/10/2016 21:33	155.5	0.0	50.6	77.3	304.9	0.0	49.6	78.7	309.2	0.0	47.5	81.9	NI	0.6
NS	4/10/2016 21:34	155.5	0.0	50.6	77.1	304.9	0.0	49.6	79.2	309.2	0.0	47.5	82.8	NI	0.6
NS	4/10/2016 21:35	155.5	0.0	50.5	77.5	302.1	0.0	49.7	79.3	309.2	0.0	47.5	83.2	NI	0.6
NS	4/10/2016 21:36	161.2	0.0	50.6	78.6	299.3	0.0	49.8	80.0	312.0	0.0	47.6	83.9	NI	0.6
NS	4/10/2016 21:37	169.6	0.0	50.8	78.0	299.3	0.0	49.9	80.6	314.8	0.0	47.6	83.9	NI	0.6
NS	4/10/2016 21:38	173.8	0.0	50.8	77.5	297.9	0.0	50.0	80.0	314.8	0.0	47.6	84.0	NI	0.6
NS	4/10/2016 21:39	175.2	0.0	51.0	78.8	307.8	0.0	50.0	80.6	317.6	0.0	47.6	83.9	NI	0.6
NS	4/10/2016 21:40	175.2	0.0	51.0	78.3	307.8	0.0	49.9	79.6	319.0	0.0	47.6	83.6	NI	0.6
NS	4/10/2016 21:41	175.2	0.0	50.8	78.7	307.8	0.0	49.8	80.2	319.0	0.0	47.6	84.2	NI	0.6
NS	4/10/2016 21:42	175.2	0.0	50.9	78.6	307.8	0.0	49.7	81.0	319.0	0.0	47.6	84.5	NI	0.6
NS	4/10/2016 21:43	175.2	0.7	51.1	78.1	307.8	0.0	50.0	81.6	319.0	0.0	47.8	86.6	NI	0.6
NS	4/10/2016 21:44	175.2	0.0	51.3	77.3	307.8	0.0	50.4	80.2	319.0	0.0	48.3	86.3	NI	0.6
NS	4/10/2016 21:45	175.2	0.0	51.5	77.1	307.8	0.0	50.7	79.9	319.0	0.0	48.9	85.6	NI	0.6
NS	4/10/2016 21:46	175.2	0.0	51.5	77.0	307.8	0.0	50.8	80.1	319.0	0.0	49.0	85.5	NI	0.6
NS	4/10/2016 21:47	175.2	0.0	51.7	75.9	307.8	0.0	51.0	78.6	319.0	0.0	49.2	84.4	NI	0.6
NS	4/10/2016 21:48	175.2	0.7	51.9	75.5	307.8	0.0	51.1	77.8	319.0	0.0	49.4	83.2	NI	0.6
NS	4/10/2016 21:49	175.2	0.0	51.8	75.9	307.8	0.0	51.2	77.8	319.0	0.0	49.4	82.3	NI	0.6
NS	4/10/2016 21:50	175.2	0.0	51.6	75.7	307.8	0.0	51.0	77.3	319.0	0.0	49.2	81.7	NI	0.6
NS	4/10/2016 21:51	175.2	0.0	51.4	76.1	307.8	0.0	50.8	77.5	319.0	0.0	49.0	82.0	NI	0.6
NS	4/10/2016 21:52	175.2	0.0	51.2	76.3	307.8	0.0	50.7	77.6	319.0	0.0	48.9	82.6	NI	0.6
NS	4/10/2016 21:53	175.2	0.0	51.0	77.4	307.8	0.0	50.5	78.6	319.0	0.0	48.8	82.8	NI	0.6
NS	4/10/2016 21:54	175.2	0.0	50.7	77.9	307.8	0.0	50.3	78.6	319.0	0.0	48.7	82.6	NI	0.6
NS	4/10/2016 21:55	175.2	0.0	50.5	78.0	307.8	0.0	50.1	78.8	319.0	0.0	48.6	82.6	NI	0.6
NS	4/10/2016 21:56	175.2	0.0	50.3	77.9	307.8	0.0	49.9	78.6	319.0	0.0	48.4	82.6	NI	0.6
NS	4/10/2016 21:57	175.2	0.0	50.1	78.0	307.8	0.0	49.7	78.8	319.0	0.0	48.3	82.7	NI	0.6
NS	4/10/2016 21:58	175.2	0.0	50.0	78.2	307.8	0.0	49.5	78.8	319.0	0.0	48.1	82.8	NI	0.6
NS	4/10/2016 21:59	175.2	0.0	49.8	78.3	307.8	0.0	49.3	79.1	319.0	0.0	47.9	82.9	NI	0.6
NS	4/10/2016 22:00	175.2	0.0	49.7	79.1	307.8	0.0	49.2	80.1	319.0	0.0	47.8	83.3	NI	0.6
NS	4/10/2016 22:01	175.2	0.0	49.8	79.9	307.8	0.0	49.2	81.6	319.0	0.0	47.6	83.1	NI	0.6
NS	4/10/2016 22:02	175.2	0.0	49.8	80.2	307.8	0.0	49.2	82.1	319.0	0.0	47.4	83.1	NI	0.6
NS	4/10/2016 22:03	175.2	0.0	50.0	80.5	307.8	0.0	49.4	82.0	319.0	0.0	47.2	83.4	NI	0.6
NS	4/10/2016 22:04	175.2	0.0	50.0	79.9	307.8	0.0	49.3	81.2	319.0	0.0	47.0	83.3	NI	0.6
NS	4/10/2016 22:05	175.2	0.0	50.1	80.9	307.8	0.0	49.2	81.0	319.0	0.0	46.9	83.2	NI	0.6
NS	4/10/2016 22:06	175.2	0.0	50.3	81.6	307.8	0.0	48.8	82.2	319.0	0.0	46.6	83.4	NI	0.6
NS	4/10/2016 22:07	175.2	0.0	50.4	81.7	307.8	0.0	48.8	84.3	319.0	0.0	46.3	85.5	NI	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/10/2016 22:08	175.2	0.0	50.4	81.6	307.8	0.0	48.6	84.8	319.0	0.0	46.2	87.1	NI	0.6
NS	4/10/2016 22:09	175.2	0.0	50.5	81.3	307.8	0.0	48.9	85.3	319.0	0.0	46.3	86.1	NI	0.6
NS	4/10/2016 22:10	175.2	0.0	50.5	80.1	307.8	0.0	49.1	84.0	319.0	0.0	46.4	88.6	NI	0.6
NS	4/10/2016 22:11	175.2	0.0	50.4	80.0	307.8	0.0	49.2	83.5	319.0	0.0	46.8	89.1	NI	0.6
NS	4/10/2016 22:12	175.2	0.0	50.4	80.7	307.8	0.0	49.4	83.9	319.0	0.0	47.2	89.0	NI	0.6
NS	4/10/2016 22:13	175.2	0.0	50.4	80.6	307.8	0.0	49.4	83.7	319.0	0.0	47.3	86.1	NI	0.6
NS	4/10/2016 22:14	175.2	0.0	50.2	80.3	307.8	0.0	49.2	83.3	319.0	0.0	47.2	87.0	NI	0.6
NS	4/10/2016 22:15	175.2	0.0	50.0	80.3	307.8	0.0	49.1	82.9	319.0	0.0	47.1	86.9	NI	0.6
NS	4/10/2016 22:16	175.2	0.0	49.9	80.5	307.8	0.0	49.0	82.9	319.0	0.0	47.0	87.1	NI	0.6
NS	4/10/2016 22:17	175.2	0.0	49.8	80.7	307.8	0.0	48.9	83.2	319.0	0.0	47.0	87.6	NI	0.6
NS	4/10/2016 22:18	175.2	0.0	49.7	82.1	307.8	0.0	48.9	84.3	319.0	0.0	47.0	88.6	NI	0.6
NS	4/10/2016 22:19	175.2	0.0	49.7	82.3	307.8	0.0	48.9	85.1	319.0	0.0	47.2	89.2	NI	0.6
NS	4/10/2016 22:20	175.2	0.0	49.7	82.6	307.8	0.0	49.1	85.1	319.0	0.0	47.3	88.8	NI	0.6
NS	4/10/2016 22:21	175.2	0.0	49.7	82.6	307.8	0.0	49.1	85.0	319.0	0.0	47.4	88.5	NI	0.6
NS	4/10/2016 22:22	175.2	0.0	49.7	81.7	307.8	0.0	49.2	84.2	319.0	0.0	47.3	87.8	NI	0.6
NS	4/10/2016 22:23	175.2	0.0	49.6	81.4	307.8	0.0	49.1	83.6	319.0	0.0	47.1	87.0	NI	0.6
NS	4/10/2016 22:24	175.2	0.0	49.5	81.4	307.8	0.0	48.9	83.2	319.0	0.0	46.8	86.4	NI	0.6
NS	4/10/2016 22:25	175.2	0.0	49.3	81.3	307.8	0.0	48.8	83.0	319.0	0.0	46.6	86.1	NI	0.6
NS	4/10/2016 22:26	175.2	0.0	49.2	81.3	307.8	0.0	48.8	83.1	319.0	0.0	46.5	86.3	NI	0.6
NS	4/10/2016 22:27	175.2	0.0	49.1	81.8	307.8	0.0	48.7	83.6	319.0	0.0	46.6	87.6	NI	0.6
NS	4/10/2016 22:28	175.2	0.0	49.1	82.0	307.8	0.0	48.7	83.5	319.0	0.0	46.6	88.1	NI	0.6
NS	4/10/2016 22:29	175.2	0.0	49.1	82.2	307.8	0.0	48.7	83.3	319.0	0.0	46.7	88.3	NI	0.6
NS	4/10/2016 22:30	175.2	0.0	49.1	82.5	307.8	0.0	48.6	83.5	319.0	0.0	46.7	87.8	NI	0.6
NS	4/10/2016 22:31	175.2	0.0	49.2	82.9	307.8	0.0	48.5	83.6	319.0	0.0	46.6	87.6	NI	0.6
NS	4/10/2016 22:32	175.2	0.0	49.1	82.8	307.8	0.0	48.3	83.4	319.0	0.0	46.4	87.1	NI	0.6
NS	4/10/2016 22:33	175.2	0.0	48.9	82.9	307.8	0.0	48.1	84.0	319.0	0.0	46.3	87.1	NI	0.6
NS	4/10/2016 22:34	175.2	0.0	48.8	83.2	307.8	0.0	48.0	84.3	319.0	0.0	46.1	87.1	NI	0.6
NS	4/10/2016 22:35	175.2	0.0	48.7	84.8	307.8	0.0	48.0	85.7	319.0	0.0	46.1	87.9	NI	0.6
NS	4/10/2016 22:36	175.2	0.0	48.6	84.3	307.8	0.0	47.9	85.7	319.0	0.0	45.9	87.7	NI	0.6
NS	4/10/2016 22:37	175.2	0.0	48.6	85.3	307.8	0.0	48.0	86.1	319.0	0.0	45.9	88.1	NI	0.6
NS	4/10/2016 22:38	175.2	0.0	48.5	84.8	307.8	0.0	47.6	85.2	319.0	0.0	45.6	87.4	NI	0.6
NS	4/10/2016 22:39	175.2	0.0	48.5	85.1	307.8	0.0	47.5	86.0	319.0	0.0	45.4	86.8	NI	0.6
NS	4/10/2016 22:40	175.2	0.0	48.4	85.7	307.8	0.0	47.4	87.1	319.0	0.0	45.2	86.7	NI	0.6
NS	4/10/2016 22:41	175.2	0.0	48.3	86.3	307.8	0.0	47.4	87.5	319.0	0.0	45.0	87.1	NI	0.6
NS	4/10/2016 22:42	175.2	0.0	48.4	87.2	307.8	0.0	47.6	88.7	319.0	0.0	44.9	87.5	NI	0.6
NS	4/10/2016 22:43	175.2	0.0	48.6	87.9	307.8	0.0	47.9	89.5	319.0	0.0	45.2	90.0	NI	0.6
NS	4/10/2016 22:44	175.2	0.0	48.6	87.8	307.8	0.0	48.0	89.1	319.0	0.0	45.3	91.5	NI	0.6
NS	4/10/2016 22:45	175.2	0.0	48.6	87.1	307.8	0.0	48.0	88.8	319.0	0.0	45.5	92.1	NI	0.6
NS	4/10/2016 22:46	175.2	0.0	48.6	86.8	307.8	0.0	47.7	88.1	319.0	0.0	45.6	91.7	NI	0.6
NS	4/10/2016 22:47	175.2	0.0	48.5	86.7	307.8	0.0	47.3	88.4	319.0	0.0	45.5	91.3	NI	0.6
NS	4/10/2016 22:48	175.2	0.0	48.2	86.8	307.8	0.0	47.1	88.6	319.0	0.0	45.4	90.5	NI	0.6
NS	4/10/2016 22:49	175.2	0.0	48.0	87.1	307.8	0.0	47.0	88.7	319.0	0.0	45.3	90.2	NI	0.6
NS	4/10/2016 22:50	175.2	0.0	48.0	86.8	307.8	0.0	47.0	88.9	319.0	0.0	45.3	90.1	NI	0.6
NS	4/10/2016 22:51	175.2	0.0	47.8	86.4	307.8	0.0	46.9	88.4	319.0	0.0	45.2	89.8	NI	0.6
NS	4/10/2016 22:52	175.2	0.0	47.7	86.3	307.8	0.0	46.8	88.4	319.0	0.0	45.1	89.7	NI	0.6
NS	4/10/2016 22:53	175.2	0.0	47.6	86.6	307.8	0.0	46.8	88.4	319.0	0.0	45.2	90.2	NI	0.6
NS	4/10/2016 22:54	175.2	0.0	47.7	87.0	307.8	0.0	46.8	88.6	319.0	0.0	45.3	90.6	NI	0.6
NS	4/10/2016 22:55	175.2	0.0	47.6	87.0	307.8	0.0	46.9	88.7	319.0	0.0	45.5	91.1	NI	0.6
NS	4/10/2016 22:56	175.2	0.0	47.6	86.8	307.8	0.0	47.0	88.4	319.0	0.0	45.4	90.9	NI	0.6
NS	4/10/2016 22:57	175.2	0.0	47.7	86.6	307.8	0.0	46.9	88.2	319.0	0.0	45.4	90.6	NI	0.6
NS	4/10/2016 22:58	175.2	0.0	47.6	86.5	307.8	0.0	46.8	88.1	319.0	0.0	45.3	90.5	NI	0.6
NS	4/10/2016 22:59	175.2	0.0	47.5	87.0	307.8	0.0	46.8	88.3	319.0	0.0	45.2	90.5	NI	0.6
NS	4/10/2016 23:00	175.2	0.0	47.4	87.1	307.8	0.0	46.8	88.4	319.0	0.0	45.0	90.5	NI	0.6
NS	4/10/2016 23:01	175.2	0.0	47.4	88.4	307.8	0.0	46.8	89.2	319.0	0.0	44.9	90.5	NI	0.6
NS	4/10/2016 23:02	175.2	0.0	47.5	89.0	307.8	0.0	47.0	90.3	319.0	0.0	45.0	91.0	NI	0.6
NS	4/10/2016 23:03	175.2	0.0	47.6	89.2	307.8	0.0	47.1	90.8	319.0	0.0	45.2	91.6	NI	0.6
NS	4/10/2016 23:04	175.2	0.0	47.6	89.3	307.8	0.0	47.2	90.8	319.0	0.0	45.4	92.1	NI	0.6
NS	4/10/2016 23:05	175.2	0.0	47.9	89.6	307.8	0.0	47.3	90.9	319.0	0.0	45.7	92.8	NI	0.6
NS	4/10/2016 23:06	175.2	0.0	48.1	89.4	307.8	0.0	47.6	91.1	319.0	0.0	45.8	93.0	NI	0.6
NS	4/10/2016 23:07	175.2	0.0	48.2	88.8	307.8	0.0	47.6	90.7	319.0	0.0	45.8	92.9	NI	0.6
NS	4/10/2016 23:08	175.2	0.0	48.2	88.4	307.8	0.0	47.6	90.1	319.0	0.0	45.9	92.9	NI	0.6
NS	4/10/2016 23:09	175.2	0.0	48.2	88.1	307.8	0.0	47.6	89.6	319.0	0.0	46.1	92.8	NI	0.6
NS	4/10/2016 23:10	175.2	0.0	48.2	88.0	307.8	0.0	47.6	89.5	319.0	0.0	46.3	93.1	NI	0.6
NS	4/10/2016 23:11	175.2	0.0	48.3	87.9	307.8	0.0	47.6	89.5	319.0	0.0	46.4	93.2	NI	0.6
NS	4/10/2016 23:12	175.2	0.0	48.4	88.3	307.8	0.0	47.7	89.7	319.0	0.0	46.3	92.8	NI	0.6
NS	4/10/2016 23:13	175.2	0.0	48.6	88.4	307.8	0.0	47.9	90.0	319.0	0.0	46.2	92.5	NI	0.6
NS	4/10/2016 23:14	175.2	0.0	48.7	88.2	307.8	0.0	48.0	89.6	319.0	0.0	46.1	92.0	NI	0.6
NS	4/10/2016 23:15	175.2	0.0	48.6	87.5	307.8	0.0	48.0	88.9	319.0	0.0	46.1	92.2	NI	0.6
NS	4/10/2016 23:16	175.2	0.0	48.6	87.7	307.8	0.0	47.9	88.7	319.0	0.0	46.1	92.1	NI	0.6
NS	4/10/2016 23:17	175.2	0.0	48.6	87.5	307.8	0.0	48.0	88.9	319.0	0.0	46.2	92.7	NI	0.6
NS	4/10/2016 23:18	175.2	0.0	48.6	87.5	307.8	0.0	48.0	88.7	319.0	0.0	46.3	92.9	NI	0.6
NS	4/10/2016 23:19	175.2	0.0	48.7	87.5	307.8	0.0	48.0	88.9	319.0	0.0	46.5	93.3	NI	0.6
NS	4/10/2016 23:20	169.6	0.7	48.8	87.9	342.9	0.7	48.1	89.5	319.0	0.7	46.7	93.5	NI	0.6
NS	4/10/2016 23:21	169.6	0.0	48.9	88.0	347.1	0.0	48.3	89.7	319.0	0.0	46.9	93.5	NI	0.6
NS	4/10/2016 23:22	169.6	0.0	49.0	88.3	347.1	0.0	48.5	89.8	319.0	0.0	47.1	93.4	NI	0.6
NS	4/10/2016 23:23	169.6	0.0	49.1	88.3	347.1	0.7	48.6	89.7	319.0	0.0	47.2	92.9	NI	0.6
NS	4/10/2016 23:24	169.6	0.0	49.2	88.1	347.1	0.7	48.8	89.6	319.0	0.0	47.3	92.8	NI	0.6
NS	4/10/2016 23:25	169.6	0.7	49.2	87.9	347.1	0.7	48.9	89.2	319.0	0.0	47.4	92.6	NI	0.6
NS	4/10/2016 23:26	169.6	0.0	49.3	87.6	347.1	0.7	48.8	88.9	319.0	0.0	47.4	92.2	NI	0.6
NS	4/10/2016 23:27	169.6	0.0	49.3	87.6	347.1	0.7	48.8	88.8	319.0	0.0	47.4	91.9	NI	0.6
NS	4/10/2016 23:28	169.6	0.0	49.2	87.5	347.1	0.7	48.8	88.9	319.0	0.0	47.4	92.0	NI	0.6
NS	4/10/2016 23:29	169.6	0.0	49.2	87.4	347.1	0.0	48.8	88.7	319.0	0.0	47.4	91.8	NI	0.6
NS	4/10/2016 23:30	169.6	0.0	49.2	87.3	347.1	0.0	48.8	88.7	319.0	0.0	47.5	91.9	NI	0.6
NS	4/10/2016 23:31	169.6	0.0	49.2	87.1	347.1	0.7	48.8	88.4	319.0	0.0	47.6	91.7	NI	0.6
NS	4/10/2016 23:32	169.6	0.0	49.3	87.2	347.1	0.7	48.8	88.5	319.0	0.0	47.6	91.7	NI	0.6
NS	4/10/2016 23:33	169.6	0.0	49.3	86.6	347.1	0.7	48.9	88.2	319.0	0.0	47.6	91.3	NI	0.6
NS	4/10/2016 23:34	169.6	0.0	49.4	86.7	347.1	0.7	48.9	87.9	319.0	0.0	47.5	90.8	NI	0.6
NS	4/10/2016 23:35	169.6	0.0	49.3	86.8	347.1	0.0	48.8	88.0	319.0	0.0	47.5	91.2	NI	0.6
NS	4/10/2016 23:36	169.6	0.0	49.2	87.0	347.1	0.0	48.7	88.4	319.0	0.0	47.5	91.4	NI	0.6
NS	4/10/2016 23:37	169.6	0.0	49.2	86.5	347.1	0.0	48.7	88.1	319.0	0.0	47.6	91.6	NI	0.6
NS	4/10/2016 23:38	169.6	0.0	49.3	86.8	347.1	0.0	48.7	88.3	319.0	0.0	47.6	91.2	NI	0.6
NS	4/10/2016 23:39	169.6	0.0	49.3	85.9	347.1	0.0	48.8	87.7	319.0	0.0	47.6	91.0	NI	0.6
NS	4/10/2016 23:40	169.6	0.0	49.3	86.2	347.1	0.0	48.8	87.5	319.0	0.0	47.6	91.0	NI	0.6
NS	4/10/2016 23:41	169.6	0.0	49.3	86.2	347.1	0.0	48.8	87.9	319.0	0.0	47.7	91.2	NI	0.6
NS	4/10/2016 23:42	169.6	0.0	49.2	86.2	347.1	0.0	48.7	87.7	319.0	0.0	47.6	91.0	NI	0.6
NS	4/10/2016 23:43	169.6	0.0	49.2	85.9	347.1	0.0	48.7	88.1	319.0	0.0	47.6	91.1	NI	0.6
NS	4/10/2016 23:44	169.6	0.0	49.3	85.5	347.1	0.7	48.8	87.7	319.0	0.0	47.5	90.8	NI	0.6
NS	4/10/2016 23:45	169.6	0.0	49.3	85.3	347.1	0.0	48.8	87.2	319.0	0.0	47.5	90.6	NI	0.6
NS	4/10/2016 23:46	169.6	0.0	49.4	85.0	347.1	0.0	48.8	86.9	319.0	0.0	47.5	90.6	NI	0.6
NS	4/10/2016 23:47	169.6	0.0	49.3	84.6	347.1	0.0	48.8	86.6	319.0	0.0	47.6	90.9	NI	0.6
NS	4/10/2016 23:48	169.6	0.0	49.4	85.0	347.1	0.0	48.9	86.7	319.0	0.0	47.7	90.9	NI	0.6
NS	4/10/2016 23:49	169.6	0.0	49.4	85.0	347.1	0.0	48.9	86.9	319.0	0.0	47.6	90.9	NI	0.6
NS	4/10/2016 23:50	169.6	0.0	49.4	84.3	347.1	0.0	48.9	86.4	319.0	0.0	47.7	90.4	NI	0.6
NS	4/10/2016 23:51	169.6	0.0	49.6	84.1	347.1	0.7	49.0	86.3	319.0	0.0	48.0	90.4	NI	0.6
NS	4/10/2016 23:52	169.6	0.0	49.6	83.8	347.1	0.0	49.1	86.2	319.0	0.0	48.0	90.2	NI	0.6
NS	4/10/2016 23:53	169.6	0.0	49.7	83.7	347.1	0.0	49.2	85.8	319.0	0.0	48.0	89.9	NI	0.6
NS	4/10/2016 23:54	169.6	0.0	49.7	83.5	347.1	0.0	49.2	85.5	319.0	0.0	47.9	89.3	NI	0.6
NS	4/10/2016 23:55	169.6	0.0	49.7	83.4	347.1	0.0	49.2	85.3	319.0	0.0	47.9	89.3	NI	0.6
NS	4/10/2016 23:56	169.6	0.0	49.7	83.3	347.1	0.0	49.2	85.0	319.0	0.0	47.9	89.2	NI	0.6
NS	4/10/2016 23:57	169.6	0.0	49.9	83.6	347.1	0.0	49.3	85.6	319.0	0.0	48.1	89.4	NI	0.6
NS	4/10/2016 23:58	169.6	0.0	50.1	83.1	347.1	0.0	49.5	85.0	319.0	0.0	48.2	88.9	NI	0.6
NS	4/10/2016 23:59	169.6	0.0	50.1	83.0	347.1	0.0	49.5	84.8	319.0	0.0	48.1	88.6	NI	0.6
NS	4/11/2016 0:00	169.6	0.0	49.9	83.6	347.1	0.0	49.2	85.1	319.0	0.0	47.9	88.3	NI	0.6
NS	4/11/2016 0:01	169.6	0.0	50.0	83.5	347.1	0.0	49.2	85.6	319.0	0.0	47.9	89.0	NI	0.6
NS	4/11/2016 0:02	169.6	0.0	50.0	83.5	347.1	0.0	49.2	85.9	319.0	0.0	47.7	89.1	NI	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/11/2016 0:03	169.6	0.0	50.0	83.3	347.1	0.0	49.2	85.6	319.0	0.0	47.6	89.0	NI	0.6
NS	4/11/2016 0:04	169.6	0.0	50.0	83.3	347.1	0.0	49.2	85.5	319.0	0.0	47.5	89.1	NI	0.6
NS	4/11/2016 0:05	169.6	0.0	50.0	84.1	347.1	0.0	49.1	85.7	319.0	0.0	47.4	89.1	NI	0.6
NS	4/11/2016 0:06	169.6	0.0	49.9	84.2	347.1	0.0	49.0	86.1	319.0	0.0	47.3	89.6	NI	0.6
NS	4/11/2016 0:07	169.6	0.0	49.8	84.8	347.1	0.0	49.0	86.5	319.0	0.0	47.3	89.6	NI	0.6
NS	4/11/2016 0:08	169.6	0.0	49.7	84.4	347.1	0.0	48.9	86.4	319.0	0.0	47.3	90.1	NI	0.6
NS	4/11/2016 0:09	169.6	0.0	49.6	84.4	347.1	0.0	48.8	86.2	319.0	0.0	47.3	90.0	NI	0.6
NS	4/11/2016 0:10	169.6	0.0	49.5	84.1	347.1	0.0	48.8	86.1	319.0	0.0	47.3	90.0	NI	0.6
NS	4/11/2016 0:11	169.6	0.0	49.5	84.1	347.1	0.0	48.8	86.0	319.0	0.0	47.3	90.0	NI	0.6
NS	4/11/2016 0:12	169.6	0.0	49.6	84.1	347.1	0.0	48.9	86.2	319.0	0.0	47.4	90.6	NI	0.6
NS	4/11/2016 0:13	169.6	0.0	49.6	84.7	347.1	0.0	48.9	86.5	319.0	0.0	47.6	90.7	NI	0.6
NS	4/11/2016 0:14	169.6	0.0	49.7	85.7	347.1	0.0	49.0	87.2	319.0	0.0	47.8	91.1	NI	0.6
NS	4/11/2016 0:15	169.6	0.0	49.8	86.1	347.1	0.0	49.2	87.7	319.0	0.0	48.1	91.2	NI	0.6
NS	4/11/2016 0:16	169.6	0.0	50.0	85.4	347.1	0.0	49.4	87.4	319.0	0.0	48.3	91.2	NI	0.6
NS	4/11/2016 0:17	169.6	0.0	50.2	85.5	347.1	0.0	49.6	87.1	319.0	0.0	48.5	91.0	NI	0.6
NS	4/11/2016 0:18	169.6	0.0	50.3	85.5	347.1	0.0	49.6	87.1	319.0	0.0	48.5	90.5	NI	0.6
NS	4/11/2016 0:19	169.6	0.0	50.4	84.9	347.1	0.0	49.7	86.9	319.0	0.0	48.5	90.3	NI	0.6
NS	4/11/2016 0:20	169.6	0.0	50.4	84.9	347.1	0.0	49.7	87.0	319.0	0.0	48.4	90.1	NI	0.6
NS	4/11/2016 0:21	169.6	0.0	50.4	84.9	347.1	0.0	49.7	86.8	319.0	0.0	48.3	90.3	NI	0.6
NS	4/11/2016 0:22	169.6	0.0	50.4	84.9	347.1	0.0	49.6	86.6	319.0	0.0	48.2	90.2	NI	0.6
NS	4/11/2016 0:23	169.6	0.0	50.4	84.9	347.1	0.0	49.6	86.7	319.0	0.0	48.2	90.2	NI	0.6
NS	4/11/2016 0:24	169.6	0.0	50.4	85.3	347.1	0.0	49.7	87.2	319.0	0.0	48.1	90.3	NI	0.6
NS	4/11/2016 0:25	169.6	0.0	50.4	85.5	347.1	0.0	49.7	87.2	319.0	0.0	48.0	90.1	NI	0.6
NS	4/11/2016 0:26	169.6	0.0	50.6	85.9	347.1	0.0	49.9	87.5	319.0	0.0	48.3	91.2	NI	0.6
NS	4/11/2016 0:27	169.6	0.0	50.6	86.0	347.1	0.0	50.1	88.1	319.0	0.0	48.7	92.1	NI	0.6
NS	4/11/2016 0:28	169.6	0.0	50.9	85.3	347.1	0.0	50.2	87.4	319.0	0.0	48.7	91.3	NI	0.6
NS	4/11/2016 0:29	169.6	0.0	50.9	86.1	347.1	0.0	50.2	87.7	319.0	0.0	48.7	91.3	NI	0.6
NS	4/11/2016 0:30	169.6	0.0	50.9	86.0	347.1	0.0	50.1	87.7	319.0	0.0	48.7	91.2	NI	0.6
NS	4/11/2016 0:31	171.0	0.0	50.9	85.5	347.1	0.0	50.1	87.4	319.0	0.0	48.6	90.6	NI	0.6
NS	4/11/2016 0:32	172.4	0.0	50.6	85.5	347.1	0.0	50.0	87.1	319.0	0.0	48.5	90.5	NI	0.6
NS	4/11/2016 0:33	172.4	0.0	50.7	86.1	347.1	0.0	50.0	87.7	319.0	0.0	48.5	91.0	NI	0.6
NS	4/11/2016 0:34	172.4	0.0	50.8	86.5	347.1	0.0	50.1	88.4	319.0	0.0	48.7	91.4	NI	0.6
NS	4/11/2016 0:35	172.4	0.0	51.1	86.7	347.1	0.7	50.4	88.6	319.0	0.0	48.9	92.1	NI	0.6
NS	4/11/2016 0:36	172.4	0.0	51.2	86.0	347.1	0.0	50.5	88.0	319.0	0.0	49.2	91.9	NI	0.6
NS	4/11/2016 0:37	172.4	0.0	51.4	86.0	347.1	0.7	50.7	88.0	319.0	0.0	49.4	91.9	NI	0.6
NS	4/11/2016 0:38	172.4	0.0	51.5	85.5	347.1	0.0	50.8	87.5	319.0	0.0	49.4	91.2	NI	0.6
NS	4/11/2016 0:39	172.4	0.0	51.5	85.9	347.1	0.0	50.8	87.6	319.0	0.0	49.5	91.3	NI	0.6
NS	4/11/2016 0:40	172.4	0.0	51.6	85.5	347.1	0.0	50.9	87.5	319.0	0.0	49.6	91.2	NI	0.6
NS	4/11/2016 0:41	172.4	0.0	51.5	85.1	347.1	0.0	50.9	86.9	319.0	0.0	49.5	91.0	NI	0.6
NS	4/11/2016 0:42	172.4	0.0	51.5	85.0	347.1	0.0	50.8	86.8	319.0	0.0	49.5	90.7	NI	0.6
NS	4/11/2016 0:43	172.4	0.0	51.4	85.2	347.1	0.0	50.8	87.1	319.0	0.0	49.5	90.7	NI	0.6
NS	4/11/2016 0:44	172.4	0.0	51.4	85.8	347.1	0.0	50.8	87.3	319.0	0.0	49.5	90.9	NI	0.6
NS	4/11/2016 0:45	172.4	0.0	51.5	85.6	347.1	0.0	50.8	87.4	319.0	0.0	49.6	90.9	NI	0.6
NS	4/11/2016 0:46	172.4	0.0	51.4	86.2	347.1	0.0	50.8	87.5	319.0	0.0	49.5	90.3	NI	0.6
NS	4/11/2016 0:47	172.4	0.0	51.5	86.2	347.1	0.0	50.8	87.9	319.0	0.0	49.3	90.3	NI	0.6
NS	4/11/2016 0:48	172.4	0.0	51.7	86.9	347.1	0.0	50.9	88.4	319.0	0.0	49.3	90.8	NI	0.6
NS	4/11/2016 0:49	172.4	0.0	51.6	86.3	347.1	0.0	50.9	87.7	319.0	0.0	49.2	90.6	NI	0.6
NS	4/11/2016 0:50	172.4	0.0	51.7	86.7	347.1	0.0	51.0	88.9	319.0	0.0	49.2	91.7	NI	0.6
NS	4/11/2016 0:51	172.4	0.0	51.6	87.0	347.1	0.0	51.0	88.7	319.0	0.0	49.2	91.6	NI	0.6
NS	4/11/2016 0:52	172.4	0.0	51.9	87.0	347.1	0.0	51.2	88.9	319.0	0.0	49.6	92.8	NI	0.6
NS	4/11/2016 0:53	175.2	0.7	52.0	86.6	341.5	0.7	51.3	88.1	319.0	0.7	49.7	92.2	NI	0.6
NS	4/11/2016 0:54	175.2	0.0	52.1	86.8	337.2	0.0	51.5	88.5	319.0	0.0	50.2	92.3	NI	0.6
NS	4/11/2016 0:55	175.2	0.0	52.2	86.2	337.2	0.0	51.7	88.1	319.0	0.0	50.3	91.8	NI	0.6
NS	4/11/2016 0:56	175.2	0.0	52.1	85.7	337.2	0.0	51.5	87.2	319.0	0.0	50.2	91.1	NI	0.6
NS	4/11/2016 0:57	175.2	0.0	52.0	86.0	337.2	0.0	51.4	87.3	319.0	0.0	50.1	90.7	NI	0.6
NS	4/11/2016 0:58	175.2	0.0	51.9	86.6	337.2	0.0	51.2	87.6	319.0	0.0	49.9	90.5	NI	0.6
NS	4/11/2016 0:59	175.2	0.0	52.0	86.3	337.2	0.0	51.4	88.1	319.0	0.0	49.8	90.8	NI	0.6
NS	4/11/2016 1:00	175.2	0.0	51.9	86.1	337.2	0.0	51.3	87.8	319.0	0.0	49.8	91.3	NI	0.6
NS	4/11/2016 1:01	175.2	0.7	51.9	86.5	337.2	0.0	51.2	87.8	319.0	0.7	49.8	91.2	NI	0.6
NS	4/11/2016 1:02	171.0	0.0	51.9	86.7	337.2	0.0	51.2	88.0	319.0	0.0	49.7	91.0	NI	0.6
NS	4/11/2016 1:03	171.0	0.0	51.6	86.0	337.2	0.0	51.1	87.5	319.0	0.0	49.6	91.1	NI	0.6
NS	4/11/2016 1:04	171.0	0.0	51.6	86.3	337.2	0.0	51.1	87.7	319.0	0.0	49.7	91.0	NI	0.6
NS	4/11/2016 1:05	171.0	0.0	51.7	87.1	337.2	0.0	51.0	88.2	319.0	0.0	49.7	91.4	NI	0.6
NS	4/11/2016 1:06	171.0	0.0	51.8	87.0	337.2	0.0	51.1	88.6	319.0	0.7	49.8	91.8	NI	0.6
NS	4/11/2016 1:07	171.0	0.0	51.8	87.0	337.2	0.0	51.1	88.6	319.0	0.0	49.9	91.5	NI	0.6
NS	4/11/2016 1:08	175.2	0.7	51.8	87.3	337.2	0.0	51.1	88.6	319.0	0.0	50.0	91.8	NI	0.6
NS	4/11/2016 1:09	182.8	0.0	52.1	87.3	337.2	0.0	51.4	89.3	319.0	0.0	50.2	92.3	NI	0.6
NS	4/11/2016 1:10	182.8	0.0	52.2	87.0	337.2	0.0	51.6	89.0	319.0	0.0	50.5	92.0	NI	0.6
NS	4/11/2016 1:11	182.8	0.0	52.2	86.7	337.2	0.0	51.6	88.4	319.0	0.0	50.5	91.4	NI	0.6
NS	4/11/2016 1:12	182.8	0.0	52.2	87.2	337.2	0.0	51.6	88.7	319.0	0.0	50.4	91.0	NI	0.6
NS	4/11/2016 1:13	182.8	0.0	52.2	87.1	337.2	0.0	51.6	88.6	319.0	0.0	50.4	91.7	NI	0.6
NS	4/11/2016 1:14	182.8	0.0	52.3	87.4	337.2	0.0	51.7	89.0	319.0	0.0	50.4	91.8	NI	0.6
NS	4/11/2016 1:15	182.8	0.0	52.4	86.9	337.2	0.0	51.9	88.7	319.0	0.0	50.4	91.5	NI	0.6
NS	4/11/2016 1:16	182.8	0.0	52.5	87.6	337.2	0.0	51.9	89.1	319.0	0.0	50.4	92.0	NI	0.6
NS	4/11/2016 1:17	182.8	0.0	52.6	87.6	337.2	0.0	52.0	89.1	319.0	0.0	50.6	92.1	NI	0.6
NS	4/11/2016 1:18	135.9	0.7	52.7	87.1	57.3	0.7	52.2	88.6	13.7	0.7	50.8	91.9	NI	0.6
NS	4/11/2016 1:19	123.2	0.0	52.5	87.1	92.4	0.0	51.9	88.3	67.1	0.0	50.6	91.4	NI	0.6
NS	4/11/2016 1:20	123.2	0.0	52.5	87.9	92.4	0.0	51.9	89.2	67.1	0.0	50.6	91.9	NI	0.6
NS	4/11/2016 1:21	123.2	0.0	52.4	88.0	92.4	0.0	51.9	89.3	67.1	0.0	50.6	91.9	NI	0.6
NS	4/11/2016 1:22	123.2	0.0	52.4	88.3	92.4	0.0	51.9	89.4	67.1	0.0	50.6	91.9	NI	0.6
NS	4/11/2016 1:23	123.2	0.0	52.4	88.4	92.4	0.0	51.9	89.7	67.1	0.0	50.9	92.3	NI	0.6
NS	4/11/2016 1:24	123.2	0.0	52.4	88.3	92.4	0.0	51.9	89.6	67.1	0.0	50.8	92.0	NI	0.6
NS	4/11/2016 1:25	123.2	0.0	52.3	88.5	92.4	0.7	51.9	89.7	67.1	0.0	50.6	92.2	NI	0.6
NS	4/11/2016 1:26	123.2	0.0	52.3	88.7	92.4	0.7	51.9	90.0	67.1	0.0	50.7	92.2	NI	0.6
NS	4/11/2016 1:27	123.2	0.0	52.3	88.8	92.4	0.0	51.9	90.0	67.1	0.0	50.7	92.2	NI	0.6
NS	4/11/2016 1:28	123.2	0.0	52.2	88.9	92.4	0.0	51.9	90.0	67.1	0.0	50.7	92.4	NI	0.6
NS	4/11/2016 1:29	123.2	0.0	52.2	89.1	92.4	0.0	51.8	90.2	67.1	0.0	50.7	92.4	NI	0.6
NS	4/11/2016 1:30	123.2	0.0	52.2	89.3	92.4	0.7	51.9	90.5	67.1	0.0	50.6	92.6	NI	0.6
NS	4/11/2016 1:31	123.2	0.0	52.2	89.1	92.4	0.0	51.9	90.4	67.1	0.0	50.6	92.9	NI	0.6
NS	4/11/2016 1:32	123.2	0.0	52.2	89.2	92.4	0.7	51.8	90.2	67.1	0.0	50.5	92.4	NI	0.6
NS	4/11/2016 1:33	123.2	0.0	52.1	89.4	92.4	0.0	51.8	90.4	67.1	0.0	50.4	92.8	NI	0.6
NS	4/11/2016 1:34	123.2	0.0	52.1	89.7	92.4	0.0	51.7	90.5	67.1	0.0	50.4	92.9	NI	0.6
NS	4/11/2016 1:35	123.2	0.7	52.1	89.6	89.6	0.7	51.6	90.5	67.1	0.7	50.3	93.0	NI	0.6
NS	4/11/2016 1:36	123.2	0.0	52.1	89.6	88.1	0.7	51.6	90.7	67.1	0.0	50.3	93.3	NI	0.6
NS	4/11/2016 1:37	123.2	0.7	52.1	89.2	12.3	0.7	51.6	90.7	54.5	0.7	50.2	92.8	NI	0.6
NS	4/11/2016 1:38	123.2	0.0	51.9	89.9	348.5	0.0	51.4	90.6	48.8	0.0	50.1	93.2	NI	0.6
NS	4/11/2016 1:39	123.2	0.0	51.6	89.3	348.5	0.0	51.2	90.2	48.8	0.0	50.0	92.8	NI	0.6
NS	4/11/2016 1:40	123.2	0.0	51.6	89.9	348.5	0.0	51.1	91.0	48.8	0.0	50.0	93.3	NI	0.6
NS	4/11/2016 1:41	123.2	0.0	51.5	90.1	348.5	0.0	50.9	91.1	48.8	0.0	49.8	92.9	NI	0.6
NS	4/11/2016 1:42	123.2	0.0	51.4	90.3	348.5	0.0	50.8	91.0	48.8	0.0	49.8	92.8	NI	0.6
NS	4/11/2016 1:43	123.2	0.0	51.4	90.9	348.5	0.7	50.9	91.8	48.8	0.0	49.8	93.4	NI	0.6
NS	4/11/2016 1:44	123.2	0.0	51.4	91.0	348.5	0.0	50.8	91.8	48.8	0.0	49.7	93.2	NI	0.6
NS	4/11/2016 1:45	123.2	0.0	51.6	91.2	348.5	0.0	51.0	92.5	48.8	0.0	49.9	94.2	NI	0.6
NS	4/11/2016 1:46	123.2	0.0	51.7	91.2	348.5	0.0	51.1	92.4	48.8	0.0	50.0	94.3	NI	0.6
NS	4/11/2016 1:47	123.2	0.0	51.7	90.4	348.5	0.0	51.1	91.9	48.8	0.0	49.9	94.0	NI	0.6
NS	4/11/2016 1:48	123.2	0.0	51.6	91.0	348.5	0.0	51.0	91.9	48.8	0.0	49.8	93.8	NI	0.6
NS	4/11/2016 1:49	123.2	0.0	51.6	91.2	348.5	0.0	51.1	92.4	48.8	0.0	49.9	94.1	NI	0.6
NS	4/11/2016 1:50	123.2	0.0	51.6	91.0	348.5	0.0	51.1	92.3	48.8	0.0	49.9	94.0	NI	0.6
NS	4/11/2016 1:51	123.2	0.0	51.6	91.4	348.5	0.0	51.1	92.4	48.8	0.0	49.8	93.9	NI	0.6
NS	4/11/2016 1:52	123.2	0.0	51.7	91.8	348.5	0.0	51.2	92.9	48.8	0.0	50.0	95.2	NI	0.6
NS	4/11/2016 1:53	123.2	0.0	51.9	92.0	348.5	0.0	51.5	93.2	48.8	0.0	50.3	95.3	NI	0.6
NS	4/11/2016 1:54	123.2	0.0	52.2	91.6	348.5	0.7	51.7	93.1	48.8	0.7	50.5	95.4	NI	0.6
NS	4/11/2016 1:55	123.2	0.0	52.2	91.5	348.5	0.0	51.8	92.5	48.8	0.0	50.5	94.7	NI	0.6
NS	4/11/2016 1:56	123.2	0.0	52.3	91.5	348.5	0.0	51.8	92.6	48.8	0.0	50.4	94.5	NI	0.6
NS	4/11/2016 1:57	123.2	0.0	52.3	91.2	348.5	0.0	51.8	92.5	48.8	0.0	50.4	94.4	NI	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/11/2016 1:58	123.2	0.0	52.2	90.8	348.5	0.0	51.7	92.0	48.8	0.0	50.4	94.1	NI	0.6
NS	4/11/2016 1:59	123.2	0.0	52.1	90.9	348.5	0.0	51.6	91.7	48.8	0.0	50.3	93.9	NI	0.6
NS	4/11/2016 2:00	123.2	0.0	51.9	90.8	348.5	0.0	51.4	91.5	48.8	0.0	50.1	94.0	NI	0.6
NS	4/11/2016 2:01	123.2	0.0	51.9	91.7	348.5	0.0	51.4	92.9	48.8	0.0	50.4	95.1	NI	0.6
NS	4/11/2016 2:02	123.2	0.0	52.0	92.2	348.5	0.0	51.5	93.2	48.8	0.0	50.4	95.2	NI	0.6
NS	4/11/2016 2:03	137.3	0.0	52.2	92.4	348.5	0.0	51.6	93.3	48.8	0.7	50.4	95.0	NI	0.6
NS	4/11/2016 2:04	140.1	0.0	52.3	92.6	348.5	0.0	51.7	93.7	48.8	0.0	50.7	95.9	NI	0.6
NS	4/11/2016 2:05	140.1	0.0	52.4	92.5	348.5	0.0	51.9	93.9	48.8	0.0	50.9	96.2	NI	0.6
NS	4/11/2016 2:06	140.1	0.0	52.4	92.3	348.5	0.0	51.9	93.5	48.8	0.0	51.1	95.9	NI	0.6
NS	4/11/2016 2:07	140.1	0.0	52.3	92.1	348.5	0.0	51.9	93.2	48.8	0.0	51.1	95.6	NI	0.6
NS	4/11/2016 2:08	140.1	0.0	52.2	91.8	348.5	0.0	51.9	92.8	48.8	0.0	51.0	95.3	NI	0.6
NS	4/11/2016 2:09	140.1	0.0	52.1	92.3	348.5	0.0	51.8	93.1	48.8	0.0	50.9	95.1	NI	0.6
NS	4/11/2016 2:10	140.1	0.0	52.0	92.7	348.5	0.0	51.7	93.6	48.8	0.0	50.8	95.1	NI	0.6
NS	4/11/2016 2:11	140.1	0.0	52.0	93.1	348.5	0.0	51.7	93.8	48.8	0.0	50.6	94.9	NI	0.6
NS	4/11/2016 2:12	140.1	0.0	52.0	92.5	348.5	0.0	51.7	93.6	48.8	0.0	50.5	95.0	NI	0.6
NS	4/11/2016 2:13	138.7	0.0	51.9	92.8	348.5	0.0	51.6	93.9	48.8	0.0	50.4	95.3	NI	0.6
NS	4/11/2016 2:14	135.9	0.0	51.8	92.8	354.1	0.0	51.4	93.3	48.8	0.0	50.3	95.4	NI	0.6
NS	4/11/2016 2:15	135.9	0.0	51.8	93.1	354.1	0.0	51.4	93.8	48.8	0.0	50.4	95.3	NI	0.6
NS	4/11/2016 2:16	135.9	0.0	51.8	93.3	354.1	0.0	51.4	94.3	48.8	0.0	50.4	95.8	NI	0.6
NS	4/11/2016 2:17	135.9	0.0	51.7	93.7	354.1	0.0	51.3	94.3	48.8	0.0	50.4	95.8	NI	0.6
NS	4/11/2016 2:18	135.9	0.0	51.6	93.8	354.1	0.0	51.3	94.3	48.8	0.0	50.4	95.9	NI	0.6
NS	4/11/2016 2:19	135.9	0.0	51.6	93.7	354.1	0.0	51.1	94.5	48.8	0.0	50.3	95.8	NI	0.6
NS	4/11/2016 2:20	135.9	0.0	51.5	94.0	354.1	0.0	51.0	94.4	48.8	0.0	50.1	95.4	NI	0.6
NS	4/11/2016 2:21	137.3	0.7	51.6	94.0	352.7	0.7	51.1	94.9	48.8	0.7	50.0	95.9	NI	0.6
NS	4/11/2016 2:22	138.7	0.7	51.6	94.5	2.5	0.7	51.1	95.1	48.8	0.7	50.0	96.2	NI	0.6
NS	4/11/2016 2:23	138.7	0.0	51.7	94.6	2.5	0.0	51.1	95.3	48.8	0.0	50.0	96.0	NI	0.6
NS	4/11/2016 2:24	138.7	0.0	51.7	94.3	2.5	0.0	51.2	95.3	48.8	0.0	50.0	96.1	NI	0.6
NS	4/11/2016 2:25	138.7	0.0	51.7	94.0	2.5	0.0	51.2	95.1	48.8	0.0	50.0	96.1	NI	0.6
NS	4/11/2016 2:26	138.7	0.0	51.7	94.3	2.5	0.0	51.2	95.3	48.8	0.0	50.0	96.4	NI	0.6
NS	4/11/2016 2:27	138.7	0.0	51.6	94.4	2.5	0.0	51.2	95.2	48.8	0.0	50.0	96.4	NI	0.6
NS	4/11/2016 2:28	138.7	0.0	51.6	94.6	2.5	0.0	51.1	95.2	48.8	0.0	50.0	96.2	NI	0.6
NS	4/11/2016 2:29	138.7	0.0	51.6	94.7	2.5	0.0	51.1	95.4	48.8	0.0	50.0	96.3	NI	0.6
NS	4/11/2016 2:30	138.7	0.0	51.7	94.9	2.5	0.0	51.2	95.5	48.8	0.0	50.0	96.5	NI	0.6
NS	4/11/2016 2:31	138.7	0.0	51.7	94.9	2.5	0.0	51.3	95.8	48.8	0.0	50.2	96.8	NI	0.6
NS	4/11/2016 2:32	152.7	1.5	51.9	95.1	349.9	0.7	51.4	95.7	39.0	0.7	50.4	97.0	NI	0.6
NS	4/11/2016 2:33	243.2	0.7	51.6	94.0	1.1	1.5	51.3	95.0	347.1	0.7	50.1	96.3	NI	0.6
NS	4/11/2016 2:34	243.2	0.0	51.9	94.7	25.0	0.0	51.4	95.3	347.1	0.0	50.3	96.7	NI	0.6
NS	4/11/2016 2:35	243.2	0.0	51.6	94.5	25.0	0.0	51.3	95.3	347.1	0.0	50.3	96.7	NI	0.6
NS	4/11/2016 2:36	243.2	0.0	51.6	94.9	25.0	0.0	51.3	95.3	347.1	0.0	50.3	96.6	NI	0.6
NS	4/11/2016 2:37	243.2	0.0	51.9	94.6	25.0	0.0	51.5	95.5	347.1	0.0	50.5	97.1	NI	0.6
NS	4/11/2016 2:38	243.2	0.0	51.9	94.5	25.0	0.0	51.4	95.3	347.1	0.0	50.4	96.8	NI	0.6
NS	4/11/2016 2:39	243.2	0.0	51.6	94.6	25.0	0.0	51.3	95.3	347.1	0.0	50.3	96.6	NI	0.6
NS	4/11/2016 2:40	243.2	0.0	51.9	94.8	25.0	0.0	51.4	95.5	347.1	0.0	50.3	96.8	NI	0.6
NS	4/11/2016 2:41	243.2	0.0	51.6	94.3	25.0	0.7	51.3	95.4	347.1	0.0	50.0	96.5	NI	0.6
NS	4/11/2016 2:42	243.2	0.0	51.7	94.8	25.0	0.0	51.2	95.3	347.1	0.0	50.0	96.2	NI	0.6
NS	4/11/2016 2:43	243.2	0.0	51.6	95.3	25.0	0.0	51.2	96.0	347.1	0.0	50.0	96.5	NI	0.6
NS	4/11/2016 2:44	248.8	0.7	51.9	95.4	356.9	0.7	51.5	96.3	344.3	0.7	50.3	96.9	NI	0.6
NS	4/11/2016 2:45	250.2	0.0	52.0	95.0	324.6	0.0	51.5	96.0	341.5	0.0	50.3	96.8	NI	0.6
NS	4/11/2016 2:46	250.2	0.0	52.0	95.1	324.6	0.0	51.5	96.0	341.5	0.0	50.2	96.8	NI	0.6
NS	4/11/2016 2:47	250.2	0.7	51.9	94.8	324.6	0.0	51.5	95.7	341.5	0.0	50.3	96.9	NI	0.6
NS	4/11/2016 2:48	250.2	0.0	51.9	95.1	324.6	0.0	51.5	95.8	341.5	0.0	50.5	97.1	NI	0.6
NS	4/11/2016 2:49	250.2	0.0	51.9	95.4	324.6	0.0	51.6	96.1	341.5	0.0	50.4	96.9	NI	0.6
NS	4/11/2016 2:50	230.5	0.7	52.1	95.3	312.0	0.7	51.7	96.2	331.6	0.7	50.7	97.4	NI	0.6
NS	4/11/2016 2:51	121.8	0.0	52.2	95.6	251.6	0.7	51.8	96.4	293.7	0.7	50.8	97.6	NI	0.6
NS	4/11/2016 2:52	121.8	0.0	52.1	95.1	251.6	0.0	51.7	96.2	293.7	0.0	51.0	97.7	NI	0.6
NS	4/11/2016 2:53	121.8	0.0	52.1	94.9	251.6	0.0	51.7	95.9	293.7	0.0	50.8	97.4	NI	0.6
NS	4/11/2016 2:54	253.0	1.5	52.2	95.4	265.6	1.5	51.8	96.2	293.7	0.7	50.7	97.3	NI	0.6
NS	4/11/2016 2:55	281.1	0.0	52.2	95.0	275.5	0.7	51.7	96.0	293.7	0.0	50.8	97.4	NI	0.6
NS	4/11/2016 2:56	281.1	0.0	52.2	94.9	275.5	0.0	51.7	96.0	293.7	0.0	50.8	97.4	NI	0.6
NS	4/11/2016 2:57	281.1	0.0	52.1	94.8	275.5	0.0	51.6	95.7	293.7	0.0	50.8	97.2	NI	0.6
NS	4/11/2016 2:58	281.1	0.0	51.9	95.3	275.5	0.0	51.5	95.8	293.7	0.0	50.7	97.2	NI	0.6
NS	4/11/2016 2:59	281.1	0.0	51.9	95.3	275.5	0.0	51.6	96.3	293.7	0.0	50.9	97.5	NI	0.6
NS	4/11/2016 3:00	281.1	0.0	51.9	95.4	275.5	0.0	51.6	96.2	293.7	0.0	50.8	97.3	NI	0.6
NS	4/11/2016 3:01	282.5	0.7	52.0	95.9	275.5	0.7	51.7	96.5	293.7	0.7	50.7	97.3	NI	0.6
NS	4/11/2016 3:02	351.3	0.7	52.1	95.9	302.1	1.5	51.7	96.5	293.7	0.7	50.7	97.5	NI	0.6
NS	4/11/2016 3:03	13.7	0.0	52.1	95.7	316.2	0.7	51.7	96.4	293.7	0.0	50.7	97.5	NI	0.6
NS	4/11/2016 3:04	10.9	0.7	52.2	95.8	316.2	0.0	51.8	96.3	293.7	0.0	50.7	97.4	NI	0.6
NS	4/11/2016 3:05	354.1	0.7	52.4	95.9	292.3	0.7	52.0	96.6	293.7	0.7	51.2	97.8	NI	0.6
NS	4/11/2016 3:06	354.1	0.0	52.4	95.5	289.5	0.7	52.0	96.4	293.7	0.0	51.2	97.8	NI	0.6
NS	4/11/2016 3:07	354.1	0.0	52.4	95.4	289.5	0.0	51.9	96.2	293.7	0.0	51.2	97.7	NI	0.6
NS	4/11/2016 3:08	354.1	0.0	52.3	95.1	289.5	0.0	51.9	96.1	293.7	0.0	51.1	97.6	NI	0.6
NS	4/11/2016 3:09	354.1	0.0	52.2	95.3	289.5	0.0	51.9	96.0	293.7	0.0	51.2	97.5	NI	0.6
NS	4/11/2016 3:10	354.1	0.0	52.1	95.4	289.5	0.0	51.7	95.9	293.7	0.0	51.0	97.3	NI	0.6
NS	4/11/2016 3:11	354.1	0.0	52.1	95.6	289.5	0.0	51.6	96.1	293.7	0.0	50.8	97.1	NI	0.6
NS	4/11/2016 3:12	354.1	0.0	52.1	95.8	289.5	0.0	51.6	96.3	293.7	0.0	50.8	97.1	NI	0.6
NS	4/11/2016 3:13	354.1	0.0	52.0	95.8	289.5	0.0	51.5	96.5	293.7	0.0	50.6	96.9	NI	0.6
NS	4/11/2016 3:14	354.1	0.0	52.0	96.1	289.5	0.0	51.6	96.8	293.7	0.0	50.6	97.4	NI	0.6
NS	4/11/2016 3:15	354.1	0.0	52.0	96.1	289.5	0.0	51.6	96.9	293.7	0.0	50.9	97.6	NI	0.6
NS	4/11/2016 3:16	354.1	0.0	51.9	96.0	289.5	0.0	51.6	96.8	293.7	0.0	50.8	97.5	NI	0.6
NS	4/11/2016 3:17	354.1	0.0	51.7	95.7	289.5	0.0	51.4	96.5	293.7	0.0	50.5	97.3	NI	0.6
NS	4/11/2016 3:18	354.1	0.0	51.6	96.1	289.5	0.0	51.3	96.4	293.7	0.0	50.5	97.3	NI	0.6
NS	4/11/2016 3:19	354.1	0.0	51.5	96.3	289.5	0.0	51.2	96.6	293.7	0.0	50.5	97.4	NI	0.6
NS	4/11/2016 3:20	354.1	0.0	51.5	96.5	289.5	0.0	51.1	96.7	293.7	0.0	50.4	97.3	NI	0.6
NS	4/11/2016 3:21	354.1	0.0	51.6	96.8	289.5	0.0	51.2	97.1	293.7	0.0	50.2	97.0	NI	0.6
NS	4/11/2016 3:22	354.1	0.0	51.7	96.8	289.5	0.0	51.1	97.2	293.7	0.0	50.2	97.1	NI	0.6
NS	4/11/2016 3:23	354.1	0.0	51.7	96.7	289.5	0.0	51.2	97.1	293.7	0.0	50.2	97.2	NI	0.6
NS	4/11/2016 3:24	354.1	0.0	51.6	96.8	289.5	0.0	51.2	97.2	293.7	0.0	50.2	97.4	NI	0.6
NS	4/11/2016 3:25	354.1	0.0	51.6	96.8	289.5	0.0	51.2	97.2	293.7	0.0	50.3	97.6	NI	0.6
NS	4/11/2016 3:26	354.1	0.0	51.5	96.7	289.5	0.0	51.1	97.3	293.7	0.0	50.3	97.8	NI	0.6
NS	4/11/2016 3:27	354.1	0.0	51.5	96.7	289.5	0.0	51.0	97.3	293.7	0.0	50.1	97.6	NI	0.6
NS	4/11/2016 3:28	354.1	0.0	51.5	97.0	289.5	0.0	51.1	97.6	293.7	0.0	50.2	97.8	NI	0.6
NS	4/11/2016 3:29	354.1	0.0	51.5	96.9	289.5	0.0	51.1	97.5	293.7	0.0	50.2	97.8	NI	0.6
NS	4/11/2016 3:30	354.1	0.7	51.5	96.9	290.9	0.7	51.1	97.4	293.7	0.7	49.6	97.6	NI	0.6
NS	4/11/2016 3:31	354.1	0.0	51.5	97.1	292.3	0.0	51.1	97.6	293.7	0.0	49.6	97.7	NI	0.6
NS	4/11/2016 3:32	354.1	0.0	51.5	97.2	292.3	0.0	51.1	97.7	293.7	0.0	49.7	97.8	NI	0.6
NS	4/11/2016 3:33	354.1	0.7	51.5	97.2	295.1	0.7	51.1	97.7	293.7	0.7	49.6	97.8	NI	0.6
NS	4/11/2016 3:34	354.1	0.0	51.5	97.2	299.3	0.7	51.1	97.8	293.7	0.0	49.9	98.1	NI	0.6
NS	4/11/2016 3:35	354.1	0.0	51.5	97.1	299.3	0.0	51.1	97.8	293.7	0.0	50.1	98.4	NI	0.6
NS	4/11/2016 3:36	354.1	0.0	51.5	97.2	299.3	0.0	51.1	97.9	293.7	0.0	50.1	98.4	NI	0.6
NS	4/11/2016 3:37	354.1	0.0	51.4	97.2	299.3	0.0	51.1	97.9	293.7	0.0	50.0	98.4	NI	0.6
NS	4/11/2016 3:38	354.1	0.0	51.4	97.3	299.3	0.0	51.1	97.9	293.7	0.0	50.1	98.4	NI	0.6
NS	4/11/2016 3:39	354.1	0.0	51.2	97.1	299.3	0.0	50.8	97.7	293.7	0.0	50.0	98.4	NI	0.6
NS	4/11/2016 3:40	354.1	0.0	51.3	97.4	299.3	0.0	50.9	97.9	293.7	0.0	49.9	98.2	NI	0.6
NS	4/11/2016 3:41	354.1	0.0	51.1	97.4	299.3	0.0	50.8	97.9	293.7	0.0	49.6	98.2	NI	0.6
NS	4/11/2016 3:42	354.1	0.0	51.2	97.4	299.3	0.0	50.7	97.8	293.7	0.0	49.6	98.1	NI	0.6
NS	4/11/2016 3:43	354.1	0.0	51.2	97.4	299.3	0.0	50.7	97.9	293.7	0.0	49.6	98.2	NI	0.6
NS	4/11/2016 3:44	354.1	0.0	51.2	97.5	299.3	0.7	50.8	98.0	293.7	0.0	49.7	98.4	NI	0.6
NS	4/11/2016 3:45	354.1	0.0	51.2	97.7	299.3	0.0	50.8	98.1	293.7	0.0	50.0	98.5	NI	0.6
NS	4/11/2016 3:46	354.1	0.0	51.1	97.3	306.4	0.7	50.7	98.1	293.7	0.7	50.0	98.6	NI	0.6
NS	4/11/2016 3:47	354.1	0.0	50.9	97.3	306.4	0.0	50.4	97.8	293.7	0.0	49.6	98.5	NI	0.6
NS	4/11/2016 3:48	354.1	0.0	51.0	97.6	306.4	0.0	50.4	98.0	293.7	0.0	49.6	98.5	NI	0.6
NS	4/11/2016 3:49	354.1	0.0	51.0	97.6	306.4	0.7	50.4	98.1	293.7	0.0	49.4	98.4	NI	0.6
NS	4/11/2016 3:50	354.1	0.7	50.9	97.6	306.4	0.7	50.3	98.0	293.7	0.0	49.2	98.3	NI	0.6
NS	4/11/2016 3:51	354.1	0.0	51.0	97.9	306.4	0.7	50.3	98.3	293.7	0.0	49.0	98.3	NI	0.6
NS	4/11/2016 3:52	354.1	0.0	50.9	97.9	306.4	0.7	50.4	98.4	293.7	0.0	49.0	98.5	NI	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/11/2016 3:53	354.1	0.0	50.9	97.9	306.4	0.7	50.4	98.4	293.7	0.0	49.1	98.7	NI	0.6
NS	4/11/2016 3:54	354.1	0.0	50.7	97.7	306.4	0.0	50.3	98.4	293.7	0.0	49.0	98.7	NI	0.6
NS	4/11/2016 3:55	354.1	0.0	50.6	97.6	306.4	0.0	50.2	98.4	293.7	0.0	49.0	98.7	NI	0.6
NS	4/11/2016 3:56	354.1	0.0	50.6	97.5	306.4	0.0	50.1	98.3	293.7	0.0	48.9	98.7	NI	0.6
NS	4/11/2016 3:57	354.1	0.0	50.4	97.5	306.4	0.0	49.9	98.2	293.7	0.0	48.9	98.5	NI	0.6
NS	4/11/2016 3:58	354.1	0.0	50.5	97.8	306.4	0.0	50.0	98.4	293.7	0.0	48.8	98.5	NI	0.6
NS	4/11/2016 3:59	354.1	0.0	50.4	97.8	306.4	0.0	50.0	98.4	293.7	0.0	49.0	98.8	NI	0.6
NS	4/11/2016 4:00	354.1	0.0	50.4	98.0	306.4	0.0	49.7	98.4	293.7	0.0	48.8	98.6	NI	0.6
NS	4/11/2016 4:01	354.1	0.0	50.4	98.1	306.4	0.0	49.8	98.5	293.7	0.0	48.7	98.6	NI	0.6
NS	4/11/2016 4:02	354.1	0.0	50.2	97.8	306.4	0.0	49.7	98.5	293.7	0.0	48.6	98.7	NI	0.6
NS	4/11/2016 4:03	354.1	0.0	50.2	97.9	306.4	0.0	49.6	98.4	293.7	0.0	48.5	98.7	NI	0.6
NS	4/11/2016 4:04	354.1	0.7	50.6	98.3	320.4	0.7	50.1	98.7	293.7	0.7	48.9	98.9	NI	0.6
NS	4/11/2016 4:05	354.1	0.0	50.6	98.3	328.8	0.0	50.0	98.7	293.7	0.0	48.9	99.0	NI	0.6
NS	4/11/2016 4:06	354.1	0.0	50.4	98.2	328.8	0.0	49.9	98.7	293.7	0.0	49.0	99.0	NI	0.6
NS	4/11/2016 4:07	354.1	0.0	50.4	98.2	328.8	0.7	49.9	98.7	293.7	0.0	48.9	98.9	NI	0.6
NS	4/11/2016 4:08	354.1	0.0	50.3	98.1	328.8	0.0	49.6	98.6	293.7	0.0	48.9	98.9	NI	0.6
NS	4/11/2016 4:09	354.1	0.0	50.6	98.4	328.8	0.0	50.0	98.8	293.7	0.0	49.0	99.0	NI	0.6
NS	4/11/2016 4:10	354.1	0.0	50.5	98.3	328.8	0.0	50.0	98.9	293.7	0.0	48.9	99.0	NI	0.6
NS	4/11/2016 4:11	354.1	0.0	50.2	98.0	328.8	0.0	49.7	98.7	293.7	0.0	48.9	99.0	NI	0.6
NS	4/11/2016 4:12	328.8	0.7	50.4	98.2	319.0	0.7	50.0	98.8	293.7	0.7	48.8	99.0	NI	0.6
NS	4/11/2016 4:13	321.8	0.0	50.6	98.4	303.5	0.0	50.1	98.8	293.7	0.0	48.8	99.0	NI	0.6
NS	4/11/2016 4:14	355.5	0.7	50.8	98.6	306.4	0.7	50.5	99.0	293.7	0.7	49.1	99.0	NI	0.6
NS	4/11/2016 4:15	355.5	0.7	50.6	98.5	309.2	0.7	50.3	98.9	293.7	0.0	49.1	99.1	NI	0.6
NS	4/11/2016 4:16	355.5	0.0	50.6	98.3	309.2	0.7	50.2	99.0	293.7	0.7	49.2	99.2	NI	0.6
NS	4/11/2016 4:17	355.5	0.7	50.6	98.2	313.4	0.7	50.1	98.9	293.7	0.7	49.2	99.2	NI	0.6
NS	4/11/2016 4:18	355.5	0.0	50.6	98.2	319.0	0.7	50.0	98.9	293.7	0.0	49.2	99.2	NI	0.6
NS	4/11/2016 4:19	355.5	0.0	50.7	98.3	319.0	0.0	50.1	98.9	293.7	0.0	49.3	99.2	NI	0.6
NS	4/11/2016 4:20	355.5	0.7	50.7	98.4	319.0	0.7	50.3	98.9	293.7	0.0	49.5	99.2	NI	0.6
NS	4/11/2016 4:21	355.5	0.0	50.5	98.2	319.0	0.0	50.2	98.9	293.7	0.0	49.5	99.3	NI	0.6
NS	4/11/2016 4:22	355.5	0.7	50.5	98.3	319.0	0.0	50.1	98.8	293.7	0.0	49.3	99.2	NI	0.6
NS	4/11/2016 4:23	355.5	0.7	50.4	98.2	319.0	0.7	49.8	98.7	293.7	0.7	48.9	99.0	NI	0.6
NS	4/11/2016 4:24	355.5	0.0	50.4	98.2	319.0	0.7	49.6	98.7	293.7	0.0	48.8	99.0	NI	0.6
NS	4/11/2016 4:25	355.5	0.0	50.4	98.3	319.0	0.0	49.8	98.9	293.7	0.0	48.9	99.0	NI	0.6
NS	4/11/2016 4:26	355.5	0.0	50.4	98.3	319.0	0.0	49.9	98.8	293.7	0.0	49.1	99.1	NI	0.6
NS	4/11/2016 4:27	355.5	0.0	50.6	98.5	319.0	0.0	50.1	99.1	293.7	0.0	49.3	99.3	NI	0.6
NS	4/11/2016 4:28	355.5	0.0	50.4	98.4	319.0	0.7	50.0	99.0	293.7	0.0	49.3	99.3	NI	0.6
NS	4/11/2016 4:29	355.5	0.0	50.5	98.5	319.0	0.0	50.1	99.1	293.7	0.0	49.4	99.3	NI	0.6
NS	4/11/2016 4:30	355.5	0.0	50.6	98.6	319.0	0.0	50.2	99.1	293.7	0.0	49.5	99.4	NI	0.6
NS	4/11/2016 4:31	355.5	0.0	50.7	98.7	319.0	0.0	50.4	99.2	293.7	0.0	49.6	99.4	NI	0.6
NS	4/11/2016 4:32	355.5	0.0	50.5	98.5	319.0	0.0	50.0	99.0	293.7	0.0	49.2	99.4	NI	0.6
NS	4/11/2016 4:33	355.5	0.7	50.5	98.6	319.0	0.7	50.0	99.1	293.7	0.0	49.2	99.4	NI	0.6
NS	4/11/2016 4:34	355.5	0.0	50.3	98.5	319.0	0.7	49.8	99.1	293.7	0.0	48.9	99.2	NI	0.6
NS	4/11/2016 4:35	355.5	0.0	49.8	97.9	319.0	0.0	49.3	98.7	293.7	0.0	48.5	99.1	NI	0.6
NS	4/11/2016 4:36	355.5	0.0	49.8	98.3	319.0	0.0	49.1	98.9	293.7	0.0	48.3	99.0	NI	0.6
NS	4/11/2016 4:37	355.5	0.0	49.7	98.5	319.0	0.0	49.1	99.0	293.7	0.0	48.3	99.1	NI	0.6
NS	4/11/2016 4:38	355.5	0.0	49.8	98.5	319.0	0.0	48.9	98.9	293.7	0.0	48.1	99.1	NI	0.6
NS	4/11/2016 4:39	355.5	0.7	49.8	98.7	319.0	0.7	49.2	99.2	293.7	0.0	48.0	99.2	NI	0.6
NS	4/11/2016 4:40	355.5	0.0	50.0	98.9	319.0	0.7	49.4	99.3	293.7	0.0	48.1	99.3	NI	0.6
NS	4/11/2016 4:41	355.5	0.0	50.0	98.8	319.0	0.0	49.3	99.2	293.7	0.0	48.2	99.3	NI	0.6
NS	4/11/2016 4:42	355.5	0.0	50.0	98.9	319.0	0.0	49.4	99.3	293.7	0.0	48.4	99.4	NI	0.6
NS	4/11/2016 4:43	355.5	0.0	50.0	98.9	319.0	0.0	49.6	99.4	293.7	0.0	48.5	99.5	NI	0.6
NS	4/11/2016 4:44	355.5	0.0	50.1	98.9	319.0	0.0	49.7	99.4	293.7	0.0	48.6	99.6	NI	0.6
NS	4/11/2016 4:45	355.5	0.0	50.1	98.9	319.0	0.0	49.6	99.3	293.7	0.0	48.6	99.6	NI	0.6
NS	4/11/2016 4:46	355.5	0.0	50.0	98.7	319.0	0.0	49.6	99.3	293.7	0.0	48.6	99.6	NI	0.6
NS	4/11/2016 4:47	355.5	0.0	49.6	98.5	319.0	0.0	49.1	99.1	293.7	0.0	48.3	99.3	NI	0.6
NS	4/11/2016 4:48	355.5	0.0	49.6	98.6	319.0	0.0	49.0	99.1	293.7	0.0	48.0	99.3	NI	0.6
NS	4/11/2016 4:49	355.5	0.0	49.6	98.8	319.0	0.0	49.1	99.3	293.7	0.0	48.0	99.3	NI	0.6
NS	4/11/2016 4:50	355.5	0.0	49.6	98.8	319.0	0.0	48.9	99.2	293.7	0.0	48.0	99.3	NI	0.6
NS	4/11/2016 4:51	355.5	0.0	49.7	98.9	319.0	0.0	49.1	99.4	293.7	0.0	48.0	99.4	NI	0.6
NS	4/11/2016 4:52	355.5	0.0	49.6	99.0	319.0	0.0	49.3	99.5	293.7	0.0	48.2	99.5	NI	0.6
NS	4/11/2016 4:53	355.5	0.0	49.6	98.9	319.0	0.0	49.3	99.5	293.7	0.0	48.2	99.6	NI	0.6
NS	4/11/2016 4:54	355.5	0.0	49.9	99.0	319.0	0.0	49.5	99.5	293.7	0.0	48.2	99.6	NI	0.6
NS	4/11/2016 4:55	355.5	0.0	49.6	98.7	319.0	0.0	49.2	99.5	293.7	0.0	48.0	99.5	NI	0.6
NS	4/11/2016 4:56	355.5	0.0	49.6	98.7	319.0	0.0	49.1	99.5	293.7	0.0	48.0	99.6	NI	0.6
NS	4/11/2016 4:57	355.5	0.0	49.4	98.8	319.0	0.0	49.0	99.4	293.7	0.0	48.0	99.6	NI	0.6
NS	4/11/2016 4:58	355.5	0.0	49.3	98.7	319.0	0.0	48.9	99.4	293.7	0.0	48.0	99.7	NI	0.6
NS	4/11/2016 4:59	355.5	0.0	49.3	98.9	319.0	0.0	48.9	99.4	293.7	0.0	48.1	99.8	NI	0.6
NS	4/11/2016 5:00	355.5	0.0	49.4	99.0	319.0	0.0	49.0	99.5	293.7	0.0	48.1	99.8	NI	0.6
NS	4/11/2016 5:01	355.5	0.0	49.4	99.0	319.0	0.0	49.0	99.5	293.7	0.0	48.2	99.7	NI	0.6
NS	4/11/2016 5:02	355.5	0.0	49.5	99.1	319.0	0.0	49.1	99.6	293.7	0.0	48.2	99.8	NI	0.6
NS	4/11/2016 5:03	355.5	0.0	49.5	99.1	319.0	0.0	49.0	99.5	293.7	0.0	48.1	99.8	NI	0.6
NS	4/11/2016 5:04	355.5	0.0	49.6	99.1	319.0	0.0	49.0	99.6	293.7	0.0	48.0	99.6	NI	0.6
NS	4/11/2016 5:05	355.5	0.0	49.5	99.1	319.0	0.0	49.0	99.6	293.7	0.0	47.9	99.6	NI	0.6
NS	4/11/2016 5:06	355.5	0.0	49.2	99.0	319.0	0.0	48.7	99.4	293.7	0.0	47.7	99.6	NI	0.6
NS	4/11/2016 5:07	355.5	0.0	49.3	99.1	319.0	0.0	48.8	99.5	293.7	0.0	47.6	99.6	NI	0.6
NS	4/11/2016 5:08	355.5	0.0	49.4	99.2	319.0	0.0	48.9	99.7	293.7	0.0	47.4	99.6	NI	0.6
NS	4/11/2016 5:09	355.5	0.0	49.5	99.2	319.0	0.0	49.0	99.7	293.7	0.0	47.6	99.7	NI	0.6
NS	4/11/2016 5:10	355.5	0.0	49.3	99.2	319.0	0.0	48.8	99.6	293.7	0.0	47.5	99.6	NI	0.6
NS	4/11/2016 5:11	355.5	0.7	49.3	99.2	319.0	0.0	48.9	99.7	293.7	0.0	47.7	99.7	NI	0.6
NS	4/11/2016 5:12	355.5	0.0	49.1	99.1	319.0	0.7	48.7	99.7	293.7	0.7	47.7	99.8	NI	0.6
NS	4/11/2016 5:13	355.5	0.0	49.1	99.1	319.0	0.0	48.5	99.6	293.7	0.0	47.5	99.7	NI	0.6
NS	4/11/2016 5:14	355.5	0.0	49.0	99.1	319.0	0.0	48.5	99.5	293.7	0.0	47.5	99.6	NI	0.6
NS	4/11/2016 5:15	355.5	0.0	49.0	99.1	319.0	0.0	48.5	99.6	293.7	0.0	47.6	99.7	NI	0.6
NS	4/11/2016 5:16	355.5	0.0	48.9	99.1	319.0	0.0	48.5	99.7	293.7	0.0	47.6	99.7	NI	0.6
NS	4/11/2016 5:17	355.5	0.0	48.9	99.1	319.0	0.0	48.5	99.6	293.7	0.0	47.6	99.8	NI	0.6
NS	4/11/2016 5:18	355.5	0.0	48.9	99.2	319.0	0.0	48.4	99.7	293.7	0.0	47.6	99.8	NI	0.6
NS	4/11/2016 5:19	355.5	0.0	49.1	99.3	319.0	0.0	48.5	99.8	293.7	0.0	47.7	99.9	NI	0.6
NS	4/11/2016 5:20	355.5	0.0	49.2	99.5	319.0	0.0	48.6	99.7	293.7	0.0	47.7	99.9	NI	0.6
NS	4/11/2016 5:21	355.5	0.0	49.2	99.4	319.0	0.0	48.7	99.7	293.7	0.0	47.7	99.9	NI	0.6
NS	4/11/2016 5:22	355.5	0.0	49.2	99.4	319.0	0.7	48.7	99.7	293.7	0.0	47.6	99.9	NI	0.6
NS	4/11/2016 5:23	355.5	0.0	49.1	99.4	319.0	0.0	48.6	99.7	293.7	0.0	47.5	99.8	NI	0.6
NS	4/11/2016 5:24	355.5	0.0	49.1	99.3	319.0	0.0	48.6	99.7	293.7	0.0	47.6	99.9	NI	0.6
NS	4/11/2016 5:25	355.5	0.0	49.0	99.3	319.0	0.0	48.5	99.7	293.7	0.0	47.6	99.9	NI	0.6
NS	4/11/2016 5:26	355.5	0.0	48.9	99.3	319.0	0.0	48.5	99.7	293.7	0.0	47.6	99.9	NI	0.6
NS	4/11/2016 5:27	355.5	0.0	48.9	99.3	319.0	0.0	48.5	99.8	293.7	0.0	47.7	99.9	NI	0.6
NS	4/11/2016 5:28	355.5	0.0	48.8	99.3	319.0	0.0	48.5	99.8	293.7	0.0	47.7	99.9	NI	0.6
NS	4/11/2016 5:29	355.5	0.0	48.8	99.3	319.0	0.0	48.5	99.8	293.7	0.0	47.6	99.9	NI	0.6
NS	4/11/2016 5:30	355.5	0.0	48.7	99.3	319.0	0.0	48.4	99.8	293.7	0.0	47.4	99.9	NI	0.6
NS	4/11/2016 5:31	355.5	0.0	48.7	99.3	319.0	0.0	48.4	99.8	293.7	0.0	47.3	99.8	NI	0.6
NS	4/11/2016 5:32	355.5	0.0	48.8	99.4	319.0	0.0	48.4	99.8	293.7	0.0	47.3	99.8	NI	0.6
NS	4/11/2016 5:33	355.5	0.0	48.9	99.4	319.0	0.0	48.4	99.7	293.7	0.0	47.2	99.8	NI	0.6
NS	4/11/2016 5:34	355.5	0.0	48.9	99.4	319.0	0.0	48.1	99.6	293.7	0.0	46.9	99.7	NI	0.6
NS	4/11/2016 5:35	355.5	0.0	48.8	99.4	319.0	0.0	47.8	99.7	293.7	0.0	46.7	99.7	NI	0.6
NS	4/11/2016 5:36	355.5	0.0	48.8	99.4	319.0	0.0	47.9	99.8	293.7	0.0	46.7	99.7	NI	0.6
NS	4/11/2016 5:37	355.5	0.0	48.8	99.4	319.0	0.0	48.1	100.0	293.7	0.0	47.0	99.8	NI	0.6
NS	4/11/2016 5:38	355.5	0.0	48.8	99.4	319.0	0.0	48.2	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:39	355.5	0.0	48.9	99.5	319.0	0.0	48.3	100.0	293.7	0.0	46.9	99.9	NI	0.6
NS	4/11/2016 5:40	355.5	0.0	48.9	99.5	319.0	0.0	48.4	100.0	293.7	0.0	47.2	100.0	NI	0.6
NS	4/11/2016 5:41	355.5	0.0	48.9	99.6	319.0	0.0	48.5	100.0	293.7	0.0	47.4	100.0	NI	0.6
NS	4/11/2016 5:42	355.5	0.0	48.9	99.5	319.0	0.0	48.3	99.9	293.7	0.0	47.2	100.0	NI	0.6
NS	4/11/2016 5:43	355.5	0.0	48.9	99.6	319.0	0.0	48.3	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:44	355.5	0.0	48.8	99.5	319.0	0.0	48.2	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:45	355.5	0.0	48.8	99.6	319.0	0.0	48.3	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:46	355.5	0.0	48.9	99.7	319.0	0.0	48.5	100.0	293.7	0.0	47.3	100.0	NI	0.6
NS	4/11/2016 5:47	355.5	0.0	48.9	99.7	319.0	0.0	48.5	100.0	293.7	0.0	47.2	100.0	NI	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/11/2016 5:48	355.5	0.0	48.9	99.7	319.0	0.0	48.4	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:49	355.5	0.0	49.0	99.6	319.0	0.0	48.4	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:50	355.5	0.0	49.1	99.6	319.0	0.0	48.4	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:51	355.5	0.0	48.9	99.7	319.0	0.0	48.1	100.0	293.7	0.0	46.9	99.9	NI	0.6
NS	4/11/2016 5:52	355.5	0.0	48.8	99.6	319.0	0.0	48.0	99.9	293.7	0.0	46.8	99.9	NI	0.6
NS	4/11/2016 5:53	355.5	0.0	48.9	99.6	319.0	0.0	48.0	100.0	293.7	0.0	46.8	99.9	NI	0.6
NS	4/11/2016 5:54	355.5	0.0	48.8	99.6	319.0	0.0	48.0	100.0	293.7	0.0	47.0	99.9	NI	0.6
NS	4/11/2016 5:55	355.5	0.0	48.7	99.6	319.0	0.0	48.0	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:56	355.5	0.0	48.6	99.6	319.0	0.0	48.0	100.0	293.7	0.0	47.2	100.0	NI	0.6
NS	4/11/2016 5:57	355.5	0.0	48.5	99.5	319.0	0.0	47.9	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 5:58	355.5	0.0	48.5	99.6	319.0	0.0	48.0	100.0	293.7	0.0	47.0	100.0	NI	0.6
NS	4/11/2016 5:59	355.5	0.0	48.6	99.5	319.0	0.0	48.0	100.0	293.7	0.0	46.8	99.9	NI	0.6
NS	4/11/2016 6:00	355.5	0.0	48.5	99.6	319.0	0.0	47.9	100.0	293.7	0.0	46.5	99.8	NI	0.6
NS	4/11/2016 6:01	355.5	0.0	48.5	99.6	319.0	0.0	47.7	100.0	293.7	0.0	46.3	99.8	NI	0.6
NS	4/11/2016 6:02	355.5	0.0	48.6	99.6	319.0	0.0	47.9	100.0	293.7	0.0	46.3	99.7	NI	0.6
NS	4/11/2016 6:03	355.5	0.0	48.6	99.7	319.0	0.0	48.0	100.0	293.7	0.0	46.3	99.8	NI	0.6
NS	4/11/2016 6:04	355.5	0.0	48.6	99.6	319.0	0.0	47.9	100.0	293.7	0.0	46.3	99.9	NI	0.6
NS	4/11/2016 6:05	355.5	0.0	48.7	99.7	319.0	0.0	48.0	100.0	293.7	0.0	46.4	100.0	NI	0.6
NS	4/11/2016 6:06	355.5	0.0	48.8	99.8	319.0	0.0	48.3	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:07	355.5	0.0	48.8	99.8	319.0	0.0	48.1	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:08	355.5	0.0	48.6	99.7	319.0	0.0	48.0	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:09	355.5	0.0	48.5	99.6	319.0	0.0	47.9	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:10	355.5	0.0	48.4	99.7	319.0	0.0	47.8	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:11	355.5	0.0	48.4	99.7	319.0	0.0	47.8	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:12	355.5	0.0	48.5	99.8	319.0	0.0	48.0	100.0	293.7	0.0	47.0	100.0	NI	0.6
NS	4/11/2016 6:13	355.5	0.0	48.5	99.8	319.0	0.0	48.0	100.0	293.7	0.0	47.1	100.0	NI	0.6
NS	4/11/2016 6:14	355.5	0.0	48.3	99.8	319.0	0.0	47.8	100.0	293.7	0.0	47.0	100.0	NI	0.6
NS	4/11/2016 6:15	355.5	0.0	48.3	99.7	319.0	0.0	47.8	100.0	293.7	0.0	46.9	100.0	NI	0.6
NS	4/11/2016 6:16	355.5	0.0	48.5	99.8	319.0	0.0	47.7	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:17	355.5	0.7	48.5	99.8	319.0	0.0	47.7	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:18	355.5	0.7	48.7	99.9	319.0	0.0	48.0	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:19	355.5	0.7	49.2	100.0	319.0	0.0	48.8	100.0	293.7	0.0	47.2	100.0	NI	0.6
NS	4/11/2016 6:20	355.5	0.0	49.3	100.0	319.0	0.0	48.7	100.0	293.7	0.0	47.3	100.0	NI	0.6
NS	4/11/2016 6:21	355.5	0.0	49.2	99.9	319.0	0.0	48.6	100.0	293.7	0.0	47.3	100.0	NI	0.6
NS	4/11/2016 6:22	355.5	0.0	49.1	99.9	319.0	0.0	48.5	100.0	293.7	0.0	47.2	100.0	NI	0.6
NS	4/11/2016 6:23	355.5	0.0	49.0	99.9	319.0	0.0	48.5	100.0	293.7	0.0	47.2	100.0	NI	0.6
NS	4/11/2016 6:24	355.5	0.0	48.9	99.9	319.0	0.0	48.6	100.0	293.7	0.0	47.4	100.0	NI	0.6
NS	4/11/2016 6:25	355.5	0.0	48.9	99.9	319.0	0.0	48.7	100.0	293.7	0.0	47.3	100.0	NI	0.6
NS	4/11/2016 6:26	355.5	0.0	48.9	99.9	319.0	0.0	48.6	100.0	293.7	0.0	47.2	100.0	NI	0.6
NS	4/11/2016 6:27	355.5	0.0	48.9	99.9	319.0	0.0	48.6	100.0	293.7	0.0	47.5	100.0	NI	0.6
NS	4/11/2016 6:28	355.5	0.0	48.9	99.9	319.0	0.0	48.6	100.0	293.7	0.0	47.2	100.0	NI	0.6
NS	4/11/2016 6:29	355.5	0.0	48.9	99.9	319.0	0.0	48.6	100.0	293.7	0.0	47.0	100.0	NI	0.6
NS	4/11/2016 6:30	355.5	0.0	48.8	99.8	319.0	0.0	48.1	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:31	355.5	0.0	48.8	99.9	319.0	0.0	48.2	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:32	355.5	0.0	48.9	100.0	319.0	0.0	48.5	100.0	293.7	0.0	47.0	100.0	NI	0.6
NS	4/11/2016 6:33	355.5	0.0	48.9	100.0	319.0	0.0	48.5	100.0	293.7	0.0	46.9	100.0	NI	0.6
NS	4/11/2016 6:34	355.5	0.0	48.9	100.0	319.0	0.0	48.6	100.0	293.7	0.0	47.0	100.0	NI	0.6
NS	4/11/2016 6:35	355.5	0.0	48.9	100.0	319.0	0.0	48.5	100.0	293.7	0.0	46.9	100.0	NI	0.6
NS	4/11/2016 6:36	355.5	0.0	48.9	100.0	319.0	0.0	48.4	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:37	355.5	0.0	48.6	99.9	319.0	0.0	48.2	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:38	355.5	0.0	49.0	100.0	319.0	0.0	48.5	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:39	355.5	0.0	48.9	100.0	319.0	0.0	48.3	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:40	355.5	0.0	48.9	100.0	319.0	0.0	48.3	100.0	293.7	0.0	46.6	100.0	NI	0.6
NS	4/11/2016 6:41	355.5	0.0	48.6	99.9	319.0	0.0	48.0	100.0	293.7	0.0	46.5	100.0	NI	0.6
NS	4/11/2016 6:42	355.5	0.0	48.7	100.0	319.0	0.0	48.2	100.0	293.7	0.0	46.5	100.0	NI	0.6
NS	4/11/2016 6:43	355.5	0.0	48.7	100.0	319.0	0.0	48.3	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:44	355.5	0.0	48.7	100.0	319.0	0.0	48.3	100.0	293.7	0.0	46.6	100.0	NI	0.6
NS	4/11/2016 6:45	355.5	0.0	48.6	100.0	319.0	0.0	48.2	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:46	355.5	0.0	48.5	100.0	319.0	0.0	48.0	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:47	355.5	0.7	48.6	100.0	319.0	0.0	48.1	100.0	293.7	0.0	46.6	100.0	NI	0.6
NS	4/11/2016 6:48	355.5	0.7	48.6	100.0	319.0	0.0	48.0	100.0	293.7	0.0	46.4	100.0	NI	0.6
NS	4/11/2016 6:49	355.5	0.0	48.5	100.0	319.0	0.0	47.5	100.0	293.7	0.0	46.1	100.0	NI	0.6
NS	4/11/2016 6:50	355.5	0.0	48.5	100.0	319.0	0.0	47.6	100.0	293.7	0.0	46.0	100.0	NI	0.6
NS	4/11/2016 6:51	355.5	0.0	48.5	100.0	319.0	0.0	47.6	100.0	293.7	0.0	46.1	100.0	NI	0.6
NS	4/11/2016 6:52	355.5	0.0	48.5	100.0	319.0	0.0	47.9	100.0	293.7	0.0	46.5	100.0	NI	0.6
NS	4/11/2016 6:53	355.5	0.0	48.6	100.0	319.0	0.0	48.1	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:54	355.5	0.0	48.6	100.0	319.0	0.0	48.2	100.0	293.7	0.0	46.8	100.0	NI	0.6
NS	4/11/2016 6:55	355.5	0.0	48.4	100.0	319.0	0.0	47.8	100.0	293.7	0.0	46.7	100.0	NI	0.6
NS	4/11/2016 6:56	355.5	0.0	48.3	100.0	319.0	0.0	47.4	100.0	293.7	0.0	46.2	100.0	NI	0.6
NS	4/11/2016 6:57	355.5	0.0	48.5	100.0	319.0	0.0	47.6	100.0	293.7	0.0	45.8	100.0	NI	0.6
NS	4/11/2016 6:58	355.5	0.0	48.7	100.0	319.0	0.0	48.0	100.0	293.7	0.0	45.9	100.0	NI	0.6
NS	4/11/2016 6:59	355.5	0.0	48.6	100.0	319.0	0.0	47.7	100.0	293.7	0.0	45.6	100.0	NI	0.6
NS	4/11/2016 7:00	355.5	0.0	48.6	100.0	319.0	0.0	47.6	100.0	293.7	0.0	45.7	100.0	NI	0.6
NS	4/11/2016 7:01	355.5	0.0	48.8	100.0	319.0	0.0	48.0	100.0	293.7	0.0	45.6	100.0	NI	0.6
NS	4/11/2016 7:02	355.5	0.0	48.8	100.0	319.0	0.0	47.8	100.0	293.7	0.0	45.7	100.0	NI	0.6
NS	4/11/2016 7:03	355.5	0.0	48.8	100.0	319.0	0.0	47.9	100.0	293.7	0.0	45.7	100.0	NI	0.6
NS	4/11/2016 7:04	355.5	0.0	48.6	100.0	319.0	0.0	47.6	100.0	293.7	0.0	45.7	100.0	NI	0.6
NS	4/11/2016 7:05	355.5	0.0	48.6	100.0	319.0	0.0	47.6	100.0	293.7	0.0	45.7	100.0	NI	0.6
NS	4/11/2016 7:06	355.5	0.0	48.9	100.0	319.0	0.0	48.0	100.0	293.7	0.0	45.9	100.0	NI	0.6
NS	4/11/2016 7:07	355.5	0.0	48.3	99.9	319.0	0.0	47.5	100.0	293.7	0.0	45.9	100.0	NI	0.6
NS	4/11/2016 7:08	355.5	0.0	48.1	99.9	319.0	0.0	47.4	100.0	293.7	0.0	45.6	100.0	NI	0.6
NS	4/11/2016 7:09	355.5	0.0	48.2	100.0	319.0	0.0	47.3	100.0	293.7	0.0	45.7	100.0	NI	0.6
NS	4/11/2016 7:10	355.5	0.0	48.2	100.0	319.0	0.0	47.2	100.0	293.7	0.0	45.9	100.0	NI	1.9
NS	4/11/2016 7:11	355.5	0.0	48.2	100.0	319.0	0.0	47.2	100.0	293.7	0.0	45.9	100.0	NI	1.9
NS	4/11/2016 7:12	355.5	0.0	48.0	100.0	319.0	0.0	47.2	100.0	293.7	0.0	45.9	100.0	NI	1.9
NS	4/11/2016 7:13	355.5	0.0	48.2	100.0	319.0	0.0	47.5	100.0	293.7	0.0	46.0	100.0	NI	3.1
NS	4/11/2016 7:14	355.5	0.0	48.3	100.0	319.0	0.0	47.6	100.0	293.7	0.0	46.0	100.0	NI	3.1
NS	4/11/2016 7:15	355.5	0.0	48.2	100.0	319.0	0.0	47.6	100.0	293.7	0.0	46.2	100.0	NI	4.4
NS	4/11/2016 7:16	355.5	0.0	48.2	100.0	319.0	0.0	47.7	100.0	293.7	0.0	46.4	100.0	NI	4.4
NS	4/11/2016 7:17	355.5	0.0	48.1	100.0	319.0	0.0	47.4	100.0	293.7	0.0	46.3	100.0	NI	4.4
NS	4/11/2016 7:18	355.5	0.0	48.2	100.0	319.0	0.0	47.2	100.0	293.7	0.0	45.7	100.0	NI	5.6
NS	4/11/2016 7:19	355.5	0.0	48.2	100.0	319.0	0.0	47.3	100.0	293.7	0.0	45.5	100.0	NI	6.9
NS	4/11/2016 7:20	355.5	0.0	48.0	100.0	319.0	0.0	47.2	100.0	293.7	0.0	45.4	100.0	NI	6.9
NS	4/11/2016 7:21	355.5	0.0	47.9	100.0	319.0	0.0	47.2	100.0	293.7	0.0	45.3	100.0	NI	8.1
NS	4/11/2016 7:22	355.5	0.0	48.0	100.0	319.0	0.0	47.3	100.0	293.7	0.0	45.6	100.0	NI	9.4
NS	4/11/2016 7:23	355.5	0.0	48.1	100.0	319.0	0.0	47.5	100.0	293.7	0.0	45.9	100.0	NI	10.6
NS	4/11/2016 7:24	355.5	0.0	48.1	100.0	319.0	0.0	47.6	100.0	293.7	0.0	46.0	100.0	NI	11.9
NS	4/11/2016 7:25	355.5	0.0	48.1	100.0	319.0	0.0	47.6	100.0	293.7	0.0	46.2	100.0	NI	11.9
NS	4/11/2016 7:26	355.5	0.0	48.0	100.0	319.0	0.0	47.5	100.0	293.7	0.0	46.2	100.0	NI	13.1
NS	4/11/2016 7:27	355.5	0.0	47.9	100.0	319.0	0.0	47.5	100.0	293.7	0.0	46.1	100.0	NI	13.1
NS	4/11/2016 7:28	355.5	0.0	48.0	100.0	319.0	0.0	47.6	100.0	293.7	0.0	46.3	100.0	NI	14.4
NS	4/11/2016 7:29	355.5	0.0	48.0	100.0	319.0	0.0	47.7	100.0	293.7	0.0	46.5	100.0	NI	14.4
NS	4/11/2016 7:30	355.5	0.0	48.2	100.0	319.0	0.0	47.9	100.0	293.7	0.0	46.7	100.0	NI	15.6
NS	4/11/2016 7:31	355.5	0.0	48.3	100.0	319.0	0.0	48.0	100.0	293.7	0.0	46.6	100.0	NI	16.9
NS	4/11/2016 7:32	355.5	0.0	48.3	100.0	319.0	0.0	48.0	100.0	293.7	0.0	46.7	100.0	NI	16.9
NS	4/11/2016 7:33	355.5	0.0	48.2	100.0	319.0	0.0	47.9	100.0	293.7	0.0	46.5	100.0	NI	18.1
NS	4/11/2016 7:34	355.5	0.0	48.2	100.0	319.0	0.0	47.7	100.0	293.7	0.0	46.4	100.0	NI	18.1
NS	4/11/2016 7:35	355.5	0.0	48.1	100.0	319.0	0.0	47.6	100.0	293.7	0.0	46.6	100.0	NI	19.4
NS	4/11/2016 7:36	355.5	0.0	48.1	100.0	319.0	0.0	47.8	100.0	293.7	0.0	46.6	100.0	NI	20.6
NS	4/11/2016 7:37	355.5	0.0	48.2	100.0	319.0	0.0	47.9	100.0	293.7	0.0	46.6	100.0	NI	20.6
NS	4/11/2016 7:38	355.5	0.0	48.3	100.0	319.0	0.0	48.0	100.0	293.7	0.0	47.0	100.0	NI	20.6
NS	4/11/2016 7:39	355.5	0.0	48.4	100.0	319.0	0.0	48.2	100.0	293.7	0.0	47.1	100.0	NI	20.6
NS	4/11/2016 7:40	355.5	0.0	48.5	100.0	319.0	0.0	48.4	100.0	293.7	0.0	47.1	100.0	NI	21.9
NS	4/11/2016 7:41	355.5	0.0	48.6	100.0	319.0	0.0	48.4	100.0	293.7	0.0	47.2	100.0	NI	21.9
NS	4/11/2016 7:42	355.5	0.0	48.6	100.0	319.0	0.0	48.4	100.0	293.7	0.0	47.1	100.0	NI	21.9

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/11/2016 7:43	355.5	0.0	48.5	100.0	319.0	0.0	48.1	100.0	293.7	0.0	46.9	100.0	NI	21.9
NS	4/11/2016 7:44	355.5	0.0	48.5	100.0	319.0	0.0	48.1	100.0	293.7	0.0	47.2	100.0	NI	23.1
NS	4/11/2016 7:45	355.5	0.0	48.6	100.0	319.0	0.0	48.3	100.0	293.7	0.0	47.3	100.0	NI	23.1
NS	4/11/2016 7:46	355.5	0.0	48.6	100.0	319.0	0.0	48.4	100.0	293.7	0.0	47.5	100.0	NI	23.1
NS	4/11/2016 7:47	355.5	0.0	48.6	100.0	319.0	0.0	48.4	100.0	293.7	0.0	47.5	100.0	NI	24.4
NS	4/11/2016 7:48	355.5	0.0	48.5	100.0	319.0	0.0	48.3	100.0	293.7	0.0	47.5	100.0	NI	24.4
NS	4/11/2016 7:49	355.5	0.0	48.5	100.0	319.0	0.0	48.4	100.0	293.7	0.0	47.5	100.0	NI	24.4
NS	4/11/2016 7:50	355.5	0.0	48.5	100.0	319.0	0.0	48.3	100.0	293.7	0.0	47.5	100.0	NI	25.6
NS	4/11/2016 7:51	355.5	0.0	48.5	100.0	319.0	0.0	48.2	100.0	293.7	0.0	47.5	100.0	NI	25.6
NS	4/11/2016 7:52	355.5	0.0	48.5	100.0	319.0	0.0	48.2	100.0	293.7	0.0	47.5	100.0	NI	25.6
NS	4/11/2016 7:53	355.5	0.0	48.5	100.0	319.0	0.0	48.2	100.0	293.7	0.0	47.4	100.0	NI	25.6
NS	4/11/2016 7:54	355.5	0.0	48.5	100.0	319.0	0.0	48.2	100.0	293.7	0.0	47.2	100.0	NI	25.6
NS	4/11/2016 7:55	355.5	0.0	48.6	100.0	319.0	0.0	48.3	100.0	293.7	0.0	47.2	100.0	NI	25.6
NS	4/11/2016 7:56	355.5	0.0	48.7	100.0	319.0	0.0	48.4	100.0	293.7	0.0	47.2	100.0	NI	26.9
NS	4/11/2016 7:57	355.5	0.0	48.7	100.0	319.0	0.0	48.4	100.0	293.7	0.0	47.2	100.0	NI	26.9
NS	4/11/2016 7:58	355.5	0.0	48.8	100.0	319.0	0.0	48.5	100.0	293.7	0.0	47.4	100.0	NI	26.9
NS	4/11/2016 7:59	355.5	0.0	48.9	100.0	319.0	0.0	48.6	100.0	293.7	0.0	47.5	100.0	NI	26.9
NS	4/11/2016 8:00	355.5	0.0	49.0	100.0	319.0	0.0	48.7	100.0	293.7	0.0	47.8	100.0	NI	26.9
NS	4/11/2016 8:01	355.5	0.0	49.2	100.0	319.0	0.0	48.9	100.0	293.7	0.0	48.1	100.0	NI	28.1
NS	4/11/2016 8:02	355.5	0.7	49.3	100.0	319.0	0.0	49.1	100.0	293.7	0.0	48.5	100.0	NI	28.1
NS	4/11/2016 8:03	355.5	0.0	49.2	100.0	319.0	0.0	49.0	100.0	293.7	0.0	48.5	100.0	NI	28.1
NS	4/11/2016 8:04	355.5	0.0	49.3	100.0	319.0	0.0	49.0	100.0	293.7	0.0	48.5	100.0	NI	28.1
NS	4/11/2016 8:05	355.5	0.0	49.4	100.0	319.0	0.0	49.0	100.0	293.7	0.0	48.5	100.0	NI	29.4
NS	4/11/2016 8:06	355.5	0.0	49.5	100.0	319.0	0.0	49.1	100.0	293.7	0.0	48.6	100.0	NI	29.4
NS	4/11/2016 8:07	355.5	0.0	49.6	100.0	319.0	0.0	49.3	100.0	293.7	0.0	48.7	100.0	NI	29.4
NS	4/11/2016 8:08	355.5	0.0	49.6	100.0	319.0	0.0	49.3	100.0	293.7	0.0	48.8	100.0	NI	29.4
NS	4/11/2016 8:09	355.5	0.0	49.7	100.0	319.0	0.0	49.4	100.0	293.7	0.0	48.9	100.0	NI	30.6
NS	4/11/2016 8:10	355.5	0.0	49.6	100.0	319.0	0.0	49.5	100.0	293.7	0.0	49.0	100.0	NI	30.6
NS	4/11/2016 8:11	355.5	0.0	49.9	100.0	319.0	0.0	49.6	100.0	293.7	0.0	49.1	100.0	NI	31.9
NS	4/11/2016 8:12	355.5	0.0	49.9	100.0	319.0	0.0	49.6	100.0	293.7	0.0	49.1	100.0	NI	31.9
NS	4/11/2016 8:13	355.5	0.0	49.9	99.9	319.0	0.0	49.6	100.0	293.7	0.0	49.0	100.0	NI	31.9
NS	4/11/2016 8:14	348.5	0.0	49.9	99.9	317.6	0.0	49.6	100.0	293.7	0.0	49.0	100.0	NI	33.1
NS	4/11/2016 8:15	326.0	0.0	50.0	99.9	304.9	0.0	49.7	100.0	293.7	0.7	49.2	100.0	NI	33.1
NS	4/11/2016 8:16	326.0	0.0	50.1	100.0	304.9	0.0	49.8	100.0	293.7	0.0	49.3	100.0	NI	34.4
NS	4/11/2016 8:17	326.0	0.0	50.2	100.0	304.9	0.0	49.9	100.0	293.7	0.0	49.4	100.0	NI	34.4
NS	4/11/2016 8:18	326.0	0.0	50.4	99.9	304.9	0.0	50.0	100.0	293.7	0.0	49.6	100.0	NI	35.6
NS	4/11/2016 8:19	326.0	0.0	50.6	100.0	304.9	0.0	50.3	100.0	293.7	0.0	49.8	100.0	NI	35.6
NS	4/11/2016 8:20	326.0	0.0	50.7	100.0	304.9	0.0	50.4	100.0	293.7	0.0	49.9	100.0	NI	36.9
NS	4/11/2016 8:21	326.0	0.0	50.9	100.0	304.9	0.0	50.6	100.0	293.7	0.0	50.2	100.0	NI	36.9
NS	4/11/2016 8:22	326.0	0.0	51.0	100.0	304.9	0.0	50.7	100.0	293.7	0.0	50.3	100.0	NI	40.6
NS	4/11/2016 8:23	326.0	0.0	51.1	100.0	304.9	0.0	50.8	100.0	293.7	0.0	50.4	100.0	NI	43.1
NS	4/11/2016 8:24	326.0	0.0	51.2	99.9	304.9	0.0	50.9	100.0	293.7	0.0	50.5	100.0	NI	40.6
NS	4/11/2016 8:25	326.0	0.0	51.3	100.0	304.9	0.0	51.0	100.0	293.7	0.0	50.5	100.0	NI	41.9
NS	4/11/2016 8:26	326.0	0.0	51.4	100.0	304.9	0.0	51.1	100.0	293.7	0.0	50.6	100.0	NI	41.9
NS	4/11/2016 8:27	326.0	0.0	51.5	100.0	304.9	0.0	51.1	100.0	293.7	0.0	50.7	100.0	NI	43.1
NS	4/11/2016 8:28	326.0	0.0	51.5	99.9	304.9	0.0	51.2	100.0	293.7	0.0	50.9	100.0	NI	43.1
NS	4/11/2016 8:29	326.0	0.0	51.6	99.8	304.9	0.0	51.4	100.0	293.7	0.0	51.1	100.0	NI	43.1
NS	4/11/2016 8:30	326.0	0.0	51.6	99.8	304.9	0.0	51.4	100.0	293.7	0.0	51.1	100.0	NI	50.6
NS	4/11/2016 8:31	326.0	0.0	51.7	99.8	304.9	0.0	51.5	100.0	293.7	0.0	51.2	100.0	NI	59.4
NS	4/11/2016 8:32	326.0	0.0	51.9	99.9	304.9	0.0	51.7	100.0	293.7	0.0	51.4	100.0	NI	64.4
NS	4/11/2016 8:33	326.0	0.0	52.1	99.9	304.9	0.0	51.9	100.0	293.7	0.0	51.6	100.0	NI	55.6
NS	4/11/2016 8:34	326.0	0.0	52.2	99.9	304.9	0.0	51.9	100.0	293.7	0.0	51.7	100.0	NI	63.1
NS	4/11/2016 8:35	326.0	0.0	52.2	99.8	304.9	0.0	52.0	100.0	293.7	0.0	51.8	100.0	NI	71.9
NS	4/11/2016 8:36	326.0	0.0	52.4	99.8	304.9	0.0	52.2	100.0	293.7	0.0	52.0	100.0	NI	81.9
NS	4/11/2016 8:37	326.0	0.0	52.5	99.8	304.9	0.0	52.3	100.0	293.7	0.0	52.1	100.0	NI	76.9
NS	4/11/2016 8:38	326.0	0.0	52.6	99.9	304.9	0.0	52.4	100.0	293.7	0.0	52.2	100.0	NI	64.4
NS	4/11/2016 8:39	326.0	0.0	52.8	99.9	304.9	0.0	52.6	100.0	293.7	0.0	52.4	100.0	NI	86.9
NS	4/11/2016 8:40	324.6	0.0	53.0	99.9	300.7	0.0	52.8	100.0	293.7	0.0	52.7	100.0	NI	105.6
NS	4/11/2016 8:41	324.6	0.0	53.1	99.8	289.5	0.0	52.9	100.0	293.7	0.0	52.8	100.0	NI	100.6
NS	4/11/2016 8:42	324.6	0.0	53.2	99.8	289.5	0.0	53.0	100.0	293.7	0.0	53.0	100.0	NI	79.4
NS	4/11/2016 8:43	324.6	0.0	53.3	99.7	289.5	0.0	53.2	100.0	293.7	0.0	53.2	100.0	NI	81.9
NS	4/11/2016 8:44	324.6	0.0	53.3	99.7	289.5	0.0	53.2	100.0	293.7	0.0	53.3	100.0	NI	118.1
NS	4/11/2016 8:45	324.6	0.0	53.5	99.7	289.5	0.0	53.3	100.0	293.7	0.0	53.3	100.0	NI	113.1
NS	4/11/2016 8:46	324.6	0.0	53.6	99.7	289.5	0.0	53.4	100.0	293.7	0.0	53.5	100.0	NI	74.4
NS	4/11/2016 8:47	324.6	0.0	53.6	99.6	289.5	0.0	53.5	100.0	293.7	0.0	53.6	100.0	NI	65.6
NS	4/11/2016 8:48	324.6	0.0	53.6	99.7	289.5	0.0	53.6	100.0	293.7	0.0	53.7	100.0	NI	68.1
NS	4/11/2016 8:49	324.6	0.0	53.9	99.6	289.5	0.0	53.7	100.0	293.7	0.0	53.9	100.0	NI	73.1
NS	4/11/2016 8:50	324.6	0.0	54.0	99.5	289.5	0.0	53.8	100.0	293.7	0.0	54.0	100.0	NI	85.6
NS	4/11/2016 8:51	324.6	0.0	54.1	99.4	289.5	0.0	54.0	100.0	293.7	0.0	54.1	100.0	NI	86.9
NS	4/11/2016 8:52	324.6	0.0	54.2	99.5	289.5	0.0	54.0	100.0	293.7	0.0	54.2	99.9	NI	78.1
NS	4/11/2016 8:53	324.6	0.0	54.3	99.4	289.5	0.0	54.1	100.0	293.7	0.0	54.2	99.9	NI	81.9
NS	4/11/2016 8:54	333.0	0.7	54.3	99.3	299.3	0.0	54.1	99.9	293.7	0.0	54.3	99.9	NI	120.6
NS	4/11/2016 8:55	330.2	1.5	54.4	99.2	312.0	0.7	54.2	99.9	299.3	0.7	54.3	99.9	NI	208.9
NS	4/11/2016 8:56	27.8	0.7	54.5	99.1	356.9	0.7	54.3	99.9	32.0	0.7	54.3	99.9	NI	218.1
NS	4/11/2016 8:57	43.2	0.0	54.6	99.0	356.9	0.7	54.4	99.8	32.0	0.0	54.4	99.9	NI	129.4
NS	4/11/2016 8:58	30.6	0.7	54.7	98.9	354.1	0.7	54.5	99.8	30.6	0.0	54.6	100.0	NI	108.9
NS	4/11/2016 8:59	358.3	0.7	55.0	98.7	342.9	1.5	54.6	99.8	20.8	0.7	54.6	100.0	NI	109.4
NS	4/11/2016 9:00	358.3	0.0	55.2	98.5	335.8	0.0	54.7	99.7	19.4	0.0	54.7	100.0	NI	104.4
NS	4/11/2016 9:01	2.5	0.7	55.4	98.3	345.7	0.7	54.9	99.6	19.4	0.7	54.9	100.0	NI	119.4
NS	4/11/2016 9:02	290.9	0.7	55.4	98.1	295.1	0.7	55.0	99.5	8.1	0.7	55.0	99.8	NI	134.4
NS	4/11/2016 9:03	316.2	0.0	55.6	97.9	296.5	0.7	55.3	99.4	6.7	0.0	55.3	99.9	NI	134.4
NS	4/11/2016 9:04	330.2	0.0	55.6	97.5	299.3	0.7	55.3	99.4	6.7	0.0	55.4	99.7	NI	123.1
NS	4/11/2016 9:05	239.0	1.5	55.9	97.8	253.0	1.5	55.4	99.1	8.1	0.7	55.4	99.6	NI	116.9
NS	4/11/2016 9:06	180.0	0.7	56.0	97.2	195.4	0.7	55.6	99.0	27.8	0.7	55.6	99.8	NI	111.9
NS	4/11/2016 9:07	342.9	0.7	56.2	96.7	267.0	0.7	55.7	98.8	347.1	0.7	55.6	99.6	NI	115.6
NS	4/11/2016 9:08	359.7	0.7	56.4	96.3	330.2	1.5	55.7	98.4	307.8	0.7	55.6	99.4	NI	131.9
NS	4/11/2016 9:09	36.2	0.7	56.5	95.8	356.9	0.7	55.8	97.9	358.3	0.7	55.7	99.2	NI	148.1
NS	4/11/2016 9:10	130.3	1.5	56.5	95.3	106.4	1.5	55.9	97.5	91.0	0.7	55.6	99.1	NI	153.1
NS	4/11/2016 9:11	324.6	1.5	56.6	94.7	288.1	2.2	55.9	96.7	272.7	1.5	55.6	99.0	NI	190.6
NS	4/11/2016 9:12	297.9	0.7	56.6	94.8	307.8	0.7	56.1	96.7	307.8	0.7	55.9	98.9	NI	264.4
NS	4/11/2016 9:13	168.2	1.5	56.7	95.1	262.8	2.2	56.2	96.5	216.5	1.5	55.9	98.7	NI	306.9
NS	4/11/2016 9:14	168.8	1.5	56.9	94.6	323.2	0.7	56.4	96.5	208.1	0.7	56.0	98.7	NI	291.9
NS	4/11/2016 9:15	169.6	0.7	56.9	94.3	166.8	1.5	56.5	95.8	195.4	0.7	56.0	98.3	NI	288.1
NS	4/11/2016 9:16	169.6	0.0	57.0	93.9	161.2	0.0	56.6	95.7	195.4	0.0	56.1	98.1	NI	336.9
NS	4/11/2016 9:17	169.6	0.0	57.3	94.0	161.2	0.7	56.8	95.6	195.4	0.0	56.2	98.2	NI	311.9
NS	4/11/2016 9:18	175.2	1.5	57.5	93.6	172.4	1.5	57.0	95.4	195.4	0.7	56.3	98.0	NI	275.6
NS	4/11/2016 9:19	172.4	0.7	57.7	94.0	175.2	0.7	57.2	95.6	195.4	0.7	56.6	98.0	NI	244.4
NS	4/11/2016 9:20	281.1	1.5	57.8	92.9	223.5	1.5	57.4	95.0	217.9	0.7	56.7	98.0	NI	291.9
NS	4/11/2016 9:21	328.8	0.7	58.0	93.6	319.0	0.7	57.7	95.0	258.6	0.7	57.0	98.1	NI	323.1
NS	4/11/2016 9:22	36.2	1.5	58.2	93.1	327.4	0.7	57.9	94.7	257.2	0.7	57.2	97.8	NI	333.1
NS	4/11/2016 9:23	227.7	1.5	58.3	93.6	201.1	1.5	58.0	94.9	236.2	0.7	57.4	97.8	NI	319.4
NS	4/11/2016 9:24	128.9	1.5	58.4	92.9	134.5	1.5	58.1	94.0	154.1	0.7	57.4	97.2	NI	301.9
NS	4/11/2016 9:25	142.9	0.7	58.5	91.9	124.7	0.7	58.2	93.5	119.0	0.0	57.5	96.6	NI	296.9
NS	4/11/2016 9:26	161.2	0.7	58.5	91.7	142.9	0.7	58.2	92.9	142.9	0.7	57.4	96.1	NI	289.4
NS	4/11/2016 9:27	159.7	0.7	58.6	91.9	124.7	0.7	58.3	93.5	142.9	0.0	57.5	96.1	NI	248.1
NS	4/11/2016 9:28	159.7	1.5	58.7	91.9	133.1	1.5	58.4	93.2	158.3	0.7	57.7	96.1	NI	229.4
NS	4/11/2016 9:29	181.4	2.2	58.8	91.3	210.9	2.2	58.5	92.7	175.2	1.5	57.7	95.6	NI	210.6
NS	4/11/2016 9:30	175.2	0.7	58.8	91.9	164.0	1.5	58.5	93.1	319.0	0.7	57.6	95.7	NI	195.6
NS	4/11/2016 9:31	175.2	0.0	58.8	91.9	162.6	0.7	58.5	93.5	326.0	0.0	57.9	96.0	NI	245.6
NS	4/11/2016 9:32	175.2	0.0	59.0	91.3	162.6	0.7	58.7	92.5	326.0	0.0	58.1	95.5	NI	243.1
NS	4/11/2016 9:33	175.2	0.0	59.1	91.2	162.6	0.0	58.8	92.6	326.0	0.0	58.4	95.4	NI	245.6
NS	4/11/2016 9:34	175.2	0.0	59.3	90.9	162.6	0.0	59.0	92.5	326.0	0.0	58.7	95.3	NI	298.1
NS	4/11/2016 9:35	181.4	2.2	59.4	89.6	172.4	1.5	59.1	91.1	203.9	1.5	58.6	93.8	NI	300.6
NS	4/11/2016 9:36	189.8	0.7	59.6	90.4	198.3	1.5	59.2	91.5	203.9	0.7	59.0	94.1	NI	274.4
NS	4/11/2016 9:37	188.4	1.5	59.7	89.7	194.0	1.5	59.4	91.4	202.5	0.7	59.2	94.2	NI	344.4

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/11/2016 9:38	181.4	2.2	59.9	89.1	135.9	1.5	59.5	90.4	158.3	1.5	59.4	92.7	NI	349.4
NS	4/11/2016 9:39	175.2	2.2	60.0	88.7	188.4	2.2	59.7	89.7	217.9	1.5	59.7	92.3	NI	423.1
NS	4/11/2016 9:40	189.6	1.5	60.2	87.9	165.4	1.5	59.8	89.6	187.0	1.5	59.9	92.1	NI	430.6
NS	4/11/2016 9:41	189.8	1.5	60.4	88.1	182.8	1.5	60.1	89.3	165.6	0.7	60.2	91.7	NI	419.4
NS	4/11/2016 9:42	248.8	2.2	60.6	87.6	175.2	2.2	60.2	89.6	180.0	1.5	60.5	91.9	NI	416.9
NS	4/11/2016 9:43	323.2	0.0	60.9	88.2	180.0	0.7	60.6	89.5	175.2	0.7	60.8	91.5	NI	418.1
NS	4/11/2016 9:44	323.2	0.0	61.3	86.9	180.0	0.0	61.0	89.0	175.2	0.0	61.4	92.3	NI	461.9
NS	4/11/2016 9:45	175.2	1.5	61.5	85.7	216.5	1.5	61.2	87.7	227.7	0.7	61.7	89.8	NI	460.6
NS	4/11/2016 9:46	202.5	0.0	61.8	87.4	185.6	0.7	61.5	86.3	220.7	0.7	61.8	90.1	NI	463.1
NS	4/11/2016 9:47	202.5	0.0	62.2	87.9	185.6	0.0	61.8	86.9	220.7	0.0	62.2	91.2	NI	455.6
NS	4/11/2016 9:48	202.5	0.0	62.5	85.7	185.6	0.0	62.2	87.8	220.7	0.0	62.7	90.1	NI	460.6
NS	4/11/2016 9:49	208.1	0.7	62.7	84.8	185.6	0.7	62.6	87.2	220.7	0.0	63.1	90.1	NI	466.9
NS	4/11/2016 9:50	12.3	1.5	62.8	85.3	57.3	2.2	62.6	85.9	32.0	1.5	63.3	88.1	NI	481.9
NS	4/11/2016 9:51	290.9	1.5	62.7	83.5	215.1	1.5	62.6	85.2	51.6	0.7	63.3	86.8	NI	468.1
NS	4/11/2016 9:52	168.2	0.7	62.8	85.4	149.9	1.5	62.7	87.7	123.2	0.7	63.3	89.3	NI	486.9
NS	4/11/2016 9:53	175.2	0.7	63.0	84.6	138.7	0.7	63.0	85.9	124.7	0.7	63.6	88.3	NI	488.1
NS	4/11/2016 9:54	181.4	1.5	63.2	83.1	142.9	0.7	63.1	84.6	127.5	0.7	63.7	86.3	NI	499.4
NS	4/11/2016 9:55	175.2	3.0	63.0	82.5	184.2	2.2	63.0	84.8	175.2	1.5	63.5	86.4	NI	488.1
NS	4/11/2016 9:56	159.7	1.5	63.1	83.6	142.9	1.5	63.1	85.9	158.3	0.7	63.6	87.0	NI	496.9
NS	4/11/2016 9:57	203.9	2.2	63.2	83.2	172.4	2.2	63.2	84.6	168.2	1.5	63.7	86.0	NI	496.9
NS	4/11/2016 9:58	175.2	2.2	63.2	82.3	166.8	2.2	63.1	83.4	172.4	1.5	63.7	85.3	NI	493.1
NS	4/11/2016 9:59	187.0	3.0	63.2	81.8	175.2	2.2	63.1	83.4	173.8	1.5	63.8	85.5	NI	480.6
NS	4/11/2016 10:00	175.2	3.0	63.3	83.3	187.0	3.0	63.2	84.7	187.0	2.2	63.8	86.0	NI	463.1
NS	4/11/2016 10:01	175.2	4.5	63.2	80.9	165.4	3.7	63.1	81.8	175.2	2.2	63.7	83.3	NI	478.1
NS	4/11/2016 10:02	175.2	4.5	63.0	79.8	169.6	3.7	63.0	81.7	175.2	3.0	63.4	83.7	NI	508.9
NS	4/11/2016 10:03	184.2	1.5	63.1	81.4	184.2	2.2	63.0	82.3	194.0	2.2	63.3	83.7	NI	463.1
NS	4/11/2016 10:04	162.6	2.2	63.3	81.7	155.5	2.2	63.2	81.8	166.8	1.5	63.6	83.4	NI	540.6
NS	4/11/2016 10:05	172.4	3.7	63.5	80.4	159.7	3.7	63.3	81.3	164.0	2.2	63.7	82.9	NI	541.9
NS	4/11/2016 10:06	158.3	2.2	63.7	80.8	166.8	3.0	63.6	82.2	173.8	2.2	64.0	84.2	NI	546.9
NS	4/11/2016 10:07	154.1	3.0	63.9	79.5	134.5	2.2	63.9	80.7	145.7	1.5	64.5	83.2	NI	544.4
NS	4/11/2016 10:08	191.2	3.7	64.1	79.1	181.4	3.0	64.1	81.1	187.0	2.2	64.6	82.6	NI	550.6
NS	4/11/2016 10:09	144.3	3.7	64.2	78.3	155.5	4.5	64.2	79.9	156.9	3.0	64.7	81.7	NI	558.1
NS	4/11/2016 10:10	181.4	3.0	64.5	79.1	173.8	2.2	64.4	79.6	175.2	1.5	64.9	81.2	NI	559.4
NS	4/11/2016 10:11	189.8	4.5	64.3	78.8	166.8	4.5	64.3	79.2	168.2	3.0	64.8	80.7	NI	550.6
NS	4/11/2016 10:12	162.6	3.7	64.6	79.6	164.0	3.7	64.6	80.3	168.2	3.0	65.1	81.3	NI	528.1
NS	4/11/2016 10:13	172.4	4.5	64.7	77.4	168.2	3.7	64.7	79.1	175.2	3.0	65.3	80.6	NI	526.9
NS	4/11/2016 10:14	191.2	3.7	64.8	77.4	181.4	3.0	64.8	78.9	194.0	2.2	65.4	80.5	NI	520.6
NS	4/11/2016 10:15	172.4	4.5	64.8	77.2	175.2	3.7	64.8	78.3	184.2	3.0	65.4	79.7	NI	559.4
NS	4/11/2016 10:16	188.4	4.5	65.1	76.4	185.6	3.7	65.1	79.3	172.4	3.0	65.7	81.0	NI	553.1
NS	4/11/2016 10:17	191.2	2.2	65.2	78.6	189.8	3.0	65.2	79.5	188.4	2.2	65.9	80.5	NI	569.4
NS	4/11/2016 10:18	213.7	3.0	65.6	76.7	188.4	2.2	65.7	79.2	188.4	1.5	66.3	80.7	NI	578.1
NS	4/11/2016 10:19	171.0	2.2	65.7	77.6	162.6	3.0	65.8	78.3	172.4	2.2	66.6	79.5	NI	578.9
NS	4/11/2016 10:20	159.7	1.5	66.0	76.1	138.7	1.5	66.2	77.0	151.3	0.7	67.0	78.4	NI	580.6
NS	4/11/2016 10:21	171.0	3.0	65.6	77.1	158.3	3.0	66.0	76.8	159.7	2.2	67.0	77.8	NI	563.1
NS	4/11/2016 10:22	181.4	3.0	65.9	75.8	187.0	3.0	66.0	76.5	184.2	2.2	67.1	77.6	NI	570.6
Application	4/11/2016 10:23	189.8	3.7	66.0	74.6	195.4	3.0	66.3	77.1	192.6	2.2	67.2	78.1	NI	601.9
Application	4/11/2016 10:24	184.2	4.5	65.9	75.1	175.2	3.7	66.1	76.5	192.6	3.0	67.1	77.0	NI	604.4
Application	4/11/2016 10:25	175.2	3.7	65.7	75.3	173.8	3.7	65.9	75.4	175.2	3.0	66.9	75.8	NI	608.9
Application	4/11/2016 10:26	188.4	3.7	65.6	74.7	169.6	3.0	65.9	76.0	172.4	2.2	66.9	76.2	NI	608.1
Application	4/11/2016 10:27	184.2	3.0	66.1	75.1	199.7	3.0	66.1	75.1	201.1	2.2	67.1	75.6	NI	604.4
Application	4/11/2016 10:28	180.0	3.7	66.3	74.6	169.6	3.7	66.4	76.1	185.6	3.0	67.3	76.0	NI	578.1
Application	4/11/2016 10:29	155.5	3.7	66.3	75.1	152.7	3.7	66.5	75.4	154.1	2.2	67.4	76.2	NI	529.4
Application	4/11/2016 10:30	199.7	3.0	66.7	75.1	192.6	3.0	66.8	76.6	191.2	2.2	67.6	77.1	NI	553.1
Application	4/11/2016 10:31	224.9	3.7	66.9	73.4	181.4	3.0	67.1	75.6	182.8	2.2	68.0	76.7	NI	605.6
Application	4/11/2016 10:32	181.4	3.7	66.7	72.7	173.8	3.7	66.9	74.1	169.6	3.0	67.9	74.7	NI	620.6
Application	4/11/2016 10:33	171.0	2.2	67.0	73.7	168.2	2.2	67.1	74.5	181.4	1.5	68.1	75.9	NI	624.4
Application	4/11/2016 10:34	154.1	0.7	67.5	74.4	113.4	1.5	67.5	75.7	137.3	0.7	68.5	76.1	NI	626.9
Application	4/11/2016 10:35	206.7	3.0	67.6	72.2	184.2	2.2	68.0	75.2	191.2	1.5	69.0	75.7	NI	629.4
NS	4/11/2016 10:36	164.0	4.5	67.3	71.8	154.1	4.5	67.7	71.3	159.7	3.7	68.8	71.9	NI	631.9
NS	4/11/2016 10:37	180.0	4.5	66.9	73.2	166.8	4.5	67.2	72.4	166.8	3.0	68.3	72.9	NI	635.6
NS	4/11/2016 10:38	192.6	3.7	67.2	72.5	191.2	3.7	67.4	73.0	198.3	3.0	68.4	73.3	NI	640.6
NS	4/11/2016 10:39	185.6	2.2	67.7	71.7	210.9	2.2	67.8	73.8	194.0	1.5	68.8	74.3	NI	640.6
NS	4/11/2016 10:40	185.6	3.7	67.5	71.7	175.2	3.0	67.8	72.9	194.0	2.2	68.9	73.2	NI	646.9
0-3	4/11/2016 10:41	168.2	2.2	67.9	72.5	169.6	2.2	68.1	73.2	173.8	1.5	69.1	73.6	NI	604.4
0-3	4/11/2016 10:42	154.1	2.2	68.2	71.8	164.0	2.2	68.4	72.4	191.2	1.5	69.3	72.3	NI	629.4
0-3	4/11/2016 10:43	162.6	3.0	68.6	71.7	142.9	3.0	68.7	73.1	149.9	2.2	69.6	72.7	NI	609.4
0-3	4/11/2016 10:44	208.1	5.2	68.5	70.6	169.6	4.5	68.6	70.4	175.2	3.0	69.7	70.6	NI	615.6
0-3	4/11/2016 10:45	206.7	5.2	68.3	69.5	187.0	5.2	68.5	69.7	192.6	4.5	69.6	70.0	NI	619.4
0-3	4/11/2016 10:46	210.9	5.2	68.1	69.8	198.3	4.5	68.3	71.0	199.7	3.0	69.5	70.8	NI	620.6
0-3	4/11/2016 10:47	202.5	4.5	67.7	71.0	195.4	4.5	67.9	69.9	188.4	3.7	69.3	69.6	NI	624.4
0-3	4/11/2016 10:48	210.9	3.7	68.2	71.0	195.4	3.7	68.5	71.2	196.8	3.0	69.8	70.7	NI	625.6
0-3	4/11/2016 10:49	186.4	5.2	68.2	69.8	175.2	4.5	68.5	70.3	198.3	3.0	69.9	69.5	NI	629.4
0-3	4/11/2016 10:50	192.6	4.5	68.6	70.9	173.8	4.5	68.7	71.0	180.0	3.0	70.1	70.0	NI	631.9
0-3	4/11/2016 10:51	194.0	6.0	68.5	71.0	175.2	6.0	68.6	70.1	182.8	4.5	70.0	69.1	NI	633.1
0-3	4/11/2016 10:52	213.7	6.0	68.6	69.3	199.7	4.5	68.8	69.2	203.9	3.7	70.1	68.3	NI	638.1
0-3	4/11/2016 10:53	216.5	7.5	68.9	68.8	191.2	6.0	69.2	69.3	199.7	5.2	70.3	68.4	NI	640.6
0-3	4/11/2016 10:54	213.7	7.5	69.3	68.0	203.9	6.7	69.5	69.7	206.7	5.2	70.5	69.2	NI	643.1
0-3	4/11/2016 10:55	199.7	7.5	69.1	67.1	182.8	6.7	69.4	67.3	191.2	5.2	70.5	66.7	NI	644.4
0-3	4/11/2016 10:56	216.5	7.5	68.8	67.5	189.8	6.7	69.1	68.0	195.4	5.2	70.3	67.1	NI	649.4
0-3	4/11/2016 10:57	180.0	4.5	69.1	67.1	168.2	4.5	69.4	69.0	175.2	3.0	70.5	69.4	NI	651.9
0-3	4/11/2016 10:58	189.8	6.0	69.2	68.2	172.4	5.2	69.4	68.8	175.2	3.7	70.7	68.2	NI	655.6
0-3	4/11/2016 10:59	206.7	7.5	68.8	67.1	201.1	6.7	69.2	67.7	194.0	5.2	70.5	66.9	NI	656.9
0-3	4/11/2016 11:00	202.5	6.0	68.8	67.5	187.0	6.0	69.1	67.6	195.4	4.5	70.5	66.9	NI	660.6
0-3	4/11/2016 11:01	195.4	4.5	68.9	69.3	158.3	4.5	69.2	68.9	169.6	3.0	70.6	68.3	NI	664.4
0-3	4/11/2016 11:02	213.7	4.5	69.7	67.5	185.6	3.7	70.0	69.4	195.4	3.0	71.2	68.4	NI	668.1
0-3	4/11/2016 11:03	215.1	6.0	70.0	68.9	198.3	6.0	70.2	69.2	203.9	4.5	71.4	68.5	NI	671.9
0-3	4/11/2016 11:04	189.8	6.0	70.3	67.0	171.0	5.2	70.8	66.1	172.4	3.7	72.0	66.2	NI	671.9
0-3	4/11/2016 11:05	181.4	4.5	70.5	66.0	152.7	4.5	70.9	66.0	159.7	3.0	72.2	65.4	NI	675.6
0-3	4/11/2016 11:06	195.4	6.0	70.3	65.9	182.8	5.2	70.8	65.5	196.8	4.5	72.1	65.0	NI	680.6
0-3	4/11/2016 11:07	201.1	4.5	70.3	64.7	188.2	4.5	71.0	66.2	173.8	3.0	72.1	64.7	NI	680.6
0-3	4/11/2016 11:08	172.4	4.5	70.7	65.6	175.2	4.5	71.1	66.0	192.6	3.7	72.0	65.6	NI	693.1
0-3	4/11/2016 11:09	151.3	6.0	70.4	64.8	147.1	5.2	70.9	64.6	155.5	3.7	71.8	65.1	NI	708.1
0-3	4/11/2016 11:10	175.2	6.0	70.0	64.6	158.3	5.2	70.3	66.0	159.7	3.7	71.5	65.2	NI	709.4
0-3	4/11/2016 11:11	182.8	6.0	70.0	65.5	175.2	5.2	70.2	66.2	187.0	4.5	71.5	65.6	NI	714.4
0-3	4/11/2016 11:12	187.0	5.2	70.1	66.2	189.8	5.2	70.4	65.6	195.4	4.5	71.7	65.1	NI	719.4
0-3	4/11/2016 11:13	181.4	4.5	70.8	65.9	182.8	4.5	71.0	66.6	184.2	3.0	72.2	66.0	NI	724.4
0-3	4/11/2016 11:14	187.0	5.2	71.0	65.2	184.2	4.5	71.3	65.0	188.4	3.0	72.6	64.4	NI	728.1
0-3	4/11/2016 11:15	210.9	6.7	71.2	64.1	205.3	6.0	71.5	64.6	213.7	4.5	72.7	63.7	NI	729.4
0-3	4/11/2016 11:16	216.5	6.7	71.1	64.9	210.9	6.0	71.4	64.6	216.5	4.5	72.6	64.0	NI	736.9
0-3	4/11/2016 11:17	209.5	6.7	71.4	63.1	213.7	5.2	71.9	65.0	222.1	4.5	73.0	64.4	NI	723.1
0-3	4/11/2016 11:18	208.1	6.7	71.0	63.9	196.8	6.7	71.4	63.4	205.3	5.2	72.7	62.4	NI	720.6
0-3	4/11/2016 11:19	223.6	8.2	70.8	64.6	216.5	6.7	71.2	63.9	220.7	5.2	72.5	62.9	NI	736.9
0-3	4/11/2016 11:20	185.6	5.2	70.8	65.4	187.0	6.0	71.3	64.2	196.8	4.5	72.4	63.4	NI	725.6
0-3	4/11/2016 11:21	175.2	3.7	71.6	64.9	172.4	3.0	71.9	66.4	184.2	2.2	72.9	65.7	NI	713.1
0-3	4/11/2016 11:22	191.2	6.7	71.5	62.8	187.0	6.0	72.0	63.3	195.4	4.5	73.2	62.9	NI	738.1
0-3	4/11/2016 11:23	195.4	5.2	71.7	64.8	203.9	4.5	72.0	63.6	196.8	3.7	73.3	63.2	NI	753.1
0-3	4/11/2016 11:24	212.3	8.2	71.6	61.8	217.9	6.7	72.1	63.6	219.3	4.5	73.3	62.9	NI	751.9
0-3	4/11/2016 11:25	208.1	6.7	71.5	64.6	199.7	6.7	71.8	63.4	199.7	5.2	73.0	62.6	NI	760.6
0-3	4/11/2016 11:26	201.1	6.0	72.2	63.0	212.3	5.2	72.5	63.4	208.1	4.5	73.6	63.1	NI	755.6
0-3	4/11/2016 11:27	212.3	7.5	72.1	61.7	203.9	6.7	72.5	62.9	209.5	5.2	73.7	62.1	NI	760.6
0-3	4/11/2016 11:28	201.1	5.2	72.1	62.4	198.3	5.2	72.4	62.5	210.9	3.7	73.7	62.1	NI	763.1
0-3	4/11/2016 11:29	216.5	5.2	72.4	63.1	212.3	4.5	72.7	63.4	208.1	3.7	74.0	62.8	NI	764.4
0-3	4/11/2016 11:30	192.6	5.2	72.9	62.5	192.6	3.7	73.3	62.8	209.5	3.0	74.6	62.1	NI	770.6
0-3	4/11/2016 11:31	202.5	7.5	72.6	60.6	198.3	6.7	73.1	61.1	202.5	5.2	74.3	60.3	NI	770.6
0-3	4/11/2016 11:32	220.7	6.0	72.1	63.1	219.3	6.0	72.4	61.7	222.1	5.2	73.6	61.1	NI	770.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
0-3	4/11/2016 11:33	198.3	6.0	73.1	62.4	196.8	5.2	73.3	63.8	206.7	4.5	74.2	63.3	NI	776.9
0-3	4/11/2016 11:34	185.6	6.7	72.4	59.6	175.2	6.0	73.0	59.7	184.2	5.2	74.3	59.2	NI	780.6
0-3	4/11/2016 11:35	175.2	5.2	72.5	61.1	175.2	5.2	72.9	61.6	189.8	3.7	74.2	61.1	NI	786.9
0-3	4/11/2016 11:36	195.4	7.5	72.3	60.8	189.8	6.0	72.7	61.0	194.0	4.5	74.1	60.3	NI	808.1
0-3	4/11/2016 11:37	206.7	9.0	72.1	59.8	202.5	8.2	72.7	60.5	206.7	6.0	74.0	59.4	NI	795.6
0-3	4/11/2016 11:38	184.2	7.5	72.0	60.5	194.0	6.7	72.5	60.0	206.7	5.2	73.8	59.4	NI	789.4
0-3	4/11/2016 11:39	198.3	6.7	72.2	61.0	199.7	6.7	72.5	60.7	202.5	5.2	73.7	60.0	NI	780.6
0-3	4/11/2016 11:40	201.1	8.2	72.5	59.6	206.7	6.7	72.9	60.4	208.1	5.2	73.9	59.6	NI	791.9
0-3	4/11/2016 11:41	208.1	7.5	72.7	60.0	205.3	7.5	73.0	60.7	213.7	6.0	73.9	60.1	NI	796.9
0-3	4/11/2016 11:42	191.2	6.7	72.9	60.6	192.6	6.0	73.2	60.0	199.7	5.2	74.3	59.4	NI	801.9
0-3	4/11/2016 11:43	206.7	7.5	73.0	60.0	203.9	6.0	73.3	60.4	202.5	5.2	74.4	59.5	NI	783.1
0-3	4/11/2016 11:44	208.1	7.5	73.3	60.5	206.7	6.0	73.6	60.9	210.9	4.5	74.7	60.4	NI	780.6
0-3	4/11/2016 11:45	222.1	8.2	73.3	58.2	213.7	6.7	73.9	58.4	213.7	5.2	75.1	57.9	NI	800.6
0-3	4/11/2016 11:46	196.8	8.2	72.9	58.2	212.3	8.2	73.3	58.0	212.3	6.0	74.6	57.2	NI	743.1
0-3	4/11/2016 11:47	195.4	7.5	72.3	59.6	192.6	6.7	72.7	59.6	198.3	5.2	73.9	58.8	NI	828.1
0-3	4/11/2016 11:48	196.8	7.5	72.4	60.3	202.5	6.7	72.7	60.7	202.5	5.2	73.7	59.9	NI	813.1
0-3	4/11/2016 11:49	198.3	6.0	73.1	59.1	188.4	6.0	73.4	61.3	194.0	5.2	74.4	60.9	NI	809.4
0-3	4/11/2016 11:50	196.8	9.0	73.3	59.0	187.0	6.0	73.7	59.5	222.1	4.5	74.9	59.0	NI	823.1
0-3	4/11/2016 11:51	203.9	10.5	73.0	57.6	199.7	10.5	73.3	57.7	208.1	8.2	74.6	56.9	NI	823.1
0-3	4/11/2016 11:52	192.6	7.5	72.9	59.7	199.7	7.5	73.1	59.4	196.8	6.0	74.3	56.7	NI	819.4
0-3	4/11/2016 11:53	206.7	9.7	73.0	57.7	203.9	8.2	73.5	57.6	209.5	6.0	74.7	57.1	NI	820.6
0-3	4/11/2016 11:54	181.4	6.7	73.0	58.6	187.0	6.0	73.4	58.7	196.8	5.2	74.6	58.3	NI	824.4
0-3	4/11/2016 11:55	180.0	9.0	72.7	57.6	175.2	6.7	73.2	58.1	182.6	5.2	74.5	57.6	NI	831.9
0-3	4/11/2016 11:56	181.4	7.5	72.6	59.7	172.4	8.2	73.0	58.9	180.0	6.0	74.3	58.0	NI	836.9
0-3	4/11/2016 11:57	188.2	6.0	73.1	57.8	166.8	6.2	73.5	57.9	171.0	4.5	74.7	57.6	NI	846.9
0-3	4/11/2016 11:58	210.9	6.7	73.3	59.6	194.0	6.0	73.5	59.3	192.6	4.5	74.9	58.4	NI	864.4
0-3	4/11/2016 11:59	194.0	7.5	73.7	57.7	198.3	7.5	74.1	57.5	201.1	5.2	75.3	57.2	NI	751.9
0-3	4/11/2016 12:00	222.1	9.0	73.6	58.3	215.1	8.2	73.9	57.4	217.9	6.7	75.1	56.9	NI	866.9
0-3	4/11/2016 12:01	189.8	6.7	74.4	57.7	194.0	6.0	74.7	58.0	201.1	4.5	75.8	57.9	NI	894.4
0-3	4/11/2016 12:02	191.2	8.2	73.9	56.3	185.6	6.7	74.5	56.3	180.0	5.2	75.8	55.4	NI	644.4
0-3	4/11/2016 12:03	192.6	9.7	73.3	57.0	189.8	9.0	73.6	56.9	191.2	6.7	74.8	56.0	NI	895.6
0-3	4/11/2016 12:04	175.2	7.5	73.2	58.6	175.2	7.5	73.5	59.3	187.0	6.0	74.6	58.6	NI	904.4
0-3	4/11/2016 12:05	202.5	8.2	73.8	56.7	188.4	6.7	74.2	58.1	198.3	5.2	75.3	57.5	NI	930.6
0-3	4/11/2016 12:06	206.7	7.5	74.0	57.3	199.7	7.5	74.3	56.5	206.7	6.7	75.5	55.8	NI	926.9
0-3	4/11/2016 12:07	191.2	6.7	74.4	57.5	196.8	6.0	74.7	57.8	199.7	4.5	75.8	57.4	NI	919.4
0-3	4/11/2016 12:08	198.3	6.7	74.9	56.9	196.8	6.0	75.2	56.8	199.7	5.2	76.3	56.2	NI	909.4
0-3	4/11/2016 12:09	199.7	8.2	75.1	57.7	202.5	6.7	75.3	56.9	212.3	5.2	76.6	56.3	NI	915.6
0-3	4/11/2016 12:10	184.2	6.7	75.5	57.0	189.8	6.0	75.8	57.0	194.0	5.2	77.0	56.2	NI	943.1
0-3	4/11/2016 12:11	184.2	7.5	75.3	55.1	175.2	6.7	75.8	54.8	182.6	5.2	77.2	53.9	NI	951.9
0-3	4/11/2016 12:12	196.8	8.2	75.0	56.2	196.8	7.5	75.4	55.0	202.5	6.0	76.9	54.2	NI	975.6
0-3	4/11/2016 12:13	189.8	7.5	74.9	56.2	194.0	6.7	75.3	56.3	202.5	5.2	76.7	55.3	NI	981.9
0-3	4/11/2016 12:14	192.6	8.2	74.0	55.0	181.4	7.5	74.7	54.6	182.6	6.0	76.3	53.7	NI	979.4
0-3	4/11/2016 12:15	175.2	4.5	74.3	56.7	175.2	4.5	74.9	57.7	184.2	3.0	76.4	56.8	NI	970.6
0-3	4/11/2016 12:16	171.0	4.5	74.5	57.3	171.0	4.5	75.0	57.1	182.6	3.7	76.4	56.5	NI	894.4
0-3	4/11/2016 12:17	159.7	7.5	74.1	55.9	152.7	5.2	74.7	56.6	155.5	3.7	76.3	55.5	NI	825.6
0-3	4/11/2016 12:18	161.2	7.5	74.0	57.9	144.3	7.5	74.3	56.9	149.9	6.0	75.7	55.6	NI	988.1
0-3	4/11/2016 12:19	184.2	7.5	74.9	56.9	187.0	6.7	75.1	56.1	191.2	5.2	76.4	55.4	NI	601.9
0-3	4/11/2016 12:20	206.7	5.2	75.1	56.0	198.3	5.2	75.6	57.0	205.3	3.7	76.9	56.1	NI	291.9
0-3	4/11/2016 12:21	191.2	4.5	74.9	55.8	209.5	4.5	75.2	55.7	206.7	3.7	76.3	54.9	NI	991.9
0-3	4/11/2016 12:22	215.1	4.5	75.2	55.7	206.7	4.5	75.6	56.7	208.1	3.7	76.6	56.6	NI	981.9
0-3	4/11/2016 12:23	203.9	4.5	75.8	56.3	209.5	4.5	76.1	56.7	215.1	3.7	77.2	56.7	NI	1018.1
0-3	4/11/2016 12:24	175.2	6.7	75.1	55.2	181.4	6.7	75.7	54.3	196.8	5.2	77.2	53.8	NI	235.6
0-3	4/11/2016 12:25	180.0	7.5	73.9	54.9	173.8	6.7	74.5	54.1	189.8	5.2	76.1	53.2	NI	704.4
0-3	4/11/2016 12:26	196.8	7.5	73.4	56.3	172.4	6.7	73.7	55.6	175.2	5.2	75.2	54.6	NI	1024.4
0-3	4/11/2016 12:27	173.8	8.2	73.8	56.9	171.0	6.7	74.0	56.8	175.2	5.2	75.3	55.7	NI	963.1
0-3	4/11/2016 12:28	191.2	9.0	74.3	56.7	203.9	7.5	74.5	56.3	191.2	6.0	75.8	55.6	NI	1006.9
0-3	4/11/2016 12:29	201.1	6.0	75.1	56.4	196.8	6.7	75.3	56.4	199.7	5.2	76.5	55.4	NI	1021.9
0-3	4/11/2016 12:30	206.7	4.5	75.4	54.3	206.7	5.2	75.9	54.3	203.9	3.7	77.2	53.8	NI	1039.4
0-3	4/11/2016 12:31	198.8	4.5	75.6	55.9	195.4	3.7	76.2	57.4	205.3	3.0	77.5	56.9	NI	421.9
0-3	4/11/2016 12:32	168.2	4.5	75.6	53.7	158.3	3.7	76.5	55.3	168.2	2.2	77.9	55.2	NI	646.9
0-3	4/11/2016 12:33	162.6	5.2	74.6	55.0	152.7	4.5	75.5	54.7	165.4	3.7	77.1	54.1	NI	346.9
0-3	4/11/2016 12:34	189.8	4.5	74.9	57.9	175.2	4.5	75.1	56.9	172.4	3.7	76.5	55.8	NI	1145.6
0-3	4/11/2016 12:35	246.0	6.0	75.2	56.3	237.6	4.5	75.7	56.1	234.8	3.7	76.8	55.6	NI	1140.6
0-3	4/11/2016 12:36	243.2	7.5	75.1	55.8	247.4	6.7	75.9	54.4	254.4	5.2	76.6	54.1	NI	285.6
0-3	4/11/2016 12:37	188.4	6.7	74.6	55.1	191.2	5.2	75.3	55.0	205.3	4.5	76.2	55.3	NI	269.4
0-3	4/11/2016 12:38	203.9	6.7	73.9	56.7	187.0	6.7	74.3	55.7	195.4	5.2	75.2	55.1	NI	256.9
0-3	4/11/2016 12:39	237.6	6.0	73.5	56.4	223.5	5.2	73.9	56.5	231.9	3.7	74.5	56.1	NI	239.4
0-3	4/11/2016 12:40	216.5	4.5	73.3	58.4	224.9	4.5	73.6	57.6	227.7	3.0	74.0	57.5	NI	270.6
0-3	4/11/2016 12:41	164.0	6.0	73.2	58.0	159.7	4.5	73.4	56.9	166.8	3.0	73.9	57.0	NI	324.4
0-3	4/11/2016 12:42	208.7	5.2	73.1	56.3	198.3	5.2	73.3	56.2	208.1	3.7	73.9	56.2	NI	279.4
0-3	4/11/2016 12:43	212.3	3.0	73.0	58.1	198.3	2.2	73.1	57.5	213.7	1.5	73.7	57.6	NI	938.1
0-3	4/11/2016 12:44	236.2	6.7	73.3	57.5	227.7	5.2	73.5	57.5	234.8	3.7	74.0	57.4	NI	281.9
0-3	4/11/2016 12:45	219.3	7.5	73.1	57.5	227.7	6.7	73.4	57.9	233.3	5.2	73.9	57.9	NI	323.1
0-3	4/11/2016 12:46	199.7	5.2	73.4	58.4	188.4	5.2	73.5	57.6	203.9	4.5	74.0	58.0	NI	298.1
0-3	4/11/2016 12:47	198.3	3.7	74.0	57.5	194.0	3.7	74.2	57.3	201.1	3.0	74.7	57.9	NI	1134.4
0-3	4/11/2016 12:48	202.5	3.7	74.7	56.3	212.3	3.0	74.9	57.9	216.5	2.2	75.6	58.3	NI	1094.4
0-3	4/11/2016 12:49	202.5	6.0	75.0	57.8	213.7	5.2	75.4	55.7	206.7	3.7	76.6	55.8	NI	1143.1
0-3	4/11/2016 12:50	192.6	7.5	75.6	54.1	187.0	6.0	76.2	54.3	198.3	4.5	77.5	54.0	NI	246.9
0-3	4/11/2016 12:51	198.3	7.5	74.5	54.9	196.8	6.7	75.1	53.4	199.7	5.2	76.4	52.6	NI	294.4
0-3	4/11/2016 12:52	205.3	6.7	74.6	55.3	201.1	6.0	74.7	55.1	203.9	4.5	75.7	54.5	NI	1111.9
0-3	4/11/2016 12:53	203.9	7.5	75.6	55.5	192.6	6.7	75.7	55.6	199.7	5.2	76.6	55.3	NI	1129.4
0-3	4/11/2016 12:54	196.8	8.2	76.1	53.8	191.2	7.5	76.5	53.3	192.6	6.0	77.6	53.1	NI	358.1
0-3	4/11/2016 12:55	191.2	8.2	75.4	54.3	188.4	7.5	75.9	53.0	187.0	6.0	77.3	52.4	NI	339.4
0-3	4/11/2016 12:56	192.6	7.5	75.3	53.9	198.3	6.7	75.7	54.1	196.8	4.5	76.9	53.3	NI	381.9
0-3	4/11/2016 12:57	194.0	8.2	74.8	53.6	187.0	7.5	75.0	52.8	192.6	5.2	76.2	52.2	NI	1248.1
0-3	4/11/2016 12:58	201.1	8.2	75.6	54.7	198.3	7.5	75.8	54.2	206.7	6.0	76.6	54.3	NI	1120.6
0-3	4/11/2016 12:59	192.6	8.2	76.2	52.7	196.8	6.7	76.7	52.9	195.4	5.2	77.7	53.0	NI	490.6
0-3	4/11/2016 13:00	202.5	7.5	76.0	54.2	206.7	7.5	76.3	53.6	202.5	6.0	77.5	53.0	NI	656.9
0-3	4/11/2016 13:01	187.0	7.5	75.7	51.7	185.6	6.7	76.3	51.8	199.7	5.2	77.6	51.0	NI	1143.1
0-3	4/11/2016 13:02	208.7	7.5	75.6	52.8	195.4	6.0	75.9	53.1	206.7	4.5	77.2	52.4	NI	1073.1
0-3	4/11/2016 13:03	223.5	6.7	76.0	52.8	216.5	6.7	76.4	53.0	217.9	5.2	77.6	52.7	NI	980.6
0-3	4/11/2016 13:04	189.8	9.0	76.2	51.5	194.0	7.5	76.9	52.1	202.5	5.2	78.1	51.8	NI	528.1
0-3	4/11/2016 13:05	195.4	7.5	75.6	53.6	192.6	7.5	76.0	52.9	196.8	6.0	77.2	52.0	NI	564.4
0-3	4/11/2016 13:06	199.7	7.5	75.4	54.2	194.0	6.7	75.6	53.4	205.3	5.2	76.7	52.9	NI	764.4
0-3	4/11/2016 13:07	196.8	9.7	75.7	52.9	198.3	8.2	75.9	54.2	209.5	6.0	76.7	54.0	NI	971.9
0-3	4/11/2016 13:08	196.8	10.5	75.3	52.3	194.0	9.0	75.6	52.7	194.0	7.5	76.7	52.4	NI	493.1
0-3	4/11/2016 13:09	215.1	8.2	74.7	52.6	212.3	8.2	75.1	53.2	220.7	6.0	76.2	52.8	NI	444.4
0-3	4/11/2016 13:10	198.3	6.0	74.7	55.3	205.3	6.0	74.9	54.7	213.7	4.5	75.7	54.6	NI	770.6
0-3	4/11/2016 13:11	184.2	7.5	74.8	52.5	181.4	6.0	75.2	53.6	202.5	4.5	76.1	53.4	NI	741.9
0-3	4/11/2016 13:12	195.4	6.0	74.9	54.6	189.8	6.0	74.9	54.6	196.8	4.5	75.9	54.5	NI	1228.1
0-3	4/11/2016 13:13	199.7	5.2	75.8	54.6	198.3	4.5	76.0	54.2	203.9	3.7	77.0	54.6	NI	439.4
0-3	4/11/2016 13:14	209.5	5.2	76.1	54.5	212.3	4.5	76.4	55.2	212.3	3.0	77.5	54.8	NI	531.9
0-3	4/11/2016 13:15	206.7	3.7	76.4	53.6	196.8	3.7	76.6	54.1	206.7	3.0	77.6	53.6	NI	833.1
0-3	4/11/2016 13:16	209.5	4.5	76.4	53.3	202.5	4.5	76.7	53.5	206.7	3.7	77.7	53.0	NI	1088.1
0-3	4/11/2016 13:17	206.7	3.7	76.5	54.8	199.7	3.7	76.8	53.5	205.3	3.0	77.9	53.5	NI	420.6
0-3	4/11/2016 13:18	208.1	6.0	76.4	53.3	216.5	5.2	76.9	53.0	215.1	3.7	78.1	52.5	NI	478.1
0-3	4/11/2016 13:19	223.5	9.0	76.7	52.3	215.1	8.2	76.2	51.5	220.7	6.0	77.3	51.1	NI	785.6
0-3	4/11/2016 13:20	194.0	6.0	75.8	53.3	189.8	6.7	76.0	54.1	198.3	4.5	77.0	53.4	NI	863.1
0-3	4/11/2016 13:21	188.4	6.7	76.2	54.0	175.2	5.2	76.3	53.9	175.2	3.7	77.4	53.7	NI	1274.4
0-3	4/11/2016 13:22	205.3	9.0	76.8	51.9	205.3	8.2	77.2	51.8	209.5	6.0	78.4	51.9	NI	1276.9
0-3	4/11/2016 13:23	217.9	6.0	76.7	52.6	209.5	6.0	77.1	51.4	213.7	4.5	78.6	51.1	NI	426.9
0-3	4/11/2016 13:24	219.3	4.5	76.6	52.1	209.5	3.7	77.1	53.0	223.5	3.0	78.4	52.5	NI	795.6
0-3	4/11/2016 13:25	223.5	6.0	76.2	52.4	222.1	5.2	76.7	52.4	222.1	4.5	78.0	51.9	NI	506.9
0-3	4/11/2016 13:26	202.5	6.0	76.2	51.2	205.3	6.0	76.7	51.6	206.7	4.5	77.9	51.1	NI	898.1
0-3	4/11/2016 13:27	196.8	6.7	76.1	51.5	205.3	6.0	76.5	52.6	210.9	4.5	77.6	52.0	NI	756.9

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
0-3	4/11/2016 13:28	222.1	6.7	76.0	53.0	210.9	6.0	76.5	52.7	219.3	4.5	77.5	52.4	NI	535.6
0-3	4/11/2016 13:29	203.9	6.7	76.0	51.6	199.7	5.2	76.6	52.4	206.7	3.7	77.6	52.3	NI	545.6
0-3	4/11/2016 13:30	205.3	6.0	75.3	52.9	203.9	6.0	75.6	53.2	209.5	4.5	76.6	52.8	NI	533.1
0-3	4/11/2016 13:31	206.7	7.5	75.0	52.4	213.7	6.0	75.4	52.4	216.5	4.5	76.2	52.0	NI	369.4
0-3	4/11/2016 13:32	195.4	8.2	74.8	52.5	189.8	7.5	75.0	52.3	199.7	5.2	75.8	52.1	NI	394.4
0-3	4/11/2016 13:33	199.7	7.5	74.5	53.3	198.8	6.7	74.6	53.1	201.1	5.2	75.3	52.9	NI	358.1
0-3	4/11/2016 13:34	206.7	5.2	74.5	54.0	201.1	5.2	74.6	54.0	202.5	3.7	75.2	54.0	NI	335.6
0-3	4/11/2016 13:35	201.1	6.0	74.5	54.2	198.8	5.2	74.6	53.9	201.1	4.5	75.2	53.7	NI	438.1
0-3	4/11/2016 13:36	212.3	7.5	74.4	53.8	199.7	6.0	74.5	53.8	216.5	4.5	75.1	53.6	NI	994.4
0-3	4/11/2016 13:37	205.3	7.5	74.9	54.3	201.1	6.7	74.9	53.9	205.3	5.2	75.6	54.3	NI	595.6
0-3	4/11/2016 13:38	201.1	6.0	75.3	54.0	202.5	6.0	75.4	53.7	205.3	4.5	76.2	53.5	NI	641.9
0-3	4/11/2016 13:39	203.9	8.2	75.7	51.3	202.5	6.0	76.0	52.6	201.1	4.5	76.9	52.7	NI	600.6
0-3	4/11/2016 13:40	210.9	7.5	75.7	53.2	216.5	7.5	75.9	52.9	217.9	5.2	76.8	52.9	NI	1168.1
0-3	4/11/2016 13:41	201.1	4.5	77.2	55.3	184.2	4.5	77.2	55.1	189.8	3.7	77.9	55.5	NI	849.4
0-3	4/11/2016 13:42	173.8	6.7	77.6	50.6	192.6	6.0	77.9	52.9	202.5	4.5	79.0	53.0	NI	706.9
0-3	4/11/2016 13:43	195.4	8.2	77.1	49.8	175.2	7.5	77.5	49.6	195.4	6.0	78.8	48.9	NI	703.1
0-3	4/11/2016 13:44	187.0	9.0	76.6	50.3	191.2	7.5	76.9	51.2	202.5	6.0	78.1	50.6	NI	1026.9
0-3	4/11/2016 13:45	182.8	7.5	75.9	52.3	185.6	7.5	76.2	51.4	191.2	6.0	77.5	50.8	NI	440.6
0-3	4/11/2016 13:46	202.5	7.5	75.9	51.8	195.4	6.0	76.2	51.8	195.4	4.5	77.2	51.3	NI	471.9
NS	4/11/2016 13:47	199.7	8.2	75.2	51.3	206.7	7.5	75.5	51.7	213.7	6.0	76.5	51.2	NI	371.9
3-6	4/11/2016 13:48	195.4	6.7	74.8	53.1	184.2	6.0	75.0	52.4	189.8	4.5	75.9	51.8	NI	378.9
3-6	4/11/2016 13:49	209.5	8.2	74.9	52.3	206.7	6.7	75.0	53.4	205.3	5.2	75.7	53.0	NI	361.9
3-6	4/11/2016 13:50	205.3	7.5	74.7	54.0	199.7	7.5	74.8	53.6	205.3	5.2	75.4	53.6	NI	368.9
3-6	4/11/2016 13:51	205.3	6.7	74.7	53.4	198.3	6.7	74.7	53.3	212.3	5.2	75.3	53.3	NI	428.9
3-6	4/11/2016 13:52	191.2	4.5	74.9	54.3	175.2	3.7	75.0	54.9	187.0	3.0	75.6	55.2	NI	439.4
3-6	4/11/2016 13:53	182.8	6.7	75.1	52.8	181.4	5.2	75.2	53.7	202.5	3.7	75.9	53.9	NI	426.9
3-6	4/11/2016 13:54	188.4	6.0	74.9	52.9	182.8	6.0	75.0	53.9	181.4	5.2	75.7	53.9	NI	448.1
3-6	4/11/2016 13:55	187.0	5.2	75.1	54.0	175.2	4.5	75.1	55.1	223.5	3.7	75.7	54.7	NI	634.4
3-6	4/11/2016 13:56	195.4	4.5	75.7	54.6	182.8	4.5	75.8	54.3	201.1	3.0	76.4	54.5	NI	873.1
3-6	4/11/2016 13:57	205.3	5.2	76.7	53.3	206.7	4.5	76.8	55.1	213.7	3.7	77.3	55.0	NI	876.9
3-6	4/11/2016 13:58	192.6	8.2	76.9	52.2	191.2	7.5	77.1	51.8	196.6	5.2	77.9	51.9	NI	706.9
3-6	4/11/2016 13:59	205.3	8.2	76.7	50.8	196.8	6.7	77.0	51.4	201.1	5.2	77.9	51.4	NI	610.6
3-6	4/11/2016 14:00	196.8	6.7	76.4	52.0	196.8	6.0	76.6	52.8	202.5	4.5	77.4	52.5	NI	648.9
3-6	4/11/2016 14:01	205.3	6.7	76.4	52.3	181.4	6.0	76.6	51.9	182.8	5.2	77.5	51.8	NI	480.6
3-6	4/11/2016 14:02	215.1	5.2	76.4	53.6	217.9	4.5	76.6	52.8	223.5	3.7	77.4	52.9	NI	511.9
3-6	4/11/2016 14:03	201.1	6.0	76.5	52.3	192.6	5.2	76.8	52.1	195.4	3.7	77.5	52.1	NI	358.1
3-6	4/11/2016 14:04	184.0	6.0	75.9	51.1	166.8	4.5	76.3	52.3	173.8	3.7	77.2	52.1	NI	360.6
3-6	4/11/2016 14:05	169.6	6.0	75.1	52.5	161.2	6.0	75.4	52.0	168.2	4.5	76.4	51.6	NI	381.9
3-6	4/11/2016 14:06	166.8	6.7	74.6	53.5	169.6	6.0	74.9	53.3	181.4	5.2	75.8	52.7	NI	475.6
3-6	4/11/2016 14:07	187.0	6.7	74.9	53.7	173.8	6.0	74.9	54.0	185.6	4.5	75.6	53.8	NI	523.1
3-6	4/11/2016 14:08	198.3	5.2	75.2	54.0	185.6	5.2	75.2	54.0	198.3	4.5	75.8	54.2	NI	958.1
3-6	4/11/2016 14:09	185.6	6.0	75.6	53.6	194.0	5.2	75.7	53.7	191.2	3.7	76.4	54.0	NI	708.1
3-6	4/11/2016 14:10	172.4	4.5	76.1	54.0	161.2	4.5	76.2	55.2	169.6	3.0	77.0	54.8	NI	678.1
3-6	4/11/2016 14:11	175.2	3.7	76.6	53.3	175.2	3.0	76.8	53.8	188.4	2.2	77.6	54.4	NI	885.6
3-6	4/11/2016 14:12	175.2	5.2	77.1	51.7	168.2	3.7	77.4	52.8	168.2	3.0	78.3	52.9	NI	1156.9
3-6	4/11/2016 14:13	172.4	5.2	77.7	53.6	166.8	5.2	78.0	53.6	175.2	3.7	78.9	54.3	NI	1224.4
3-6	4/11/2016 14:14	192.6	5.2	78.2	51.8	187.0	4.5	78.7	52.1	199.7	3.7	80.0	51.7	NI	393.1
3-6	4/11/2016 14:15	175.2	4.5	77.6	50.5	175.2	4.5	78.3	49.4	192.6	3.7	79.7	49.8	NI	328.1
3-6	4/11/2016 14:16	151.3	6.7	76.4	50.4	154.1	5.2	77.0	50.0	159.7	3.7	78.4	49.3	NI	315.6
3-6	4/11/2016 14:17	149.9	6.7	75.5	52.5	141.5	6.7	75.8	51.3	154.1	5.2	77.0	50.4	NI	326.1
3-6	4/11/2016 14:18	194.0	5.2	75.3	53.4	180.0	4.5	75.5	52.6	182.8	3.0	76.5	52.0	NI	325.6
3-6	4/11/2016 14:19	156.9	7.5	74.9	54.1	152.7	6.0	75.2	53.2	151.3	4.5	76.0	52.8	NI	331.9
3-6	4/11/2016 14:20	169.6	4.5	75.2	54.0	169.6	4.5	75.2	55.3	173.8	3.0	75.9	55.1	NI	483.1
3-6	4/11/2016 14:21	162.6	5.2	75.1	52.8	152.7	5.2	75.2	53.7	165.4	3.7	75.9	53.4	NI	823.1
3-6	4/11/2016 14:22	191.2	8.2	75.6	53.4	181.4	6.0	75.7	54.7	182.8	4.5	76.4	54.7	NI	866.9
3-6	4/11/2016 14:23	172.4	7.5	76.0	53.2	171.0	7.5	76.2	53.5	173.8	6.0	77.0	53.4	NI	671.9
3-6	4/11/2016 14:24	192.6	7.5	76.2	51.7	182.8	6.7	76.5	52.6	195.4	5.2	77.4	52.3	NI	483.1
3-6	4/11/2016 14:25	188.4	6.0	75.9	52.3	181.4	6.0	76.2	52.3	188.4	4.5	77.1	52.1	NI	391.9
3-6	4/11/2016 14:26	195.4	5.2	75.9	53.0	198.3	5.2	76.0	53.6	198.3	3.7	76.8	53.6	NI	456.9
3-6	4/11/2016 14:27	184.2	6.0	75.6	52.8	175.2	5.2	75.7	53.5	185.6	4.5	76.6	53.1	NI	1139.4
3-6	4/11/2016 14:28	196.8	5.2	76.4	53.9	188.4	5.2	76.4	53.6	196.8	3.7	77.1	53.8	NI	956.9
3-6	4/11/2016 14:29	173.8	3.0	77.3	53.3	188.4	3.0	77.5	54.4	201.1	2.2	78.2	55.0	NI	859.4
3-6	4/11/2016 14:30	149.9	4.5	77.4	52.8	141.5	3.7	77.8	54.4	144.3	3.0	78.8	54.3	NI	268.1
3-6	4/11/2016 14:31	165.4	5.2	76.7	50.9	149.9	4.5	77.3	51.1	154.1	3.0	78.5	51.2	NI	339.4
3-6	4/11/2016 14:32	135.9	6.7	75.9	52.8	134.5	6.7	76.3	52.4	144.3	4.5	77.5	51.8	NI	1138.1
3-6	4/11/2016 14:33	166.8	6.7	76.2	52.1	165.4	6.0	76.6	53.0	173.8	5.2	77.6	52.4	NI	1103.1
3-6	4/11/2016 14:34	180.0	5.2	76.9	53.7	175.2	5.2	77.2	52.1	181.4	4.5	78.3	51.6	NI	1070.6
3-6	4/11/2016 14:35	144.3	6.7	77.5	50.2	144.3	5.2	78.2	51.1	156.9	3.7	79.2	51.9	NI	1089.4
3-6	4/11/2016 14:36	135.9	8.2	77.3	49.8	133.1	7.5	77.9	51.5	140.1	5.2	79.2	51.1	NI	1025.6
3-6	4/11/2016 14:37	146.5	7.5	77.2	51.2	135.9	8.2	77.7	50.8	137.3	6.7	79.1	50.9	NI	1060.6
3-6	4/11/2016 14:38	181.4	7.5	77.5	49.7	171.0	6.0	77.9	50.3	180.0	4.5	79.3	49.5	NI	1100.6
3-6	4/11/2016 14:39	188.4	7.5	77.3	51.0	185.6	7.5	77.7	49.8	194.0	6.0	79.0	49.4	NI	876.9
3-6	4/11/2016 14:40	189.8	6.0	78.0	51.8	182.8	5.2	78.3	52.1	188.4	3.7	79.5	51.6	NI	961.9
3-6	4/11/2016 14:41	149.9	4.5	78.5	51.9	144.3	5.2	78.9	50.1	162.6	3.7	80.1	50.4	NI	838.1
3-6	4/11/2016 14:42	184.2	5.2	78.6	48.6	164.0	3.7	79.2	49.2	173.8	3.0	80.6	49.1	NI	988.1
3-6	4/11/2016 14:43	156.9	5.2	78.3	49.4	168.2	5.2	78.8	48.7	175.2	3.7	80.3	49.1	NI	623.1
3-6	4/11/2016 14:44	172.4	7.5	77.8	48.7	161.2	6.0	78.3	47.9	171.0	4.5	79.6	47.8	NI	475.6
3-6	4/11/2016 14:45	198.8	8.2	77.6	49.1	180.0	7.5	77.9	48.9	187.0	5.2	79.1	48.5	NI	1044.4
3-6	4/11/2016 14:46	205.3	7.5	77.9	49.0	196.8	6.0	78.3	49.9	212.3	5.2	79.3	49.7	NI	460.6
3-6	4/11/2016 14:47	205.3	7.5	77.4	49.1	202.5	6.7	77.7	48.5	208.5	6.0	78.9	48.4	NI	509.4
3-6	4/11/2016 14:48	182.8	6.7	77.0	49.2	182.8	6.0	77.5	48.4	184.2	5.2	78.5	48.2	NI	708.1
3-6	4/11/2016 14:49	165.4	5.2	77.0	50.5	164.0	5.2	77.2	51.1	172.4	3.7	78.2	50.4	NI	1053.1
3-6	4/11/2016 14:50	149.9	5.2	76.9	49.7	148.5	5.2	77.3	49.8	158.3	3.7	78.6	49.3	NI	354.4
3-6	4/11/2016 14:51	185.6	5.2	77.0	50.8	182.6	4.5	77.2	51.0	171.0	3.0	78.4	50.4	NI	288.1
3-6	4/11/2016 14:52	175.2	7.5	76.9	50.5	194.0	6.7	77.1	50.5	191.2	5.2	78.1	50.2	NI	334.4
3-6	4/11/2016 14:53	166.8	5.2	76.6	50.7	158.3	5.2	76.9	50.6	166.8	3.7	77.7	50.3	NI	304.4
3-6	4/11/2016 14:54	166.8	5.2	76.1	50.4	159.7	4.5	76.4	50.5	161.2	3.0	77.3	50.2	NI	291.9
3-6	4/11/2016 14:55	181.4	6.7	75.6	51.7	182.8	6.0	75.7	51.4	187.0	4.5	76.6	51.0	NI	283.1
3-6	4/11/2016 14:56	172.4	6.0	75.2	52.8	164.0	5.2	75.3	52.1	168.2	4.5	76.0	51.4	NI	330.6
3-6	4/11/2016 14:57	168.2	5.2	75.2	51.6	175.2	4.5	75.3	53.3	189.8	3.0	75.9	53.3	NI	374.4
3-6	4/11/2016 14:58	142.9	4.5	75.0	52.5	135.9	5.2	75.2	52.9	140.1	3.7	75.7	53.5	NI	281.9
3-6	4/11/2016 14:59	158.3	5.2	75.2	52.8	154.1	4.5	75.2	53.1	158.3	3.0	75.8	53.1	NI	1126.9
3-6	4/11/2016 15:00	166.8	9.7	75.9	50.9	158.3	8.2	76.1	51.8	166.8	6.0	76.7	52.2	NI	894.4
3-6	4/11/2016 15:01	162.6	6.7	76.3	51.4	156.9	6.0	76.5	51.4	161.2	5.2	77.3	51.6	NI	294.4
3-6	4/11/2016 15:02	171.0	6.0	76.6	50.2	165.4	6.0	76.7	51.1	172.4	4.5	77.6	50.6	NI	433.1
3-6	4/11/2016 15:03	169.6	6.7	76.6	50.4	165.4	6.7	76.8	50.6	168.2	5.2	77.6	50.7	NI	303.1
3-6	4/11/2016 15:04	194.0	6.7	76.6	50.3	194.0	5.2	76.9	49.8	198.3	3.7	77.6	49.4	NI	475.6
3-6	4/11/2016 15:05	189.8	5.2	76.8	49.3	189.8	6.0	76.9	49.1	182.8	4.5	77.7	49.0	NI	538.1
3-6	4/11/2016 15:06	168.2	3.7	76.9	49.6	169.6	3.7	77.1	50.0	171.0	3.0	77.9	50.6	NI	288.1
3-6	4/11/2016 15:07	161.2	4.5	76.6	50.5	147.1	3.7	76.8	51.0	155.5	3.0	77.7	50.7	NI	1016.9
3-6	4/11/2016 15:08	168.2	5.2	76.9	50.4	172.4	4.5	77.1	50.5	185.6	3.0	78.0	50.4	NI	1076.9
3-6	4/11/2016 15:09	202.5	4.5	77.4	51.6	175.2	4.5	77.6	52.7	181.4	3.7	78.6	52.2	NI	888.1
3-6	4/11/2016 15:10	206.7	8.2	77.9	49.3	210.9	6.0	78.2	50.6	223.5	4.5	79.2	50.1	NI	828.1
3-6	4/11/2016 15:11	198.3	8.2	78.1	48.9	195.4	7.5	78.5	49.6	199.7	6.0	79.5	49.4	NI	351.9
3-6	4/11/2016 15:12	199.7	8.2	77.8	50.0	198.3	8.2	78.0	49.3	208.1	6.7	79.0	48.7	NI	556.9
3-6	4/11/2016 15:13	187.0	8.2	77.9	48.4	191.2	6.7	78.3	49.2	202.5	5.2	79.1	49.2	NI	870.6
3-6	4/11/2016 15:14	181.4	5.2	78.0	49.1	171.0	6.0	78.2	50.2	173.8	4.5	79.1	49.6	NI	999.4
3-6	4/11/2016 15:15	194.0	6.0	78.3	47.5	191.2	5.2	78.6	48.8	192.6	3.7	79.7	48.9	NI	851.9
3-6	4/11/2016 15:16	171.0	5.2	77.9	47.7	168.2	5.2	78.3	47.5	173.8	3.7	79.6	47.6	NI	933.1
3-6	4/11/2016 15:17	165.4	5.2	78.0	49.2	154.1	4.5	78.4	49.0	161.2	3.7	79.6	48.8	NI	366.9
3-6	4/11/2016 15:18	162.6	4.5	78.1	49.6	168.2	4.5	78.5	49.0	175.2	3.0	79.9	49.0	NI	343.1
3-6	4/11/2016 15:19	192.6	3.7	78.0	50.0	182.8	3.0	78.3	49.5	175.2	2.2	79.7	48.8	NI	315.6
3-6	4/11/2016 15:20	144.3	5.2	77.4	48.6	156.9	4.5	77.8	48.6	154.1	3.0	78.9	47.9	NI	314.4
3-6	4/11/2016 15:21	182.8	6.7	76.9	50.1	164.0	6.0	77.1	51.1	175.2	4.5	77.9	50.5	NI	316.9
3-6	4/11/2016 15:22	210.9	7.5	76.6	49.6	201.1	6.7	76.8	50.3	213.7	5.2	77.4	49.9	NI	294.4

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
3-6	4/11/2016 15:23	192.6	6.7	76.3	50.3	189.8	6.0	76.5	50.4	199.7	4.5	77.0	50.5	NI	285.6
3-6	4/11/2016 15:24	189.8	7.5	76.1	50.2	188.4	6.0	76.3	50.4	205.3	4.5	76.8	50.7	NI	366.9
3-6	4/11/2016 15:25	181.4	5.2	76.3	50.8	184.2	5.2	76.2	50.7	187.0	3.7	76.9	50.8	NI	1061.9
3-6	4/11/2016 15:26	189.8	6.0	77.0	51.1	182.8	6.0	77.1	50.0	206.7	4.5	77.9	50.6	NI	374.4
3-6	4/11/2016 15:27	186.8	5.2	77.0	49.1	164.0	4.5	77.2	49.8	159.7	3.7	78.0	49.9	NI	334.4
3-6	4/11/2016 15:28	194.0	9.0	76.6	49.6	192.6	7.5	76.8	50.6	196.8	6.0	77.4	50.1	NI	321.9
3-6	4/11/2016 15:29	187.0	7.5	76.2	51.0	189.8	8.2	76.3	50.2	195.4	6.0	76.9	50.0	NI	324.4
3-6	4/11/2016 15:30	138.7	3.7	76.2	52.0	140.1	4.5	76.3	52.3	152.7	3.0	76.8	51.8	NI	326.9
3-6	4/11/2016 15:31	175.2	7.5	76.0	49.8	158.3	5.2	76.2	50.5	168.2	3.7	76.7	50.5	NI	385.6
3-6	4/11/2016 15:32	161.2	6.0	75.9	50.7	155.5	6.0	76.0	51.7	168.2	4.5	76.5	51.8	NI	306.9
3-6	4/11/2016 15:33	168.2	6.7	75.8	51.0	159.7	6.0	75.9	50.8	171.0	5.2	76.4	51.0	NI	303.1
3-6	4/11/2016 15:34	149.9	4.5	75.7	50.8	136.7	4.5	75.8	51.4	145.7	3.7	76.2	51.5	NI	980.6
3-6	4/11/2016 15:35	137.3	3.7	76.2	52.0	127.5	3.0	76.2	52.3	128.9	2.2	76.7	52.8	NI	1063.1
3-6	4/11/2016 15:36	144.3	6.0	77.0	51.1	147.1	5.2	77.1	51.0	148.5	3.7	77.9	51.6	NI	921.9
3-6	4/11/2016 15:37	133.1	6.0	77.3	49.7	131.7	5.2	77.6	50.3	134.5	4.5	78.4	50.9	NI	760.6
3-6	4/11/2016 15:38	148.5	6.7	77.0	49.7	138.7	6.0	77.4	49.6	138.7	4.5	78.4	49.8	NI	296.9
3-6	4/11/2016 15:39	152.7	7.5	76.3	49.7	138.7	6.0	76.7	49.5	144.3	4.5	77.7	49.4	NI	333.1
3-6	4/11/2016 15:40	168.2	5.2	76.3	51.0	158.3	6.0	76.3	51.0	162.6	3.7	77.2	50.5	NI	1015.6
3-6	4/11/2016 15:41	175.2	6.7	77.0	50.5	175.2	6.0	77.1	50.1	184.2	4.5	78.0	50.2	NI	323.1
3-6	4/11/2016 15:42	168.2	6.7	77.2	50.0	161.2	6.0	77.3	50.5	175.2	4.5	78.4	50.4	NI	326.1
3-6	4/11/2016 15:43	171.0	5.2	77.2	50.0	166.8	5.2	77.3	50.7	175.2	3.7	78.3	50.2	NI	374.4
3-6	4/11/2016 15:44	173.8	4.5	77.6	50.1	166.8	4.5	77.8	50.7	173.8	3.7	78.7	50.6	NI	345.6
3-6	4/11/2016 15:45	188.4	6.7	77.7	48.4	180.0	6.0	77.9	48.9	182.8	4.5	78.8	48.7	NI	595.6
3-6	4/11/2016 15:46	185.4	8.2	77.6	48.6	172.4	7.5	77.8	48.6	175.2	6.0	78.8	48.4	NI	918.1
3-6	4/11/2016 15:47	187.0	6.7	78.3	49.4	180.0	6.0	78.3	49.9	191.2	4.5	79.3	49.6	NI	959.4
3-6	4/11/2016 15:48	187.0	6.7	78.6	48.3	191.2	6.0	78.9	48.6	192.6	4.5	80.0	48.4	NI	986.1
3-6	4/11/2016 15:49	172.4	6.0	78.7	47.4	168.2	6.0	79.1	47.9	175.2	4.5	80.4	47.5	NI	364.4
3-6	4/11/2016 15:50	161.2	8.2	78.0	47.2	159.7	7.5	78.4	47.6	168.2	5.2	79.7	46.9	NI	385.6
3-6	4/11/2016 15:51	149.9	6.0	77.6	48.5	154.1	6.0	78.0	49.1	168.2	5.2	79.0	48.2	NI	376.9
3-6	4/11/2016 15:52	147.1	6.7	77.5	48.3	124.7	6.0	77.7	48.3	133.1	4.5	78.5	48.1	NI	426.9
3-6	4/11/2016 15:53	172.4	9.0	77.3	48.2	165.4	6.7	77.5	47.8	188.4	5.2	78.4	47.6	NI	305.6
3-6	4/11/2016 15:54	168.2	6.7	77.1	48.9	166.8	6.7	77.3	48.6	175.2	5.2	78.0	48.3	NI	290.6
3-6	4/11/2016 15:55	154.1	6.0	77.0	48.4	148.5	5.2	77.1	50.0	152.7	3.7	77.8	49.8	NI	766.9
3-6	4/11/2016 15:56	165.4	5.2	77.1	49.6	154.1	4.5	77.2	50.5	155.5	3.7	77.9	50.3	NI	258.1
3-6	4/11/2016 15:57	198.3	6.0	77.0	49.6	192.6	5.2	77.1	50.4	202.5	3.7	77.8	50.3	NI	264.4
3-6	4/11/2016 15:58	192.6	6.7	76.9	48.9	192.6	5.2	77.0	50.3	201.1	3.7	77.6	50.5	NI	764.4
3-6	4/11/2016 15:59	188.4	8.2	77.6	49.3	189.8	8.2	77.6	49.6	191.2	6.0	78.1	49.7	NI	790.6
3-6	4/11/2016 16:00	158.3	6.7	77.6	47.7	158.3	6.7	77.9	48.0	171.0	5.2	78.7	48.5	NI	550.6
3-6	4/11/2016 16:01	164.0	6.0	77.9	47.7	161.2	5.2	78.0	47.9	169.6	3.7	78.8	47.9	NI	553.1
3-6	4/11/2016 16:02	175.2	6.0	77.6	46.7	166.8	6.0	77.9	47.2	171.0	4.5	78.8	47.5	NI	584.4
3-6	4/11/2016 16:03	175.2	3.7	78.1	49.1	169.6	3.7	78.2	48.6	166.8	2.2	79.0	48.6	NI	394.4
3-6	4/11/2016 16:04	171.0	3.7	78.5	48.6	171.0	3.7	78.6	49.3	173.8	2.2	79.5	49.8	NI	374.4
3-6	4/11/2016 16:05	184.2	6.0	78.3	46.3	168.2	4.5	78.6	47.7	172.4	3.7	79.5	47.5	NI	341.9
3-6	4/11/2016 16:06	188.4	8.2	77.6	47.7	194.0	6.0	78.0	47.7	199.7	4.5	78.9	47.2	NI	309.4
3-6	4/11/2016 16:07	184.2	8.2	77.2	47.1	173.8	8.2	77.3	48.4	175.2	6.7	78.1	48.0	NI	268.1
3-6	4/11/2016 16:08	191.2	6.7	76.9	48.5	203.9	7.5	76.9	48.1	192.6	5.2	77.5	47.9	NI	278.1
3-6	4/11/2016 16:09	186.8	5.2	76.8	48.0	168.2	4.5	76.9	48.7	171.0	3.7	77.3	48.7	NI	305.6
3-6	4/11/2016 16:10	175.2	7.5	76.6	48.7	172.4	6.7	76.7	48.6	175.2	5.2	77.1	48.5	NI	379.4
3-6	4/11/2016 16:11	162.6	6.7	76.6	49.9	172.4	6.7	76.8	50.3	180.0	4.5	77.2	50.4	NI	496.9
3-6	4/11/2016 16:12	156.3	4.5	77.0	49.8	151.3	3.7	77.0	51.0	152.7	3.0	77.5	51.1	NI	426.9
3-6	4/11/2016 16:13	161.2	5.2	77.0	49.9	159.7	5.2	77.1	48.9	161.2	3.7	77.7	49.1	NI	386.1
3-6	4/11/2016 16:14	152.7	6.0	77.1	48.5	145.7	5.2	77.2	49.8	151.3	3.7	77.8	49.8	NI	540.6
3-6	4/11/2016 16:15	175.2	7.5	77.0	48.5	155.5	7.5	77.1	48.6	168.2	5.2	77.7	48.7	NI	463.1
3-6	4/11/2016 16:16	145.7	5.2	77.2	49.4	151.3	4.5	77.3	49.8	155.5	3.7	77.9	49.8	NI	434.4
3-6	4/11/2016 16:17	159.7	8.2	77.1	48.3	148.5	6.7	77.2	48.6	154.1	5.2	77.8	48.9	NI	374.4
3-6	4/11/2016 16:18	158.3	6.7	76.9	48.2	168.2	6.0	76.9	49.3	175.2	4.5	77.5	49.2	NI	356.9
3-6	4/11/2016 16:19	158.3	6.0	76.9	49.1	147.1	5.2	76.9	50.4	148.5	3.7	77.4	50.3	NI	361.9
3-6	4/11/2016 16:20	164.0	6.0	76.9	49.1	161.2	6.7	76.9	49.5	172.4	5.2	77.3	49.7	NI	330.6
3-6	4/11/2016 16:21	168.8	3.7	76.9	49.7	147.1	3.7	76.9	49.9	149.9	3.0	77.3	50.2	NI	323.1
3-6	4/11/2016 16:22	180.0	3.7	76.9	49.9	168.2	3.0	76.9	50.5	166.8	2.2	77.3	50.5	NI	306.9
3-6	4/11/2016 16:23	141.5	6.0	76.7	48.7	145.7	4.5	76.9	49.2	148.5	3.7	77.2	49.7	NI	299.4
3-6	4/11/2016 16:24	164.0	6.0	76.5	50.0	155.5	6.0	76.6	49.8	152.7	4.5	77.0	50.0	NI	298.1
3-6	4/11/2016 16:25	168.8	4.5	76.5	49.8	165.4	3.7	76.5	49.9	173.8	3.0	76.9	50.3	NI	298.1
3-6	4/11/2016 16:26	181.4	6.0	76.4	49.6	173.8	5.2	76.4	50.2	181.4	4.5	76.8	50.4	NI	303.1
3-6	4/11/2016 16:27	173.8	4.5	76.4	49.2	173.8	3.7	76.4	50.1	175.2	3.0	76.8	50.3	NI	309.4
3-6	4/11/2016 16:28	173.8	6.7	76.2	49.0	171.0	6.0	76.2	49.7	182.8	4.5	76.6	49.9	NI	318.1
3-6	4/11/2016 16:29	159.7	6.0	76.2	49.2	161.2	5.2	76.2	50.8	164.0	3.7	76.6	51.0	NI	333.1
3-6	4/11/2016 16:30	161.2	9.0	76.2	49.6	168.2	7.5	76.2	49.8	171.0	6.0	76.5	50.0	NI	369.4
3-6	4/11/2016 16:31	149.9	8.2	76.2	49.3	140.1	8.2	76.2	49.8	148.5	6.0	76.5	50.0	NI	393.1
3-6	4/11/2016 16:32	154.1	6.0	76.4	49.5	144.3	5.2	76.3	50.2	154.1	4.5	76.6	50.6	NI	409.4
3-6	4/11/2016 16:33	155.5	4.5	76.7	51.2	154.1	4.5	76.6	51.1	156.9	3.0	76.9	51.2	NI	529.4
3-6	4/11/2016 16:34	152.7	6.7	76.9	49.0	138.7	6.0	76.9	50.2	144.3	4.5	77.3	50.8	NI	524.4
3-6	4/11/2016 16:35	159.7	6.7	77.0	48.4	152.6	6.0	77.0	49.0	173.8	4.5	77.6	49.7	NI	514.4
3-6	4/11/2016 16:36	161.2	5.2	77.1	48.7	151.3	5.2	77.1	49.4	159.7	3.7	77.7	49.9	NI	508.1
3-6	4/11/2016 16:37	169.6	5.2	77.3	49.8	172.4	4.5	77.3	49.6	175.2	3.7	77.9	49.8	NI	484.4
3-6	4/11/2016 16:38	180.0	5.2	77.5	48.6	171.0	3.7	77.5	49.5	181.4	3.0	78.2	50.0	NI	485.6
3-6	4/11/2016 16:39	189.8	6.7	77.4	48.6	171.0	6.0	77.5	48.7	181.4	4.5	78.1	48.7	NI	431.9
3-6	4/11/2016 16:40	175.2	7.5	77.3	48.3	173.8	6.7	77.4	48.7	175.2	5.2	78.1	48.9	NI	495.6
6-12	4/11/2016 16:41	198.8	6.7	77.5	48.7	175.2	6.0	77.5	49.2	187.0	4.5	78.1	49.4	NI	500.6
6-12	4/11/2016 16:42	181.4	5.2	77.7	48.9	181.4	5.2	77.6	49.1	175.2	4.5	78.3	49.2	NI	481.9
6-12	4/11/2016 16:43	191.2	6.7	77.7	48.5	180.0	6.0	77.7	48.0	194.0	4.5	78.4	48.1	NI	450.6
6-12	4/11/2016 16:44	192.6	6.0	77.8	48.0	188.4	4.5	77.8	48.6	191.2	3.7	78.4	48.6	NI	425.6
6-12	4/11/2016 16:45	187.0	5.2	78.0	49.3	194.0	5.2	77.9	50.4	192.6	4.5	78.5	50.6	NI	390.6
6-12	4/11/2016 16:46	180.0	5.2	78.0	48.8	172.4	4.5	78.1	49.7	212.3	3.0	78.6	49.7	NI	360.6
6-12	4/11/2016 16:47	175.2	4.5	77.9	49.3	173.8	4.5	78.0	49.0	184.2	3.0	78.5	49.2	NI	340.6
6-12	4/11/2016 16:48	162.6	4.5	77.9	49.6	148.5	3.7	77.9	49.8	151.3	2.2	78.4	50.2	NI	356.9
6-12	4/11/2016 16:49	189.8	6.7	77.6	48.2	187.0	6.7	77.6	48.5	199.7	5.2	78.2	48.5	NI	335.6
6-12	4/11/2016 16:50	194.0	6.0	77.5	47.7	192.6	4.5	77.6	48.9	192.6	3.7	78.0	49.1	NI	344.4
6-12	4/11/2016 16:51	182.8	6.0	77.3	48.6	189.8	5.2	77.4	48.4	182.8	3.7	77.8	48.7	NI	351.9
6-12	4/11/2016 16:52	198.8	7.5	77.3	48.0	192.6	6.0	77.3	48.1	192.6	4.5	77.8	48.6	NI	355.6
6-12	4/11/2016 16:53	181.4	8.2	77.2	46.9	191.2	7.5	77.2	47.4	191.2	6.0	77.6	47.7	NI	354.4
6-12	4/11/2016 16:54	181.4	7.5	77.1	47.3	189.8	6.7	77.1	47.9	189.8	5.2	77.5	48.1	NI	341.9
6-12	4/11/2016 16:55	191.2	9.7	77.0	47.5	188.4	9.7	77.0	47.5	201.1	7.5	77.3	47.8	NI	333.1
6-12	4/11/2016 16:56	195.4	6.7	77.1	48.3	185.6	6.0	77.1	49.2	189.8	4.5	77.3	49.6	NI	326.9
6-12	4/11/2016 16:57	169.6	7.5	77.0	47.9	171.0	6.0	77.0	48.8	175.2	4.5	77.3	49.1	NI	330.6
6-12	4/11/2016 16:58	181.4	5.2	77.0	48.5	173.8	5.2	77.0	48.1	181.4	4.5	77.3	48.6	NI	329.4
6-12	4/11/2016 16:59	166.8	4.5	77.1	48.5	184.0	3.7	77.1	48.9	169.6	3.0	77.3	49.5	NI	330.6
6-12	4/11/2016 17:00	181.4	4.5	77.1	48.9	172.4	4.5	77.1	49.1	175.2	3.0	77.4	49.8	NI	341.9
6-12	4/11/2016 17:01	175.2	4.5	77.2	49.3	184.2	3.7	77.2	49.9	187.0	3.0	77.5	50.5	NI	338.1
6-12	4/11/2016 17:02	168.2	4.5	77.3	49.1	172.4	3.7	77.3	50.5	186.6	3.0	77.6	51.0	NI	333.1
6-12	4/11/2016 17:03	191.2	4.5	77.3	47.6	187.0	3.7	77.3	48.6	191.2	3.0	77.6	49.2	NI	324.4
6-12	4/11/2016 17:04	189.8	6.0	77.2	48.2	181.4	5.2	77.2	48.2	191.2	3.7	77.6	48.5	NI	314.4
6-12	4/11/2016 17:05	164.0	7.5	77.0	47.3	159.7	6.7	77.1	47.8	168.2	5.2	77.4	48.3	NI	311.9
6-12	4/11/2016 17:06	187.0	6.7	76.9	47.4	173.8	6.0	76.9	48.8	175.2	4.5	77.2	49.1	NI	310.6
6-12	4/11/2016 17:07	175.2	8.2	76.8	48.0	175.2	8.2	76.8	48.0	187.0	6.7	77.1	48.4	NI	311.9
6-12	4/11/2016 17:08	194.0	7.5	76.9	48.7	187.0	6.7	76.8	49.0	202.5	5.2	77.0	49.3	NI	319.4
6-12	4/11/2016 17:09	194.0	6.7	77.0	48.4	181.4	6.7	76.9	48.6	199.7	5.2	77.1	49.1	NI	321.9
6-12	4/11/2016 17:10	180.0	6.0	77.0	48.3	184.2	5.2	77.0	49.5	188.4	4.5	77.2	49.9	NI	339.4
6-12	4/11/2016 17:11	189.8	3.7	77.1	49.6	172.4	3.7	77.0	49.9	168.2	3.0	77.3	50.3	NI	343.1
6-12	4/11/2016 17:12	184.2	6.0	77.2	47.6	188.4	4.5	77.1	48.1	192.6	3.7	77.4	48.4	NI	358.1
6-12	4/11/2016 17:13	180.0	5.2	77.2	48.7	180.0	6.0	77.1	48.4	182.8	4.5	77.4	48.7	NI	366.9
6-12	4/11/2016 17:14	205.3	6.7	77.2	47.6	203.9	5.2	77.2	48.9	203.9	3.7	77.5	49.2	NI	371.9
6-12	4/11/2016 17:15	205.3	6.7	77.3	48.0	188.4	6.0	77.3	48.1	192.6	4.5	77.6	48.6	NI	378.1
6-12	4/11/2016 17:16	189.8	6.7	77.4	48.7	188.4	6.7	77.3	48.7	194.0	5.2	77.6	49.1	NI	376.9
6-12	4/11/2016 17:17	184.2	5.2	77.4	48.0	173.8	4.5	77.4	48.5	185.6	3.7	77.6	48.9	NI	335.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
6-12	4/11/2016 17:18	184.2	6.0	77.4	49.5	192.6	6.0	77.4	49.4	199.7	4.5	77.7	49.7	NI	350.6
6-12	4/11/2016 17:19	185.6	3.7	77.5	48.9	181.4	3.0	77.4	49.1	192.6	2.2	77.8	49.8	NI	311.9
6-12	4/11/2016 17:20	175.2	3.7	77.5	48.5	172.4	3.7	77.5	49.5	212.3	2.2	77.8	50.3	NI	294.4
6-12	4/11/2016 17:21	189.8	6.7	77.4	48.2	171.0	5.2	77.3	46.4	160.0	3.7	77.7	46.8	NI	281.9
6-12	4/11/2016 17:22	175.2	6.7	77.2	47.7	180.0	6.0	77.2	46.9	191.2	4.5	77.6	49.4	NI	275.6
6-12	4/11/2016 17:23	184.2	4.5	77.1	48.4	180.0	4.5	77.0	49.5	165.6	3.7	77.3	49.8	NI	258.1
6-12	4/11/2016 17:24	175.2	6.7	76.9	48.3	172.4	6.0	76.9	46.8	173.8	4.5	77.2	49.2	NI	245.6
6-12	4/11/2016 17:25	187.0	6.0	76.9	48.5	182.8	5.2	76.9	49.0	169.8	3.7	77.1	49.4	NI	231.9
6-12	4/11/2016 17:26	188.4	6.0	76.8	49.0	185.6	6.0	76.8	49.0	192.6	4.5	77.0	49.5	NI	215.6
6-12	4/11/2016 17:27	184.2	6.0	76.7	48.5	185.6	6.0	76.7	46.9	169.8	4.5	76.9	49.6	NI	194.4
6-12	4/11/2016 17:28	181.4	4.5	76.6	49.9	173.8	4.5	76.6	50.0	160.0	3.0	76.7	50.4	NI	178.1
6-12	4/11/2016 17:29	187.0	6.7	76.6	49.3	181.4	5.2	76.5	49.4	167.0	3.7	76.6	49.9	NI	161.9
6-12	4/11/2016 17:30	185.6	4.5	76.5	49.9	184.2	4.5	76.4	50.2	164.2	3.7	76.6	50.8	NI	149.4
6-12	4/11/2016 17:31	196.8	5.2	76.4	49.2	182.8	3.7	76.3	50.2	191.2	3.0	76.5	50.9	NI	135.6
6-12	4/11/2016 17:32	189.8	5.2	76.4	49.6	185.6	5.2	76.3	49.5	198.3	4.5	76.4	50.0	NI	121.9
6-12	4/11/2016 17:33	182.8	4.5	76.3	50.4	189.8	4.5	76.2	50.5	192.6	3.0	76.2	51.0	NI	111.9
6-12	4/11/2016 17:34	175.2	4.5	76.2	50.2	156.3	3.7	76.1	50.6	175.2	3.0	76.2	51.1	NI	110.6
6-12	4/11/2016 17:35	195.4	5.2	76.2	50.1	195.4	4.5	76.0	50.7	192.6	3.7	76.1	51.3	NI	116.9
6-12	4/11/2016 17:36	196.8	4.5	76.1	50.2	186.4	3.7	76.0	51.0	201.1	3.0	76.0	51.7	NI	125.6
6-12	4/11/2016 17:37	188.4	3.7	76.1	50.4	194.0	3.7	75.9	51.7	199.7	3.0	75.9	52.3	NI	131.9
6-12	4/11/2016 17:38	194.0	5.2	76.1	50.4	192.6	3.7	75.9	51.1	196.8	3.0	75.9	51.7	NI	133.1
6-12	4/11/2016 17:39	162.6	6.0	76.0	50.5	162.6	6.0	75.9	51.0	169.6	3.7	75.9	51.7	NI	126.9
6-12	4/11/2016 17:40	175.2	3.7	76.0	50.5	172.4	3.7	75.9	50.8	191.2	2.2	75.9	51.6	NI	118.1
6-12	4/11/2016 17:41	166.8	4.5	75.9	50.2	159.7	3.7	75.9	50.7	161.2	3.0	75.9	51.3	NI	111.9
6-12	4/11/2016 17:42	165.4	3.7	75.9	50.6	162.6	3.7	75.8	51.0	161.2	3.0	75.8	51.5	NI	108.1
6-12	4/11/2016 17:43	196.8	4.5	75.9	50.6	202.5	3.0	75.8	51.0	169.8	2.2	75.8	51.7	NI	108.1
6-12	4/11/2016 17:44	172.4	3.7	75.8	51.4	180.0	3.7	75.7	51.7	191.2	3.0	75.7	52.3	NI	109.4
6-12	4/11/2016 17:45	192.6	3.0	75.6	51.2	198.3	3.0	75.6	51.9	222.1	2.2	75.6	52.5	NI	110.6
6-12	4/11/2016 17:46	175.2	3.0	75.6	51.0	175.2	2.2	75.6	51.7	199.7	2.2	75.6	52.3	NI	109.4
6-12	4/11/2016 17:47	191.2	4.5	75.7	51.0	175.2	3.7	75.6	51.7	184.2	3.0	75.6	52.3	NI	109.4
6-12	4/11/2016 17:48	LOGGING STOPPED FOR MAINTENANCE				215.1	3.0	75.6	51.8	201.1	3.0	75.5	52.4	NI	MAINTENANCE
6-12	4/11/2016 17:49	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				184.2	3.7	75.5	52.5	196.8	3.0	75.5	52.9	NI	XXXXXXXXXX
6-12	4/11/2016 17:50	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				180.0	1.5	75.4	53.5	195.4	0.7	75.4	54.3	NI	XXXXXXXXXX
6-12	4/11/2016 17:51	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				181.4	2.2	75.4	52.3	194.0	2.2	75.3	53.3	NI	XXXXXXXXXX
6-12	4/11/2016 17:52	175.2	2.2	75.6	52.5	149.9	2.2	75.4	53.1	155.5	1.5	75.4	53.9	0	114.4
6-12	4/11/2016 17:53	166.8	2.2	75.6	52.6	156.9	2.2	75.4	52.8	154.1	1.5	75.3	53.9	0	119.4
6-12	4/11/2016 17:54	148.5	3.0	75.4	52.1	147.1	3.0	75.3	52.8	147.1	2.2	75.3	53.4	0	123.1
6-12	4/11/2016 17:55	147.1	3.7	75.4	52.4	126.1	3.7	75.3	52.9	131.7	2.2	75.2	53.7	0	125.6
6-12	4/11/2016 17:56	152.7	6.0	75.5	51.2	165.4	6.0	75.4	51.5	161.2	4.5	75.3	52.2	0	129.4
6-12	4/11/2016 17:57	175.2	4.5	75.6	51.4	169.6	3.0	75.5	51.5	171.0	3.0	75.4	52.3	0	131.9
6-12	4/11/2016 17:58	191.2	3.0	75.6	51.2	175.2	3.0	75.5	52.0	175.2	2.2	75.4	52.7	0	131.9
6-12	4/11/2016 17:59	169.6	1.5	75.6	51.4	147.1	1.5	75.4	52.5	148.5	0.7	75.4	53.1	0	129.4
6-12	4/11/2016 18:00	168.2	1.5	75.5	52.4	147.1	1.5	75.3	53.0	148.5	0.7	75.3	54.0	0	125.6
6-12	4/11/2016 18:01	169.6	2.2	75.4	52.4	145.7	2.2	75.2	52.8	151.3	1.5	75.2	53.7	0	119.4
6-12	4/11/2016 18:02	166.8	3.0	75.3	52.4	166.8	3.0	75.2	52.9	161.2	2.2	75.2	53.7	0	111.9
6-12	4/11/2016 18:03	180.0	2.2	75.3	51.8	180.0	2.2	75.2	52.5	182.8	1.5	75.1	53.4	0	104.4
6-12	4/11/2016 18:04	181.4	3.7	75.3	52.3	169.6	3.0	75.1	52.7	175.2	2.2	75.0	53.5	0	99.4
6-12	4/11/2016 18:05	169.6	3.7	75.3	52.0	156.9	3.0	75.1	52.3	156.9	2.2	75.0	53.2	0	95.6
6-12	4/11/2016 18:06	168.2	3.7	75.3	51.2	165.4	3.0	75.1	52.2	175.2	2.2	75.0	52.9	0	91.9
6-12	4/11/2016 18:07	184.2	3.7	75.3	51.2	180.0	3.7	75.2	51.5	184.2	3.0	75.0	52.2	0	89.4
6-12	4/11/2016 18:08	166.8	3.7	75.3	51.1	168.2	3.7	75.1	52.3	169.6	2.2	75.0	53.1	0	85.6
6-12	4/11/2016 18:09	175.2	3.7	75.2	51.2	175.2	3.7	75.0	52.2	175.2	3.0	74.9	52.8	0	80.6
6-12	4/11/2016 18:10	192.6	5.2	75.2	51.0	189.8	4.5	75.1	51.8	202.5	3.7	74.9	52.5	0	74.4
6-12	4/11/2016 18:11	156.9	3.7	75.2	51.1	148.5	3.0	75.0	52.1	164.0	2.2	74.9	52.8	0	70.6
6-12	4/11/2016 18:12	175.2	3.7	75.2	51.3	180.0	3.0	75.0	52.1	184.2	2.2	74.9	52.8	0	68.1
6-12	4/11/2016 18:13	188.4	3.0	75.1	52.6	166.8	2.2	74.9	52.8	198.3	1.5	74.7	53.7	0	66.9
6-12	4/11/2016 18:14	173.8	2.2	74.9	52.5	162.6	2.2	74.8	52.7	180.0	1.5	74.6	53.8	0	64.4
6-12	4/11/2016 18:15	182.8	3.0	74.9	52.6	187.0	2.2	74.6	52.8	203.9	1.5	74.5	53.8	0	61.9
6-12	4/11/2016 18:16	187.0	3.0	74.9	52.2	191.2	3.7	74.7	52.5	187.0	3.0	74.5	53.4	0	60.6
6-12	4/11/2016 18:17	189.8	6.7	74.9	51.6	191.2	6.0	74.8	52.2	201.1	4.5	74.6	53.0	0	59.4
6-12	4/11/2016 18:18	192.6	5.2	75.0	51.7	187.0	4.5	74.8	52.3	205.3	3.7	74.6	53.1	0	58.1
6-12	4/11/2016 18:19	194.0	3.7	74.9	52.5	191.2	3.0	74.7	53.0	201.1	2.2	74.6	53.9	0	58.1
6-12	4/11/2016 18:20	192.6	5.2	74.9	52.0	199.7	4.5	74.7	52.7	201.1	3.7	74.6	53.4	0	56.9
6-12	4/11/2016 18:21	182.8	4.5	74.9	51.9	195.4	4.5	74.7	52.3	196.8	3.7	74.6	53.1	0	55.6
6-12	4/11/2016 18:22	192.6	6.0	74.9	52.0	189.8	4.5	74.7	52.9	192.6	3.7	74.6	53.6	0	54.4
6-12	4/11/2016 18:23	202.5	3.7	74.8	52.2	205.3	3.7	74.6	52.9	202.5	3.0	74.5	53.7	0	53.1
6-12	4/11/2016 18:24	194.0	5.2	74.9	52.0	181.4	4.5	74.7	52.8	198.3	3.0	74.6	53.5	0	50.6
6-12	4/11/2016 18:25	189.8	5.2	74.8	52.2	191.2	5.2	74.6	52.9	201.1	3.7	74.5	53.7	0	48.1
6-12	4/11/2016 18:26	192.6	4.5	74.7	52.4	189.8	3.7	74.6	53.1	199.7	3.0	74.4	53.7	0	46.9
6-12	4/11/2016 18:27	195.4	5.2	74.7	52.6	198.3	4.5	74.6	52.8	205.3	3.0	74.4	53.5	0	45.6
6-12	4/11/2016 18:28	206.7	4.5	74.7	52.5	198.3	3.7	74.6	52.8	201.1	3.0	74.4	53.6	0	46.9
6-12	4/11/2016 18:29	201.1	3.7	74.6	52.7	187.0	3.0	74.5	53.2	189.8	2.2	74.3	54.0	0	46.9
6-12	4/11/2016 18:30	203.9	4.5	74.6	52.9	203.9	3.7	74.4	53.6	209.5	3.0	74.3	54.4	0	46.9
6-12	4/11/2016 18:31	198.3	3.7	74.5	53.4	187.0	3.7	74.3	53.5	201.1	3.0	74.2	54.3	0	49.4
6-12	4/11/2016 18:32	195.4	5.2	74.6	52.5	198.3	5.2	74.5	53.1	202.5	3.7	74.3	53.9	0	51.9
6-12	4/11/2016 18:33	202.5	4.5	74.7	52.9	201.1	3.7	74.5	53.6	212.3	2.2	74.3	54.5	0	54.4
6-12	4/11/2016 18:34	189.8	3.7	74.6	53.1	189.8	3.0	74.4	53.9	202.5	2.2	74.2	54.7	0	55.6
6-12	4/11/2016 18:35	192.6	3.7	74.5	53.0	194.0	3.0	74.4	53.6	189.8	2.2	74.2	54.6	0	56.9
6-12	4/11/2016 18:36	199.7	3.0	74.5	53.5	199.7	3.0	74.3	54.4	198.3	1.5	74.1	55.3	0	56.9
6-12	4/11/2016 18:37	203.9	3.7	74.4	53.6	195.4	3.0	74.2	54.4	202.5	2.2	74.0	55.3	0	55.6
6-12	4/11/2016 18:38	195.4	3.7	74.4	53.7	192.6	3.0	74.2	54.5	208.1	2.2	74.0	55.3	0	55.6
6-12	4/11/2016 18:39	196.8	3.0	74.3	54.1	194.0	3.0	74.1	55.0	199.7	2.2	74.0	55.8	0	55.6
6-12	4/11/2016 18:40	191.2	2.2	74.3	54.6	194.0	2.2	74.0	55.4	199.7	1.5	73.9	56.2	0	58.1
6-12	4/11/2016 18:41	187.0	1.5	74.2	55.1	194.0	1.5	73.9	55.6	199.7	0.7	73.8	56.5	0	58.1
6-12	4/11/2016 18:42	191.2	2.2	74.1	55.3	187.0	2.2	73.9	56.2	198.3	1.5	73.8	56.9	0	56.9
6-12	4/11/2016 18:43	187.0	2.2	74.1	54.9	195.4	2.2	73.9	55.6	182.8	2.2	73.8	56.3	0	54.4
6-12	4/11/2016 18:44	201.1	2.2	74.1	55.0	282.5	2.2	73.9	55.7	172.4	1.5	73.8	56.3	0	53.1
6-12	4/11/2016 18:45	194.0	2.2	74.0	55.0	209.5	2.2	73.9	55.8	175.2	1.5	73.8	56.5	0	51.9
6-12	4/11/2016 18:46	198.3	2.2	74.0	55.6	187.0	2.2	73.8	55.7	187.0	1.5	73.7	56.6	0	51.9
6-12	4/11/2016 18:47	189.8	3.0	74.0	55.1	188.4	3.0	73.8	56.0	182.8	2.2	73.7	56.8	0	50.6
6-12	4/11/2016 18:48	182.8	3.0	74.0	54.9	181.4	3.0	73.9	55.6	187.0	2.2	73.7	56.5	0	50.6
6-12	4/11/2016 18:49	180.0	3.0	74.1	55.3	199.7	3.0	73.9	55.7	181.4	2.2	73.7	56.5	0	48.1
6-12	4/11/2016 18:50	192.6	3.0	74.0	55.2	185.6	2.2	73.8	56.2	181.4	1.5	73.6	56.9	0	44.4
6-12	4/11/2016 18:51	189.8	1.5	73.9	56.6	188.4	0.7	73.6	57.4	187.0	0.7	73.5	58.1	0	40.6
6-12	4/11/2016 18:52	185.6	2.2	73.7	56.3	181.4	2.2	73.6	56.8	188.4	1.5	73.4	57.6	0	36.9
6-12	4/11/2016 18:53	184.2	2.2	73.7	56.6	184.2	1.5	73.4	57.7	220.7	0.7	73.3	58.4	0	33.1
6-12	4/11/2016 18:54	180.0	1.5	73.6	56.8	184.2	1.5	73.3	57.7	216.5	0.7	73.2	58.5	0	30.6
6-12	4/11/2016 18:55	180.0	1.5	73.5	56.9	299.3	1.5	73.3	57.9	215.1	0.7	73.1	58.8	0	29.4
6-12	4/11/2016 18:56	184.2	2.2	73.5	56.6	195.4	1.5	73.3	57.0	194.0	1.5	73.0	58.3	0	28.1
6-12	4/11/2016 18:57	191.2	1.5	73.6	56.4	175.2	1.5	73.3	57.7	166.8	0.7	73.1	58.8	0	28.1
6-12	4/11/2016 18:58	196.8	0.7	73.5	57.1	175.2	0.7	73.2	57.9	166.8	0.0	73.0	59.2	0	29.4
6-12	4/11/2016 18:59	192.6	1.5	73.4	57.4	187.0	1.5	73.2	57.3	171.0	0.7	72.9	58.3	0	29.4
6-12	4/11/2016 19:00	216.5	1.5	73.5	56.6	194.0	1.5	73.3	57.5	199.7	1.5	73.0	58.6	0	30.6
6-12	4/11/2016 19:01	181.4	1.5	73.4	57.2	175.2	1.5	73.2	58.1	196.8	0.7	72.9	59.0	0	29.4
6-12	4/11/2016 19:02	159.7	1.5	73.4	56.8	171.0	2.2	73.2	57.5	181.4	1.5	72.9	58.4	0	29.4
6-12	4/11/2016 19:03	182.8	3.0	73.3	57.7	182.8	2.2	73.1	58.3	185.6	1.5	72.9	59.4	0	28.1
6-12	4/11/2016 19:04	189.8	3.0	73.4	56.9	191.2	2.2	73.2	57.5	212.3	2.2	72.9	58.3	0	29.4
6-12	4/11/2016 19:05	162.6	2.2	73.4	57.0	149.9	2.2	73.2	57.7	175.2	1.5	72.9	58.6	0	29.4
6-12	4/11/2016 19:06	169.6	3.0	73.3	56.8	156.9	2.2	73.2	57.1	159.7	1.5	72.9	58.0	0	29.4
6-12	4/11/2016 19:07	180.0	3.0	73.5	56.2	173.8	3.0	73.3	57.0	173.8	2.2	73.0	58.0	0	29.4
6-12	4/11/2016 19:08	219.3	2.2	73.5	56.8	172.4	1.5	73.3	57.7	172.4	1.5	73.0	58.5	0	30.6
6-12	4/11/2016 19:09	260.0	2.2	73.4	56.9	184.2	2.2	73.2	57.8	199.7	1.5	73.0	58.7	0	29.4
6-12	4/11/2016 19:10	192.6	2.2	73.4	57.1	191.2	2.2	73.2	57.8	206.7	1.5	73.0	58.6	0	28.1
6-12	4/11/2016 19:11	202.5	1.5	73.3	57.4	195.4	0.7	73.0	58.2	222.1	0.7	72.8	59.1	0	28.1
6-12	4/11/2016 19:12	189.8	1.5	73.1	57.5	181.4	1.5	72.9	58.3	222.1	0.7	72.7	59.4	0	26.9

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
6-12	4/11/2016 19:13	194.0	1.5	73.0	57.7	187.0	1.5	72.8	58.3	222.1	0.7	72.5	59.3	0	25.6
6-12	4/11/2016 19:14	192.6	1.5	73.0	57.8	194.0	1.5	72.7	58.3	215.1	1.5	72.5	59.4	0	24.4
6-12	4/11/2016 19:15	185.6	2.2	73.0	57.9	186.4	2.2	72.7	58.7	199.7	1.5	72.5	59.8	0	21.9
6-12	4/11/2016 19:16	189.8	1.5	72.8	58.5	189.8	1.5	72.6	58.6	199.7	0.7	72.4	59.8	0	20.6
6-12	4/11/2016 19:17	189.8	0.7	72.8	58.2	189.8	0.7	72.6	59.1	199.7	0.7	72.3	60.1	0	19.4
6-12	4/11/2016 19:18	189.8	0.7	72.7	58.5	189.8	0.7	72.5	59.6	199.7	0.0	72.2	60.7	0	19.4
6-12	4/11/2016 19:19	189.8	0.7	72.7	58.4	189.8	0.7	72.5	59.5	199.7	0.7	72.2	60.6	0	19.4
6-12	4/11/2016 19:20	189.8	1.5	72.7	58.2	189.8	0.7	72.5	59.2	199.7	0.0	72.1	60.3	0	16.9
6-12	4/11/2016 19:21	189.8	0.7	72.7	58.9	189.8	0.7	72.4	59.2	199.7	0.0	72.1	60.5	0	15.6
6-12	4/11/2016 19:22	189.8	1.5	72.7	58.8	189.8	1.5	72.4	59.8	199.7	0.7	72.1	60.7	0	14.4
6-12	4/11/2016 19:23	215.1	1.5	72.7	58.3	172.4	1.5	72.4	59.1	198.3	0.7	72.1	60.2	0	14.4
6-12	4/11/2016 19:24	180.0	0.7	72.6	58.9	169.6	0.7	72.4	59.9	196.8	0.7	72.1	61.0	0	14.4
6-12	4/11/2016 19:25	180.0	0.7	72.4	59.1	169.6	0.7	72.2	60.0	196.8	0.0	71.9	61.0	0	14.4
6-12	4/11/2016 19:26	180.0	0.7	72.4	59.1	169.6	0.7	72.2	59.9	196.8	0.0	71.8	61.0	0	14.4
6-12	4/11/2016 19:27	180.0	0.7	72.3	59.4	169.6	0.7	72.1	60.1	196.8	0.0	71.7	61.1	0	14.4
6-12	4/11/2016 19:28	180.0	0.7	72.3	59.3	169.6	0.7	72.1	60.3	196.8	0.0	71.7	61.5	0	14.4
6-12	4/11/2016 19:29	180.0	0.7	72.2	59.9	169.6	0.7	71.9	61.0	196.8	0.0	71.6	62.0	0	14.4
6-12	4/11/2016 19:30	180.0	0.7	72.1	60.0	169.6	0.7	71.8	60.7	196.8	0.0	71.5	62.3	0	14.4
6-12	4/11/2016 19:31	180.0	0.0	72.1	60.5	169.6	0.7	71.7	61.0	196.8	0.0	71.4	62.2	0	14.4
6-12	4/11/2016 19:32	180.0	0.7	72.0	60.1	169.6	0.7	71.7	61.2	196.8	0.0	71.3	62.4	0	15.6
6-12	4/11/2016 19:33	180.0	0.7	72.0	60.5	169.6	0.7	71.7	61.1	196.8	0.0	71.3	62.6	0	15.6
6-12	4/11/2016 19:34	180.0	0.7	72.0	60.2	169.6	0.7	71.6	61.3	196.8	0.7	71.2	62.9	0	14.4
6-12	4/11/2016 19:35	180.0	0.7	71.9	60.8	169.6	0.0	71.5	61.9	196.8	0.0	71.1	63.3	0	13.1
6-12	4/11/2016 19:36	180.0	0.0	71.8	61.1	169.6	0.0	71.4	62.3	196.8	0.0	71.0	64.2	0	11.9
6-12	4/11/2016 19:37	180.0	0.7	71.7	60.3	169.6	0.7	71.4	61.5	196.8	0.0	70.9	63.1	0	9.4
6-12	4/11/2016 19:38	180.0	0.7	71.8	60.7	169.6	1.5	71.5	61.6	196.8	0.7	71.0	63.3	0	8.1
6-12	4/11/2016 19:39	180.0	1.5	71.7	61.2	175.2	1.5	71.4	62.1	196.8	0.7	70.9	63.9	0	6.9
6-12	4/11/2016 19:40	189.8	1.5	71.6	61.5	189.8	1.5	71.2	62.9	196.8	0.7	70.8	64.2	0	5.6
6-12	4/11/2016 19:41	189.8	1.5	71.4	62.7	189.8	0.7	71.0	63.5	196.8	0.7	70.7	64.9	0	5.6
6-12	4/11/2016 19:42	189.8	0.7	71.2	62.4	189.8	0.7	70.9	63.0	196.8	0.0	70.5	64.6	0	4.4
6-12	4/11/2016 19:43	189.8	0.7	71.1	62.9	189.8	0.0	70.8	63.7	196.8	0.0	70.5	64.8	0	4.4
6-12	4/11/2016 19:44	189.8	0.7	71.1	63.0	189.8	0.7	70.8	64.2	196.8	0.0	70.4	65.8	0	4.4
6-12	4/11/2016 19:45	189.8	0.0	71.1	63.2	189.8	0.7	70.8	64.3	196.8	0.0	70.3	65.6	0	4.4
6-12	4/11/2016 19:46	241.8	0.7	71.1	62.3	182.8	1.5	70.8	63.2	196.8	0.7	70.3	64.9	0	3.1
6-12	4/11/2016 19:47	323.2	0.7	71.3	62.2	180.0	0.7	71.0	63.0	196.8	0.0	70.4	64.8	0	3.1
6-12	4/11/2016 19:48	234.8	1.5	71.4	61.8	180.0	1.5	71.1	63.0	196.8	0.7	70.5	64.7	0	3.1
6-12	4/11/2016 19:49	323.2	0.7	71.4	61.9	180.0	0.7	71.1	62.4	196.8	0.7	70.6	64.3	0	1.9
6-12	4/11/2016 19:50	323.2	1.5	71.6	61.6	180.0	0.7	71.2	62.5	196.8	0.7	70.7	64.3	0	1.9
6-12	4/11/2016 19:51	323.2	0.7	71.6	61.5	180.0	0.7	71.2	62.9	196.8	0.0	70.7	64.2	0	1.9
6-12	4/11/2016 19:52	323.2	1.5	71.5	61.4	180.0	1.5	71.1	62.5	196.8	0.0	70.6	64.2	0	1.9
6-12	4/11/2016 19:53	323.2	1.5	71.4	61.9	180.0	0.7	71.1	63.1	196.8	0.0	70.5	64.5	0	1.9
6-12	4/11/2016 19:54	323.2	0.7	71.3	62.2	180.0	0.7	70.9	63.4	196.8	0.0	70.5	64.9	0	0.6
6-12	4/11/2016 19:55	323.2	0.7	71.3	62.1	180.0	0.7	70.9	63.3	196.8	0.0	70.4	64.9	0	0.6
6-12	4/11/2016 19:56	323.2	0.0	71.1	62.4	180.0	0.7	70.8	63.7	196.8	0.0	70.3	65.3	0	0.6
6-12	4/11/2016 19:57	323.2	0.0	71.1	62.4	180.0	0.7	70.7	64.2	196.8	0.0	70.2	66.0	0	0.6
6-12	4/11/2016 19:58	323.2	0.0	71.1	62.4	180.0	0.7	70.6	63.9	196.8	0.0	70.1	65.6	0	0.6
6-12	4/11/2016 19:59	323.2	0.0	71.0	63.1	180.0	0.7	70.5	64.1	196.8	0.0	70.0	66.0	0	0.6
6-12	4/11/2016 20:00	323.2	0.0	71.0	62.9	180.0	0.7	70.5	64.5	196.8	0.0	70.0	66.1	0	0.6
6-12	4/11/2016 20:01	323.2	0.0	71.0	62.9	180.0	0.7	70.5	64.7	196.8	0.0	69.9	66.3	0	0.6
6-12	4/11/2016 20:02	323.2	0.0	70.6	63.7	180.0	0.7	70.3	65.0	196.8	0.0	69.8	67.1	0	0.6
6-12	4/11/2016 20:03	323.2	0.0	70.7	64.2	180.0	0.7	70.2	65.5	196.8	0.0	69.6	67.6	0	0.6
6-12	4/11/2016 20:04	323.2	0.0	70.5	64.6	180.0	0.7	70.0	65.6	196.8	0.0	69.5	67.6	0	0.6
6-12	4/11/2016 20:05	323.2	0.0	70.5	64.4	180.0	0.7	70.0	65.9	196.8	0.7	69.5	67.8	0	0.6
6-12	4/11/2016 20:06	323.2	0.0	70.4	64.5	180.0	0.7	69.9	65.8	196.8	0.0	69.4	67.7	0	0.6
6-12	4/11/2016 20:07	323.2	0.0	70.3	64.6	180.0	0.7	69.9	66.2	196.8	0.0	69.3	67.7	0	0.6
6-12	4/11/2016 20:08	323.2	0.0	70.4	64.4	180.0	0.7	69.9	65.9	196.8	0.0	69.3	68.0	0	0.6
6-12	4/11/2016 20:09	323.2	0.0	70.3	64.7	180.0	0.7	69.9	66.4	196.8	0.0	69.2	68.5	0	0.6
6-12	4/11/2016 20:10	323.2	0.0	70.3	64.2	201.1	1.5	69.9	65.8	196.8	0.0	69.2	68.0	0	0.6
6-12	4/11/2016 20:11	323.2	0.7	70.4	64.7	323.2	0.7	69.9	66.2	196.8	0.7	69.2	68.2	0	0.6
6-12	4/11/2016 20:12	323.2	0.0	70.4	64.6	321.8	0.7	69.9	66.2	196.8	0.0	69.2	68.2	0	0.6
6-12	4/11/2016 20:13	162.6	1.5	70.5	64.2	155.5	1.5	70.0	65.7	196.8	0.7	69.3	67.8	0	0.6
6-12	4/11/2016 20:14	154.1	2.2	70.7	63.3	149.9	1.5	70.2	65.0	175.2	0.7	69.5	67.0	0	0.6
6-12	4/11/2016 20:15	147.1	1.5	70.7	63.9	138.7	1.5	70.2	65.0	133.1	0.7	69.6	67.0	0	0.6
6-12	4/11/2016 20:16	147.1	1.5	70.7	63.8	140.1	1.5	70.2	65.4	133.1	0.7	69.6	67.2	0	0.6
6-12	4/11/2016 20:17	151.3	2.2	70.7	63.3	149.9	2.2	70.4	64.2	151.3	1.5	69.8	66.3	0	0.6
6-12	4/11/2016 20:18	148.5	2.2	70.9	62.7	142.9	2.2	70.5	63.8	161.2	1.5	69.9	65.9	0	0.6
6-12	4/11/2016 20:19	147.1	3.7	71.0	62.3	147.1	3.0	70.7	63.5	152.7	2.2	70.1	65.4	0	0.6
6-12	4/11/2016 20:20	156.9	1.5	71.0	62.9	145.7	1.5	70.6	64.2	159.7	0.7	70.1	66.0	0	0.6
6-12	4/11/2016 20:21	152.7	2.2	70.6	62.9	142.9	2.2	70.5	63.8	158.3	1.5	70.1	65.5	0	0.6
6-12	4/11/2016 20:22	164.0	3.0	70.9	62.7	159.7	2.2	70.6	63.7	166.8	1.5	70.1	65.3	0	0.6
6-12	4/11/2016 20:23	173.8	2.2	70.9	62.3	158.3	2.2	70.6	63.6	169.6	1.5	70.1	65.1	0	0.6
6-12	4/11/2016 20:24	147.1	2.2	70.9	62.6	141.5	2.2	70.5	64.0	165.4	1.5	70.1	65.4	0	0.6
6-12	4/11/2016 20:25	147.1	1.5	70.7	63.1	147.1	1.5	70.4	63.8	165.4	0.7	70.0	65.3	0	0.6
6-12	4/11/2016 20:26	166.8	2.2	70.7	62.7	172.4	2.2	70.4	63.9	169.6	1.5	70.0	65.2	0	0.6
6-12	4/11/2016 20:27	169.6	1.5	70.6	62.9	173.8	1.5	70.3	63.8	169.6	0.7	69.9	65.3	0	0.6
6-12	4/11/2016 20:28	169.6	1.5	70.7	62.7	173.8	1.5	70.4	63.8	169.6	0.7	69.9	65.3	0	0.6
6-12	4/11/2016 20:29	169.6	1.5	70.6	63.3	173.8	1.5	70.2	64.1	169.6	0.7	69.7	65.7	0	0.6
6-12	4/11/2016 20:30	175.2	2.2	70.5	63.2	175.2	2.2	70.2	64.0	316.2	1.5	69.7	65.4	0	0.6
6-12	4/11/2016 20:31	175.2	2.2	70.5	63.0	171.0	2.2	70.3	63.7	251.6	1.5	69.8	65.1	0	0.6
6-12	4/11/2016 20:32	169.6	1.5	70.5	63.2	161.2	1.5	70.2	63.9	172.4	0.7	69.8	65.3	0	0.6
6-12	4/11/2016 20:33	158.3	2.2	70.5	63.0	149.9	2.2	70.2	63.8	147.1	1.5	69.8	65.1	0	0.6
6-12	4/11/2016 20:34	159.7	2.2	70.7	62.5	154.1	2.2	70.4	63.8	159.7	1.5	69.9	65.1	0	0.6
6-12	4/11/2016 20:35	148.5	2.2	70.7	62.5	141.5	2.2	70.4	63.7	149.9	1.5	69.9	65.1	0	0.6
6-12	4/11/2016 20:36	162.6	2.2	70.6	62.6	149.9	2.2	70.3	63.4	144.3	1.5	69.8	65.0	0	0.6
6-12	4/11/2016 20:37	162.6	3.0	70.7	62.1	159.7	2.2	70.5	63.1	166.8	1.5	69.9	64.6	0	0.6
6-12	4/11/2016 20:38	166.8	2.2	70.6	62.2	158.3	1.5	70.5	63.4	175.2	1.5	70.0	64.7	0	0.6
6-12	4/11/2016 20:39	173.8	1.5	70.7	62.4	166.8	1.5	70.4	63.3	206.7	0.7	69.9	64.7	0	0.6
6-12	4/11/2016 20:40	175.2	2.2	70.6	62.8	173.8	1.5	70.2	64.0	326.0	0.7	69.6	65.5	0	0.6
6-12	4/11/2016 20:41	175.2	1.5	70.4	63.3	173.8	1.5	70.0	64.4	326.0	0.7	69.6	66.0	0	0.6
6-12	4/11/2016 20:42	175.2	1.5	70.2	63.7	173.8	1.5	69.8	64.6	326.0	0.7	69.4	66.1	0	0.6
6-12	4/11/2016 20:43	165.4	3.0	70.2	63.0	152.7	3.0	69.9	64.1	154.1	1.5	69.4	65.7	0	0.6
6-12	4/11/2016 20:44	162.6	3.0	70.4	63.3	166.8	2.2	70.0	64.1	159.7	1.5	69.5	66.0	0	0.6
6-12	4/11/2016 20:45	166.8	2.2	70.3	63.2	166.8	2.2	70.0	64.1	161.2	1.5	69.5	65.7	0	0.6
6-12	4/11/2016 20:46	156.9	3.0	70.5	62.7	156.9	3.0	70.2	63.6	171.0	2.2	69.6	65.4	0	0.6
6-12	4/11/2016 20:47	172.4	2.2	70.5	62.9	164.0	2.2	70.1	63.8	182.8	1.5	69.6	65.5	0	0.6
6-12	4/11/2016 20:48	171.0	3.0	70.3	63.2	156.9	2.2	70.0	64.1	278.3	1.5	69.6	65.5	0	0.6
6-12	4/11/2016 20:49	154.1	3.0	70.3	63.2	144.3	2.2	70.0	64.1	161.2	1.5	69.6	65.4	0	0.6
6-12	4/11/2016 20:50	165.4	3.0	70.4	62.8	156.9	2.2	70.1	63.5	162.6	1.5	69.6	65.0	0	0.6
6-12	4/11/2016 20:51	172.4	1.5	70.3	63.3	161.2	1.5	70.0	64.0	162.6	0.7	69.6	65.3	0	0.6
6-12	4/11/2016 20:52	186.4	2.2	70.3	62.9	172.4	2.2	70.0	63.7	162.6	1.5	69.6	65.2	0	0.6
6-12	4/11/2016 20:53	175.2	1.5	70.3	63.2	175.2	2.2	69.9	64.0	165.4	1.5	69.6	65.6	0	0.6
6-12	4/11/2016 20:54	191.2	3.7	70.3	63.0	202.5	3.0	70.0	63.6	208.1	2.2	69.6	65.1	0	0.6
6-12	4/11/2016 20:55	186.4	3.7	70.4	62.8	172.4	3.7	70.2	63.4	188.4	3.0	69.6	64.7	0	0.6
6-12	4/11/2016 20:56	173.8	5.2	70.6	61.8	164.0	4.5	70.5	62.7	172.4	3.0	70.0	64.0	0	0.6
6-12	4/11/2016 20:57	155.5	3.7	70.8	61.8	149.9	3.0	70.5	62.7	159.7	2.2	70.1	63.9	0	0.6
6-12	4/11/2016 20:58	175.2	2.2	70.6	62.2	168.2	2.2	70.4	63.1	161.2	1.5	70.1	64.1	0	0.6
6-12	4/11/2016 20:59	149.9	3.7	70.5	62.2	140.1	3.0	70.3	62.9	159.7	2.2	69.9	64.1	0	0.6
6-12	4/11/2016 21:00	156.9	3.0	70.5	62.2	151.3	3.0	70.3	62.7	162.6	2.2	69.9	64.1	0	0.6
6-12	4/11/2016 21:01	173.8	3.7	70.5	62.5	173.8	3.0	70.2	63.3	168.2	2.2	69.9	64.7	0	0.6
6-12	4/11/2016 21:02	154.1	3.7	70.5	62.2	148.5	3.7	70.2	63.0	156.9	2.2	69.9	64.3	0	0.6
6-12	4/11/2016 21:03	154.1	3.7	70.5	62.3	154.1	3.0	70.2	63.5	158.3	2.2	69.9	64.8	0	0.6
6-12	4/11/2016 21:04	209.5	3.0	70.4	62.9	175.2	2.2	70.0	63.8	180.0	1.5	69.7	65.0	0	0.6
6-12	4/11/2016 21:05	175.2	3.0	70.2	63.2	175.2	3.0	69.9	64.1	172.4	2.2	69.6	65.4	0	0.6
6-12	4/11/2016 21:06	171.0	3.7	70.0	63.3	165.4	3.0	69.8	64.2	169.6	2.2	69.4	65.5	0	0.6
6-12	4/11/2016 21:07	168.2	4.5	70.1	63.4	159.7	4.5	69.8	64.4	171.0	3.0	69.4	65.9	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
6-12	4/11/2016 21:08	165.4	4.5	70.2	63.0	158.3	3.7	69.9	63.9	164.0	3.0	69.5	65.4	0	0.6
6-12	4/11/2016 21:09	181.4	3.0	70.0	64.0	171.0	2.2	69.6	65.1	172.4	1.5	69.3	66.5	0	0.6
6-12	4/11/2016 21:10	164.0	3.0	69.7	64.9	165.5	2.2	69.3	65.9	165.4	1.5	69.0	67.4	0	0.6
6-12	4/11/2016 21:11	166.8	3.7	69.5	65.1	154.1	3.7	69.2	66.1	159.7	3.0	68.8	67.5	0	0.6
6-12	4/11/2016 21:12	162.6	3.0	69.3	65.9	155.5	3.0	68.9	66.9	149.9	2.2	68.6	68.1	0	0.6
6-12	4/11/2016 21:13	164.0	4.5	69.2	65.6	161.2	5.2	69.0	66.8	172.4	3.0	68.6	68.2	0	0.6
6-12	4/11/2016 21:14	161.2	5.2	69.3	65.3	165.4	4.5	69.1	66.1	165.4	3.7	68.7	67.7	0	0.6
6-12	4/11/2016 21:15	173.8	5.2	69.5	65.3	165.4	4.5	69.2	66.3	169.6	3.0	68.8	68.2	0	0.6
6-12	4/11/2016 21:16	165.4	3.7	69.3	66.0	159.7	3.0	68.9	67.5	171.0	2.2	68.6	68.8	0	0.6
6-12	4/11/2016 21:17	175.2	4.5	69.2	66.4	173.8	4.5	68.9	66.9	181.4	3.7	68.5	68.4	0	0.6
6-12	4/11/2016 21:18	175.2	3.0	69.1	66.5	173.8	3.0	68.7	67.1	180.0	1.5	68.4	68.6	0	0.6
6-12	4/11/2016 21:19	180.0	3.7	69.0	66.7	171.0	3.0	68.6	67.9	180.0	2.2	68.3	69.3	0	0.6
6-12	4/11/2016 21:20	173.8	3.7	68.9	66.5	172.4	3.7	68.6	67.6	181.4	2.2	68.2	69.2	0	0.6
6-12	4/11/2016 21:21	187.0	3.7	69.0	66.5	185.6	3.7	68.7	67.5	191.2	3.0	68.2	69.1	0	0.6
6-12	4/11/2016 21:22	172.4	5.2	69.0	66.4	182.8	4.5	68.6	68.3	198.3	3.7	68.2	69.9	0	0.6
6-12	4/11/2016 21:23	182.8	3.7	68.7	67.8	169.6	3.0	68.3	69.0	191.2	2.2	67.9	70.7	0	0.6
6-12	4/11/2016 21:24	173.8	3.0	68.5	67.9	171.0	3.0	68.1	69.2	188.4	1.5	67.8	70.8	0	0.6
NS	4/11/2016 21:25	171.0	2.2	68.3	69.1	168.2	2.2	67.9	70.1	180.0	1.5	67.5	71.8	0	0.6
12-24	4/11/2016 21:26	182.8	3.7	68.2	69.0	173.8	3.0	67.9	70.2	191.2	2.2	67.5	71.7	0	0.6
12-24	4/11/2016 21:27	175.2	3.0	68.1	69.4	181.4	3.0	67.8	70.3	188.4	2.2	67.4	71.8	0	0.6
12-24	4/11/2016 21:28	185.6	4.5	68.2	69.0	172.4	4.5	68.0	69.5	187.0	3.7	67.5	70.9	0	0.6
12-24	4/11/2016 21:29	175.2	4.5	68.6	68.3	169.6	3.7	68.3	69.1	186.6	3.0	67.8	70.6	0	0.6
12-24	4/11/2016 21:30	185.6	3.0	68.5	68.3	175.2	3.0	68.2	69.3	175.2	2.2	67.8	70.8	0	0.6
12-24	4/11/2016 21:31	175.2	3.7	68.5	68.0	159.7	3.7	68.2	68.9	159.7	3.0	67.8	70.4	0	0.6
12-24	4/11/2016 21:32	152.7	3.0	68.4	68.5	154.1	3.0	68.1	69.4	151.3	2.2	67.7	70.9	0	0.6
12-24	4/11/2016 21:33	180.0	3.0	68.4	68.5	187.0	2.2	68.1	69.5	175.2	1.5	67.7	71.0	0	0.6
12-24	4/11/2016 21:34	202.5	3.0	68.4	68.6	168.8	2.2	68.1	69.7	166.8	1.5	67.6	71.1	0	0.6
12-24	4/11/2016 21:35	175.2	3.0	68.3	69.0	171.0	3.0	68.0	69.9	188.4	1.5	67.5	71.5	0	0.6
12-24	4/11/2016 21:36	166.8	4.5	68.4	68.4	159.7	3.7	68.1	69.5	169.6	3.0	67.7	71.0	0	0.6
12-24	4/11/2016 21:37	166.8	3.7	68.4	68.2	166.8	3.7	68.1	69.0	171.0	2.2	67.7	70.6	0	0.6
12-24	4/11/2016 21:38	188.2	3.7	68.5	67.7	166.8	3.7	68.3	68.5	172.4	3.0	67.8	70.1	0	0.6
12-24	4/11/2016 21:39	171.0	4.5	68.7	67.1	159.7	3.7	68.4	68.1	169.6	2.2	68.0	69.8	0	0.6
12-24	4/11/2016 21:40	169.6	4.5	68.6	67.0	165.4	3.7	68.5	67.9	166.8	3.0	68.1	69.5	0	0.6
12-24	4/11/2016 21:41	164.0	4.5	68.7	66.9	151.3	3.7	68.5	67.5	156.9	2.2	68.1	69.3	0	0.6
12-24	4/11/2016 21:42	158.3	4.5	68.9	66.4	156.9	3.7	68.6	67.4	159.7	2.2	68.2	68.9	0	0.6
12-24	4/11/2016 21:43	162.6	3.7	68.8	66.4	159.7	3.0	68.5	67.6	165.4	2.2	68.1	69.1	0	0.6
12-24	4/11/2016 21:44	159.7	3.0	68.7	66.4	148.5	3.0	68.4	67.5	161.2	2.2	68.1	69.0	0	0.6
12-24	4/11/2016 21:45	158.3	3.7	68.7	66.8	148.5	3.7	68.4	67.2	149.9	2.2	68.0	68.9	0	0.6
12-24	4/11/2016 21:46	141.5	4.5	68.7	66.4	137.3	3.7	68.5	66.8	133.1	3.0	68.1	68.6	0	0.6
12-24	4/11/2016 21:47	151.3	4.5	68.9	65.8	145.7	3.7	68.7	66.7	154.1	3.0	68.2	68.4	0	0.6
12-24	4/11/2016 21:48	142.9	3.0	68.9	66.1	145.7	2.2	68.6	67.0	137.3	1.5	68.2	68.5	0	0.6
12-24	4/11/2016 21:49	158.3	2.2	68.7	66.0	154.1	2.2	68.4	66.8	149.9	1.5	68.1	68.5	0	0.6
12-24	4/11/2016 21:50	148.5	3.7	68.6	65.7	145.7	3.7	68.5	66.7	148.5	2.2	68.1	68.3	0	0.6
12-24	4/11/2016 21:51	152.7	3.0	68.7	66.2	137.3	3.0	68.4	67.2	141.5	1.5	68.0	68.7	0	0.6
12-24	4/11/2016 21:52	145.7	4.5	68.6	65.8	149.9	4.5	68.4	66.3	156.9	3.7	67.9	68.0	0	0.6
12-24	4/11/2016 21:53	165.4	4.5	68.6	65.9	152.7	3.0	68.4	67.0	155.5	2.2	68.0	68.6	0	0.6
12-24	4/11/2016 21:54	152.7	3.7	68.7	65.9	142.9	3.7	68.4	67.0	152.7	2.2	67.9	68.4	0	0.6
12-24	4/11/2016 21:55	156.9	3.7	68.6	66.4	147.1	3.0	68.2	67.3	149.9	2.2	67.8	68.7	0	0.6
12-24	4/11/2016 21:56	147.1	3.0	68.4	66.3	144.3	3.0	68.1	67.4	151.3	2.2	67.8	68.6	0	0.6
12-24	4/11/2016 21:57	161.2	2.2	68.3	66.6	154.1	2.2	68.0	67.7	161.2	1.5	67.7	69.0	0	0.6
12-24	4/11/2016 21:58	164.0	3.7	68.2	67.1	155.5	3.0	67.8	68.3	171.0	2.2	67.5	69.6	0	0.6
12-24	4/11/2016 21:59	164.0	3.7	68.1	66.8	159.7	3.7	67.9	67.8	195.4	2.2	67.4	69.3	0	0.6
12-24	4/11/2016 22:00	152.7	3.7	68.3	66.4	144.3	3.0	68.0	67.1	152.7	2.2	67.5	68.9	0	0.6
12-24	4/11/2016 22:01	159.7	3.7	68.3	66.6	151.3	3.0	68.0	67.5	156.9	2.2	67.5	69.2	0	0.6
12-24	4/11/2016 22:02	173.8	3.7	68.2	66.3	199.7	3.0	67.9	67.6	230.5	2.2	67.5	69.2	0	0.6
12-24	4/11/2016 22:03	182.8	3.0	68.1	66.7	175.2	3.7	67.8	67.4	181.4	2.2	67.4	69.1	0	0.6
12-24	4/11/2016 22:04	187.0	5.2	68.3	65.7	164.0	5.2	68.1	66.4	172.4	3.7	67.6	68.2	0	0.6
12-24	4/11/2016 22:05	175.2	4.5	68.5	65.7	188.4	3.7	68.2	66.6	175.2	3.0	67.8	68.2	0	0.6
12-24	4/11/2016 22:06	182.8	3.7	68.4	65.5	169.6	3.0	68.1	66.0	187.0	2.2	67.7	67.9	0	0.6
12-24	4/11/2016 22:07	175.2	3.0	68.4	65.6	185.6	2.2	68.1	66.3	181.4	2.2	67.7	68.0	0	0.6
12-24	4/11/2016 22:08	191.2	3.7	68.3	65.3	189.8	3.7	68.1	65.9	189.8	3.0	67.6	67.6	0	0.6
12-24	4/11/2016 22:09	188.4	4.5	68.4	64.9	180.0	3.7	68.2	65.7	196.8	3.0	67.8	67.2	0	0.6
12-24	4/11/2016 22:10	165.4	3.7	68.5	64.4	156.9	4.5	68.3	65.0	189.7	3.0	67.8	66.6	0	0.6
12-24	4/11/2016 22:11	175.2	4.5	68.6	64.0	189.8	3.7	68.3	65.2	192.6	3.0	67.9	66.7	0	0.6
12-24	4/11/2016 22:12	192.6	3.7	68.5	64.6	182.8	3.0	68.1	65.4	185.6	2.2	67.8	67.1	0	0.6
12-24	4/11/2016 22:13	205.3	3.7	68.3	64.6	175.2	3.0	68.0	65.7	187.0	2.2	67.6	67.3	0	0.6
12-24	4/11/2016 22:14	175.2	3.0	68.2	64.9	162.6	3.0	67.9	65.5	171.0	1.5	67.5	67.1	0	0.6
12-24	4/11/2016 22:15	172.4	3.0	68.2	64.7	168.2	3.0	67.9	65.7	299.3	1.5	67.5	67.3	0	0.6
12-24	4/11/2016 22:16	181.4	3.0	68.1	64.4	180.0	3.0	67.9	65.5	201.1	2.2	67.5	67.2	0	0.6
12-24	4/11/2016 22:17	166.8	3.0	68.1	65.2	147.1	2.2	67.8	66.0	168.2	1.5	67.4	67.3	0	0.6
12-24	4/11/2016 22:18	162.6	2.2	67.9	65.3	152.7	2.2	67.6	66.5	166.8	1.5	67.2	67.7	0	0.6
12-24	4/11/2016 22:19	159.7	3.7	67.9	64.8	161.2	3.7	67.8	65.5	162.6	3.0	67.3	67.1	0	0.6
12-24	4/11/2016 22:20	171.0	3.0	68.1	64.7	156.9	2.2	67.8	65.6	156.9	1.5	67.3	67.1	0	0.6
12-24	4/11/2016 22:21	162.6	2.2	68.0	64.6	158.3	2.2	67.7	65.6	147.1	1.5	67.2	67.0	0	0.6
12-24	4/11/2016 22:22	186.4	2.2	67.9	65.2	171.0	2.2	67.5	66.3	155.5	1.5	67.1	67.8	0	0.6
12-24	4/11/2016 22:23	180.0	1.5	67.7	65.5	172.4	1.5	67.4	66.2	155.5	0.7	66.9	67.5	0	0.6
12-24	4/11/2016 22:24	208.1	2.2	67.7	64.9	175.2	2.2	67.4	66.2	156.9	1.5	66.9	67.4	0	0.6
12-24	4/11/2016 22:25	175.2	3.0	67.7	64.7	168.2	3.0	67.5	65.4	172.4	2.2	66.9	67.0	0	0.6
12-24	4/11/2016 22:26	168.2	2.2	67.6	64.9	154.1	1.5	67.4	66.1	209.5	0.7	66.9	67.6	0	0.6
12-24	4/11/2016 22:27	184.2	2.2	67.6	64.5	191.2	2.2	67.5	65.7	192.6	1.5	67.0	67.1	0	0.6
12-24	4/11/2016 22:28	185.6	3.7	68.0	64.0	182.8	3.7	67.8	65.1	187.0	3.0	67.2	66.7	0	0.6
12-24	4/11/2016 22:29	162.6	3.0	67.9	64.4	166.8	2.2	67.5	65.3	253.0	1.5	67.2	66.8	0	0.6
12-24	4/11/2016 22:30	182.8	1.5	67.7	64.9	180.0	1.5	67.4	65.7	326.0	0.7	67.0	67.1	0	0.6
12-24	4/11/2016 22:31	169.6	1.5	67.5	65.1	171.0	1.5	67.2	65.9	326.0	0.7	66.8	67.4	0	0.6
12-24	4/11/2016 22:32	168.2	2.2	67.5	64.9	165.4	2.2	67.2	65.8	326.0	1.5	66.7	67.4	0	0.6
12-24	4/11/2016 22:33	159.7	2.2	67.5	65.0	154.1	1.5	67.2	66.1	180.0	1.5	66.6	67.6	0	0.6
12-24	4/11/2016 22:34	158.3	2.2	67.3	65.1	152.7	1.5	67.0	65.9	175.2	0.7	66.5	67.6	0	0.6
12-24	4/11/2016 22:35	164.0	2.2	67.4	65.3	148.5	1.5	67.0	66.1	173.8	0.7	66.5	67.7	0	0.6
12-24	4/11/2016 22:36	164.0	1.5	67.3	65.2	148.5	1.5	66.9	66.4	173.8	0.7	66.4	67.8	0	0.6
12-24	4/11/2016 22:37	162.6	1.5	67.2	65.3	148.5	1.5	66.8	66.6	173.8	0.7	66.3	68.1	0	0.6
12-24	4/11/2016 22:38	162.6	1.5	67.1	65.5	164.0	1.5	66.7	66.5	173.8	0.7	66.2	68.1	0	0.6
12-24	4/11/2016 22:39	169.6	2.2	67.2	65.3	155.5	2.2	66.9	65.9	175.2	1.5	66.3	67.8	0	0.6
12-24	4/11/2016 22:40	172.4	1.5	67.3	65.0	159.7	1.5	66.9	66.1	175.2	0.7	66.3	67.8	0	0.6
12-24	4/11/2016 22:41	171.0	3.0	67.4	64.7	159.7	3.0	67.1	65.5	166.8	1.5	66.4	67.4	0	0.6
12-24	4/11/2016 22:42	173.8	2.2	67.4	64.4	161.2	2.2	67.2	65.2	171.0	1.5	66.5	67.1	0	0.6
12-24	4/11/2016 22:43	164.0	2.2	67.5	64.3	154.1	2.2	67.2	65.1	173.8	1.5	66.6	67.1	0	0.6
12-24	4/11/2016 22:44	161.2	3.0	67.6	64.2	161.2	2.2	67.2	65.3	182.8	1.5	66.6	67.3	0	0.6
12-24	4/11/2016 22:45	147.1	2.2	67.6	64.2	135.9	1.5	67.2	65.4	209.5	0.7	66.6	67.1	0	0.6
12-24	4/11/2016 22:46	144.3	1.5	67.5	64.4	142.9	1.5	67.1	65.3	205.3	0.7	66.5	67.1	0	0.6
12-24	4/11/2016 22:47	188.4	2.2	67.5	64.3	168.2	2.2	67.1	65.2	201.1	1.5	66.6	67.0	0	0.6
12-24	4/11/2016 22:48	175.2	3.0	67.5	64.4	173.8	3.0	67.2	65.1	184.2	2.2	66.6	66.9	0	0.6
12-24	4/11/2016 22:49	175.2	3.0	67.5	64.1	172.4	2.2	67.2	65.1	182.8	1.5	66.7	66.8	0	0.6
12-24	4/11/2016 22:50	175.2	2.2	67.5	64.2	175.2	2.2	67.2	65.0	175.2	1.5	66.7	66.6	0	0.6
12-24	4/11/2016 22:51	175.2	1.5	67.3	64.8	175.2	1.5	67.0	65.3	175.2	0.7	66.6	66.9	0	0.6
12-24	4/11/2016 22:52	173.8	2.2	67.2	64.8	172.4	1.5	66.9	65.7	175.2	0.7	66.5	67.1	0	0.6
12-24	4/11/2016 22:53	161.2	1.5	67.2	64.7	171.0	1.5	66.9	65.7	175.2	0.7	66.4	67.0	0	0.6
12-24	4/11/2016 22:54	159.7	1.5	67.2	64.7	171.0	1.5	66.9	65.6	175.2	0.7	66.4	67.1	0	0.6
12-24	4/11/2016 22:55	169.6	2.2	67.2	64.5	181.4	2.2	67.0	65.4	182.8	1.5	66.4	66.9	0	0.6
12-24	4/11/2016 22:56	155.5	3.0	67.4	64.3	149.9	2.2	67.1	65.0	158.3	1.5	66.6	66.7	0	0.6
12-24	4/11/2016 22:57	158.3	2.2	67.5	64.0	152.7	2.2	67.2	64.9	164.0	1.5	66.6	66.6	0	0.6
12-24	4/11/2016 22:58	156.9	2.2	67.6	63.5	152.7	3.0	67.3	64.4	161.2	1.5	66.6	66.0	0	0.6
12-24	4/11/2016 22:59	169.6	2.2	67.6	63.9	166.8	2.2	67.2	64.8	156.9	1.5	66.6	66.3	0	0.6
12-24	4/11/2016 23:00	173.8	2.2	67.5	63.6	165.4	1.5	67.2	64.8	156.9	0.7	66.7	66.3	0	0.6
12-24	4/11/2016 23:01	175.2	2.2	67.4	64.0	159.7	2.2	67.1	64.6	156.9	0.7	66.6	66.2	0	0.6
12-24	4/11/2016 23:02	175.2	2.2	67.3	64.5	171.0	1.5	66.9	65.7	164.0	0.7	66.5	67.2	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
12-24	4/11/2016 23:03	175.2	0.7	67.0	65.2	171.0	0.7	66.6	66.3	164.0	0.7	66.3	67.7	0	0.6
12-24	4/11/2016 23:04	175.2	0.7	66.9	65.3	171.0	0.7	66.5	66.5	164.0	0.0	66.1	67.9	0	0.6
12-24	4/11/2016 23:05	175.2	1.5	66.9	65.2	175.2	1.5	66.6	66.1	164.0	0.7	66.1	67.6	0	0.6
12-24	4/11/2016 23:06	175.2	1.5	66.9	64.9	175.2	0.7	66.6	65.8	164.0	0.0	66.1	67.4	0	0.6
12-24	4/11/2016 23:07	175.2	1.5	66.9	65.2	169.6	1.5	66.5	66.1	164.0	0.7	66.0	67.6	0	0.6
12-24	4/11/2016 23:08	171.0	1.5	66.9	65.0	158.9	1.5	66.5	66.2	164.0	0.7	66.0	67.8	0	0.6
12-24	4/11/2016 23:09	171.0	0.7	66.9	65.2	158.9	0.7	66.5	66.6	164.0	0.0	66.0	68.1	0	0.6
12-24	4/11/2016 23:10	171.0	1.5	66.9	65.0	158.3	1.5	66.6	66.0	164.0	0.7	66.0	67.9	0	0.6
12-24	4/11/2016 23:11	172.4	1.5	66.9	65.0	161.2	1.5	66.6	65.9	164.0	0.7	66.0	67.7	0	0.6
12-24	4/11/2016 23:12	175.2	1.5	66.9	65.2	162.6	1.5	66.6	66.3	164.0	0.7	66.0	68.1	0	0.6
12-24	4/11/2016 23:13	175.2	1.5	66.8	65.7	162.6	0.7	66.4	66.8	164.0	0.7	66.0	68.5	0	0.6
12-24	4/11/2016 23:14	175.2	1.5	66.7	65.7	161.2	1.5	66.4	66.1	164.0	0.7	65.9	68.1	0	0.6
12-24	4/11/2016 23:15	182.8	3.0	66.9	64.7	169.6	2.2	66.7	65.7	175.2	1.5	66.1	67.5	0	0.6
12-24	4/11/2016 23:16	323.2	2.2	67.2	64.4	175.2	1.5	66.9	65.7	175.2	1.5	66.3	67.4	0	0.6
12-24	4/11/2016 23:17	251.6	1.5	67.1	64.6	175.2	1.5	66.8	65.6	175.2	1.5	66.3	67.3	0	0.6
12-24	4/11/2016 23:18	180.0	3.0	67.2	63.7	168.2	3.0	67.0	64.6	169.6	2.2	66.5	66.5	0	0.6
12-24	4/11/2016 23:19	175.2	2.2	67.3	64.1	172.4	1.5	67.0	64.9	159.7	1.5	66.6	66.7	0	0.6
12-24	4/11/2016 23:20	175.2	1.5	67.2	63.8	172.4	1.5	66.9	65.0	159.7	0.7	66.5	66.6	0	0.6
12-24	4/11/2016 23:21	175.2	1.5	67.1	64.5	172.4	1.5	66.7	65.5	159.7	0.7	66.4	66.9	0	0.6
12-24	4/11/2016 23:22	175.2	1.5	66.9	64.8	172.4	1.5	66.6	65.9	159.7	0.7	66.2	67.3	0	0.6
12-24	4/11/2016 23:23	175.2	1.5	66.9	64.3	181.4	2.2	66.6	65.5	164.0	1.5	66.2	67.0	0	0.6
12-24	4/11/2016 23:24	220.7	2.2	66.9	65.0	191.2	2.2	66.6	66.2	175.2	1.5	66.2	67.8	0	0.6
12-24	4/11/2016 23:25	184.2	2.2	66.6	65.9	185.6	1.5	66.3	66.8	175.2	1.5	65.9	68.4	0	0.6
12-24	4/11/2016 23:26	195.4	2.2	66.4	66.4	181.4	1.5	66.1	67.2	175.2	1.5	65.8	68.6	0	0.6
12-24	4/11/2016 23:27	194.0	3.0	66.3	66.2	187.0	2.2	66.1	67.3	208.1	1.5	65.7	68.6	0	0.6
12-24	4/11/2016 23:28	187.0	2.2	66.4	66.1	164.0	1.5	66.1	66.8	192.6	0.7	65.7	68.5	0	0.6
12-24	4/11/2016 23:29	184.2	1.5	66.5	65.6	151.3	1.5	66.2	66.4	172.4	0.7	65.8	68.2	0	0.6
12-24	4/11/2016 23:30	161.2	2.2	66.6	65.2	149.9	2.2	66.5	66.1	140.1	1.5	66.0	67.7	0	0.6
12-24	4/11/2016 23:31	164.0	1.5	66.6	64.7	158.3	1.5	66.6	65.7	140.1	0.7	66.1	67.3	0	0.6
12-24	4/11/2016 23:32	180.0	2.2	67.0	64.2	168.2	2.2	66.7	65.3	151.3	1.5	66.2	66.8	0	0.6
12-24	4/11/2016 23:33	175.2	2.2	67.1	64.1	171.0	1.5	66.8	65.2	156.9	1.5	66.3	66.7	0	0.6
12-24	4/11/2016 23:34	173.8	1.5	66.9	64.4	175.2	1.5	66.6	65.4	158.3	0.7	66.2	66.8	0	0.6
12-24	4/11/2016 23:35	175.2	1.5	66.9	64.3	175.2	1.5	66.6	65.1	158.3	0.7	66.2	66.5	0	0.6
12-24	4/11/2016 23:36	282.5	2.2	66.6	64.8	187.0	1.5	66.4	65.8	166.8	1.5	66.1	67.2	0	0.6
12-24	4/11/2016 23:37	192.6	2.2	66.6	65.3	201.1	2.2	66.3	66.0	185.6	1.5	65.9	67.6	0	0.6
12-24	4/11/2016 23:38	201.1	2.2	66.5	65.6	202.5	1.5	66.2	66.4	205.3	1.5	65.9	67.8	0	0.6
12-24	4/11/2016 23:39	194.0	1.5	66.4	65.8	199.7	1.5	66.1	66.5	205.3	0.7	65.8	67.9	0	0.6
12-24	4/11/2016 23:40	188.4	1.5	66.3	65.8	180.0	1.5	66.1	66.5	202.5	0.7	65.7	67.8	0	0.6
12-24	4/11/2016 23:41	169.6	2.2	66.5	65.1	158.3	1.5	66.3	66.0	189.8	1.5	65.9	67.4	0	0.6
12-24	4/11/2016 23:42	162.6	1.5	66.6	65.3	154.1	1.5	66.3	65.7	175.2	0.7	65.9	67.4	0	0.6
12-24	4/11/2016 23:43	156.9	2.2	66.8	64.3	133.1	1.5	66.5	65.0	175.2	0.7	66.0	66.7	0	0.6
12-24	4/11/2016 23:44	141.5	1.5	66.9	63.8	128.9	1.5	66.7	64.4	172.4	0.7	66.2	66.2	0	0.6
12-24	4/11/2016 23:45	147.1	2.2	67.1	63.2	148.5	1.5	66.9	63.9	171.0	1.5	66.4	65.8	0	0.6
12-24	4/11/2016 23:46	149.9	1.5	67.2	63.3	151.3	0.7	66.9	64.0	169.6	0.7	66.5	65.9	0	0.6
12-24	4/11/2016 23:47	149.9	0.7	67.2	63.0	155.5	0.7	66.9	64.0	169.6	0.7	66.4	65.9	0	0.6
12-24	4/11/2016 23:48	158.3	1.5	67.0	63.9	184.2	1.5	66.7	64.7	172.4	0.7	66.3	66.6	0	0.6
12-24	4/11/2016 23:49	189.8	1.5	66.8	64.2	202.5	1.5	66.5	65.2	175.2	0.7	66.2	67.0	0	0.6
12-24	4/11/2016 23:50	194.0	1.5	66.7	64.4	203.9	1.5	66.3	65.4	175.2	0.7	66.0	67.2	0	0.6
12-24	4/11/2016 23:51	198.3	1.5	66.6	64.1	208.1	0.7	66.3	65.2	175.2	0.7	66.0	66.7	0	0.6
12-24	4/11/2016 23:52	199.7	0.7	66.7	64.1	209.5	0.7	66.4	65.1	175.2	0.7	66.0	66.9	0	0.6
12-24	4/11/2016 23:53	199.7	0.7	66.7	64.0	209.5	0.0	66.3	65.2	175.2	0.0	65.9	67.0	0	0.6
12-24	4/11/2016 23:54	222.1	1.5	66.7	64.0	234.8	1.5	66.3	65.2	210.9	0.7	65.9	67.0	0	0.6
12-24	4/11/2016 23:55	265.6	2.2	66.6	64.2	260.0	1.5	66.4	65.7	251.6	1.5	65.9	67.3	0	0.6
12-24	4/11/2016 23:56	279.7	2.2	66.7	64.1	278.3	2.2	66.4	65.5	275.5	1.5	65.8	67.1	0	0.6
12-24	4/11/2016 23:57	300.7	3.0	66.6	64.8	297.9	2.2	66.4	66.0	309.2	1.5	65.8	67.7	0	0.6
12-24	4/11/2016 23:58	306.4	3.0	66.6	65.3	302.1	3.0	66.3	66.1	309.2	2.2	65.8	67.8	0	0.6
12-24	4/11/2016 23:59	313.4	3.7	66.6	65.5	306.4	3.0	66.3	66.5	312.0	2.2	65.8	68.1	0	0.6
12-24	4/12/2016 0:00	317.6	3.0	66.6	65.6	307.8	3.0	66.3	66.6	316.2	2.2	65.8	68.2	0	0.6
12-24	4/12/2016 0:01	316.2	3.7	66.7	64.9	313.4	3.7	66.6	65.5	321.8	3.0	65.9	67.5	0	0.6
12-24	4/12/2016 0:02	323.2	3.7	66.9	64.2	310.6	3.7	66.7	65.2	323.2	2.2	66.1	67.1	0	0.6
12-24	4/12/2016 0:03	312.0	5.2	67.0	63.9	310.6	5.2	66.8	64.7	314.8	3.0	66.3	66.8	0	0.6
12-24	4/12/2016 0:04	316.2	6.0	67.2	63.9	310.6	5.2	66.9	64.7	310.6	3.7	66.4	66.6	0	0.6
12-24	4/12/2016 0:05	327.4	3.7	67.1	63.9	314.8	3.0	66.9	64.7	306.4	2.2	66.5	66.6	0	0.6
12-24	4/12/2016 0:06	333.0	3.0	67.1	64.0	326.0	2.2	66.9	64.9	355.5	1.5	66.5	66.5	0	0.6
12-24	4/12/2016 0:07	319.0	3.7	67.1	64.1	310.6	3.7	66.9	64.8	314.8	2.2	66.5	66.3	0	0.6
12-24	4/12/2016 0:08	326.0	3.7	67.0	64.4	324.6	3.0	66.8	65.0	328.6	2.2	66.5	66.4	0	0.6
12-24	4/12/2016 0:09	320.4	2.2	66.9	64.4	327.4	2.2	66.7	65.1	323.2	1.5	66.5	66.5	0	0.6
12-24	4/12/2016 0:10	321.8	1.5	66.9	64.6	342.9	1.5	66.7	65.5	344.3	0.7	66.4	66.6	0	0.6
12-24	4/12/2016 0:11	321.8	0.7	66.6	64.9	342.9	0.7	66.5	66.0	344.3	0.7	66.3	67.0	0	0.6
12-24	4/12/2016 0:12	334.4	1.5	66.7	65.4	347.1	1.5	66.4	66.4	1.1	0.7	66.2	67.4	0	0.6
12-24	4/12/2016 0:13	351.3	1.5	66.5	66.3	9.5	0.7	66.2	66.9	8.1	0.7	66.0	68.4	0	0.6
12-24	4/12/2016 0:14	352.7	1.5	66.4	66.1	16.5	2.2	66.1	67.2	12.3	1.5	65.9	68.7	0	0.6
12-24	4/12/2016 0:15	2.5	3.0	66.4	66.1	25.0	2.2	66.1	67.4	20.8	1.5	65.7	69.1	0	0.6
12-24	4/12/2016 0:16	10.9	1.5	66.3	66.6	23.6	1.5	66.0	67.6	22.2	0.7	65.5	69.5	0	0.6
12-24	4/12/2016 0:17	10.9	1.5	66.1	67.9	16.5	1.5	65.7	69.0	22.2	0.7	65.3	71.0	0	0.6
12-24	4/12/2016 0:18	8.1	1.5	65.7	69.1	6.7	1.5	65.3	70.4	22.2	0.7	64.9	72.3	0	0.6
12-24	4/12/2016 0:19	8.1	0.7	65.4	69.5	6.7	0.7	65.1	70.7	22.2	0.7	64.6	72.8	0	0.6
12-24	4/12/2016 0:20	8.1	0.0	65.1	70.5	6.7	0.7	64.8	71.9	22.2	0.0	64.3	73.4	0	0.6
12-24	4/12/2016 0:21	8.1	0.0	65.0	71.4	6.7	0.7	64.6	72.8	22.2	0.0	64.1	74.9	0	0.6
12-24	4/12/2016 0:22	8.1	0.7	64.9	71.1	6.7	0.7	64.5	73.0	22.2	0.7	64.0	75.0	0	0.6
12-24	4/12/2016 0:23	8.1	0.7	64.7	72.4	6.7	0.7	64.3	73.8	22.2	0.7	63.8	76.1	0	0.6
12-24	4/12/2016 0:24	8.1	0.0	64.6	73.3	6.7	0.7	64.1	74.9	22.2	0.7	63.6	77.0	0	0.6
12-24	4/12/2016 0:25	359.7	1.5	64.4	74.3	347.1	1.5	63.9	75.6	1.1	0.7	63.4	77.9	0	0.6
12-24	4/12/2016 0:26	355.5	1.5	64.3	74.5	349.9	1.5	63.8	76.5	354.1	0.7	63.3	78.4	0	0.6
12-24	4/12/2016 0:27	355.5	0.7	64.2	74.2	347.1	1.5	63.8	75.9	356.9	0.7	63.3	78.3	0	0.6
12-24	4/12/2016 0:28	356.9	2.2	64.2	74.1	2.5	2.2	63.8	75.8	358.3	1.5	63.3	78.4	0	0.6
12-24	4/12/2016 0:29	8.1	2.2	64.2	74.8	8.1	2.2	63.8	76.8	6.7	1.5	63.3	78.7	0	0.6
12-24	4/12/2016 0:30	5.3	1.5	63.9	76.4	358.3	1.5	63.5	78.0	6.7	0.7	63.1	79.6	0	0.6
12-24	4/12/2016 0:31	5.3	0.7	63.6	77.5	16.5	0.7	63.3	79.4	6.7	0.7	63.0	80.1	0	0.6
12-24	4/12/2016 0:32	89.6	2.2	63.5	78.5	123.2	2.2	63.1	79.3	61.1	1.5	62.9	80.5	0	0.6
12-24	4/12/2016 0:33	181.4	3.7	63.6	77.0	165.4	3.7	63.5	78.4	169.6	3.0	63.1	79.6	0	0.6
12-24	4/12/2016 0:34	175.2	3.0	63.7	78.2	168.2	2.2	63.4	78.4	173.8	1.5	63.1	80.4	0	0.6
12-24	4/12/2016 0:35	175.2	1.5	64.0	74.8	180.0	1.5	63.9	76.0	180.0	0.7	63.3	77.8	0	0.6
12-24	4/12/2016 0:36	175.2	0.0	64.2	74.9	168.2	0.7	63.9	76.0	171.0	0.7	63.4	78.4	0	0.6
12-24	4/12/2016 0:37	116.2	2.2	64.0	76.6	56.7	1.5	63.6	77.9	96.6	1.5	63.3	79.5	0	0.6
12-24	4/12/2016 0:38	106.4	1.5	63.7	76.9	358.3	1.5	63.4	77.9	95.2	0.7	63.1	79.0	0	0.6
12-24	4/12/2016 0:39	106.4	0.7	63.7	76.9	352.7	0.7	63.5	77.6	95.2	0.7	63.0	78.8	0	0.6
12-24	4/12/2016 0:40	106.4	0.7	63.9	76.1	352.7	1.5	63.6	77.1	95.2	0.7	63.0	78.6	0	0.6
12-24	4/12/2016 0:41	106.4	1.5	63.9	75.1	352.7	0.7	63.5	77.3	95.2	0.0	63.0	79.7	0	0.6
12-24	4/12/2016 0:42	106.4	1.5	63.7	78.0	351.3	0.7	63.2	79.8	95.2	0.7	62.8	81.6	0	0.6
12-24	4/12/2016 0:43	140.1	2.2	63.3	79.6	347.1	1.5	62.8	81.0	103.6	1.5	62.6	82.3	0	0.6
12-24	4/12/2016 0:44	154.1	0.7	63.0	80.1	341.5	0.7	62.6	80.9	116.2	0.7	62.4	82.0	0	0.6
12-24	4/12/2016 0:45	154.1	0.7	62.8	80.4	341.5	0.7	62.5	82.2	116.2	0.7	62.3	83.0	0	0.6
12-24	4/12/2016 0:46	127.5	0.7	62.8	81.0	341.5	0.7	62.5	82.4	110.6	0.7	62.2	83.7	0	0.6
12-24	4/12/2016 0:47	114.8	0.0	62.9	80.7	341.5	0.0	62.5	82.3	107.8	0.0	62.2	83.3	0	0.6
12-24	4/12/2016 0:48	114.8	0.0	62.8	81.3	341.5	0.0	62.4	82.7	107.8	0.0	62.1	83.0	0	0.6
12-24	4/12/2016 0:49	114.8	0.0	62.7	81.7	341.5	0.0	62.3	83.3	107.8	0.0	62.0	84.4	0	0.6
12-24	4/12/2016 0:50	114.8	0.0	62.7	82.4	341.5	0.0	62.2	83.8	107.8	0.0	61.9	84.8	0	0.6
12-24	4/12/2016 0:51	114.8	0.0	62.6	82.5	341.5	0.0	62.1	84.5	107.8	0.0	61.8	85.2	0	0.6
12-24	4/12/2016 0:52	114.8	0.7	62.3	84.2	341.5	0.0	61.8	85.5	107.8	0.0	61.7	86.7	0	0.6
12-24	4/12/2016 0:53	114.8	0.7	62.1	84.1	341.5	0.0	61.8	85.5	107.8	0.0	61.5	86.3	0	0.6
12-24	4/12/2016 0:54	114.8	0.0	62.0	84.4	341.5	0.0	61.7	85.3	107.8	0.0	61.5	86.3	0	0.6
12-24	4/12/2016 0:55	114.8	0.7	62.0	83.8	341.5	0.0	61.7	84.9	107.8	0.0	61.5	86.7	0	0.6
12-24	4/12/2016 0:56	114.8	0.0	62.0	83.5	341.5	0.0	61.7	84.6	107.8	0.0	61.5	86.3	0	0.6
12-24	4/12/2016 0:57	114.8	0.0	61.9	84.4	341.5	0.0	61.6	85.4	107.8	0.0	61.4	86.5	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
12-24	4/12/2016 0:58	114.8	0.7	61.8	85.1	341.5	0.0	61.5	86.0	107.8	0.0	61.4	87.0	0	0.6
12-24	4/12/2016 0:59	114.8	0.0	61.8	85.6	341.5	0.0	61.5	86.6	107.8	0.0	61.3	86.7	0	0.6
12-24	4/12/2016 1:00	114.8	0.0	61.7	85.7	341.5	0.0	61.5	86.7	107.8	0.0	61.2	87.4	0	0.6
12-24	4/12/2016 1:01	114.8	0.0	61.7	86.0	341.5	0.0	61.5	86.9	107.8	0.0	61.2	87.3	0	0.6
12-24	4/12/2016 1:02	114.8	0.0	61.7	85.7	341.5	0.0	61.4	86.4	107.8	0.0	61.2	87.1	0	0.6
12-24	4/12/2016 1:03	114.8	0.0	61.6	85.7	341.5	0.0	61.4	86.2	107.8	0.0	61.2	87.1	0	0.6
12-24	4/12/2016 1:04	114.8	0.0	61.6	85.3	341.5	0.0	61.4	85.9	107.8	0.0	61.2	87.0	0	0.6
12-24	4/12/2016 1:05	114.8	0.0	61.6	85.2	341.5	0.0	61.3	85.9	107.8	0.0	61.1	87.1	0	0.6
12-24	4/12/2016 1:06	114.8	0.0	61.5	85.3	341.5	0.0	61.3	85.9	107.8	0.0	61.1	87.1	0	0.6
12-24	4/12/2016 1:07	114.8	0.0	61.5	85.6	341.5	0.0	61.3	86.2	107.8	0.0	61.1	87.2	0	0.6
12-24	4/12/2016 1:08	114.8	0.0	61.5	85.7	341.5	0.0	61.2	86.2	107.8	0.0	61.1	87.3	0	0.6
12-24	4/12/2016 1:09	114.8	0.0	61.5	85.7	341.5	0.0	61.2	86.1	107.8	0.0	61.1	87.4	0	0.6
12-24	4/12/2016 1:10	114.8	0.0	61.4	85.7	341.5	0.0	61.2	86.3	107.8	0.0	61.0	87.5	0	0.6
12-24	4/12/2016 1:11	114.8	0.0	61.4	85.7	341.5	0.0	61.2	86.2	107.8	0.0	61.0	87.5	0	0.6
12-24	4/12/2016 1:12	114.8	0.0	61.4	85.8	341.5	0.0	61.2	86.3	107.8	0.0	61.0	87.6	0	0.6
12-24	4/12/2016 1:13	114.8	0.0	61.3	85.9	341.5	0.0	61.1	86.4	107.8	0.0	61.0	87.6	0	0.6
12-24	4/12/2016 1:14	114.8	0.0	61.3	85.8	341.5	0.0	61.1	86.4	107.8	0.0	61.0	87.7	0	0.6
12-24	4/12/2016 1:15	114.8	0.0	61.3	86.4	341.5	0.0	61.1	87.2	107.8	0.0	60.9	87.8	0	0.6
12-24	4/12/2016 1:16	114.8	0.0	61.3	86.4	341.5	0.0	61.1	87.1	107.8	0.0	60.9	88.0	0	0.6
12-24	4/12/2016 1:17	114.8	0.0	61.3	87.5	341.5	0.0	61.1	87.7	107.8	0.0	60.9	88.5	0	0.6
12-24	4/12/2016 1:18	114.8	0.0	61.3	87.1	341.5	0.0	61.1	87.7	107.8	0.0	60.9	89.5	0	0.6
12-24	4/12/2016 1:19	114.8	0.0	61.2	87.3	341.5	0.0	61.0	87.7	107.8	0.0	60.9	89.5	0	0.6
12-24	4/12/2016 1:20	114.8	0.0	61.2	87.4	341.5	0.0	61.0	88.1	107.8	0.0	60.9	90.5	0	0.6
12-24	4/12/2016 1:21	114.8	0.0	61.2	88.4	341.5	0.0	60.9	89.4	107.8	0.0	60.9	91.4	0	0.6
12-24	4/12/2016 1:22	114.8	0.7	61.1	88.7	341.5	0.0	60.9	89.7	107.8	0.0	60.8	91.7	0	0.6
12-24	4/12/2016 1:23	114.8	0.7	61.1	89.1	341.5	0.0	60.9	90.0	107.8	0.0	60.8	91.7	0	0.6
12-24	4/12/2016 1:24	114.8	0.7	61.0	89.5	341.5	0.0	60.8	90.5	107.8	0.0	60.7	91.9	0	0.6
12-24	4/12/2016 1:25	114.8	0.7	61.0	90.1	341.5	0.0	60.8	90.7	107.8	0.0	60.7	91.9	0	0.6
12-24	4/12/2016 1:26	114.8	0.7	61.0	90.1	341.5	0.0	60.8	90.6	107.8	0.0	60.7	91.9	0	0.6
12-24	4/12/2016 1:27	114.8	0.7	60.9	89.6	341.5	0.0	60.8	90.3	107.8	0.0	60.7	91.9	0	0.6
12-24	4/12/2016 1:28	114.8	0.7	60.9	89.4	341.5	0.0	60.8	90.0	107.8	0.0	60.6	91.7	0	0.6
12-24	4/12/2016 1:29	114.8	0.7	61.0	89.2	341.5	0.0	60.8	90.0	107.8	0.0	60.7	91.4	0	0.6
12-24	4/12/2016 1:30	114.8	0.7	61.1	88.9	341.5	0.0	60.9	89.7	107.8	0.0	60.7	91.3	0	0.6
12-24	4/12/2016 1:31	114.8	0.7	61.3	88.4	341.5	0.0	61.0	89.4	107.8	0.0	60.8	90.8	0	0.6
12-24	4/12/2016 1:32	114.8	0.7	61.4	88.3	341.5	0.7	61.1	89.2	107.8	0.0	60.8	90.5	0	0.6
12-24	4/12/2016 1:33	114.8	0.0	61.4	88.3	341.5	0.0	61.1	89.0	107.8	0.0	60.8	90.4	0	0.6
12-24	4/12/2016 1:34	114.8	0.0	61.4	88.2	341.5	0.0	61.0	89.0	107.8	0.0	60.8	90.9	0	0.6
12-24	4/12/2016 1:35	114.8	0.0	61.3	88.4	341.5	0.7	61.0	89.5	107.8	0.0	60.8	91.7	0	0.6
12-24	4/12/2016 1:36	114.8	1.5	61.3	88.9	341.5	0.7	61.0	90.1	107.8	0.7	60.8	92.2	0	0.6
12-24	4/12/2016 1:37	152.7	1.5	61.4	88.6	296.5	1.5	61.1	89.7	151.3	0.7	60.8	91.6	0	0.6
12-24	4/12/2016 1:38	208.1	1.5	61.5	87.4	269.9	1.5	61.2	88.8	187.0	0.7	61.0	90.6	0	0.6
12-24	4/12/2016 1:39	220.7	2.2	61.6	86.5	230.5	2.2	61.5	88.0	226.3	1.5	61.2	89.6	0	0.6
12-24	4/12/2016 1:40	224.9	1.5	61.9	86.8	219.3	1.5	61.5	88.2	233.3	0.7	61.3	89.7	0	0.6
12-24	4/12/2016 1:41	224.9	1.5	61.6	86.9	219.3	1.5	61.5	88.3	233.3	0.7	61.2	89.8	0	0.6
12-24	4/12/2016 1:42	226.3	1.5	61.6	86.6	220.7	1.5	61.5	88.0	233.3	0.7	61.2	89.6	0	0.6
12-24	4/12/2016 1:43	226.3	1.5	61.9	86.0	222.1	1.5	61.7	87.3	233.3	1.5	61.4	88.9	0	0.6
12-24	4/12/2016 1:44	236.2	1.5	62.1	85.6	229.1	1.5	61.8	87.0	241.8	0.7	61.5	88.7	0	0.6
12-24	4/12/2016 1:45	244.6	1.5	62.1	85.4	231.9	1.5	61.8	86.9	267.0	0.7	61.5	88.3	0	0.6
12-24	4/12/2016 1:46	243.2	1.5	62.1	85.5	233.3	0.7	61.7	86.9	267.0	0.7	61.5	88.6	0	0.6
12-24	4/12/2016 1:47	244.6	0.7	62.0	85.6	237.6	0.7	61.6	87.0	267.0	0.0	61.4	88.6	0	0.6
12-24	4/12/2016 1:48	244.6	0.0	61.9	85.6	237.6	0.0	61.5	86.7	267.0	0.0	61.3	88.8	0	0.6
12-24	4/12/2016 1:49	244.6	0.0	61.8	85.7	237.6	0.7	61.5	86.9	267.0	0.0	61.2	89.3	0	0.6
12-24	4/12/2016 1:50	244.6	0.7	61.6	86.9	237.6	0.7	61.3	88.2	267.0	0.0	61.0	89.8	0	0.6
12-24	4/12/2016 1:51	244.6	0.7	61.4	88.1	237.6	0.0	61.1	88.8	267.0	0.0	60.9	90.4	0	0.6
12-24	4/12/2016 1:52	244.6	0.7	61.1	88.3	237.6	0.7	60.9	89.0	267.0	0.0	60.7	91.4	0	0.6
12-24	4/12/2016 1:53	244.6	0.7	60.8	89.1	237.6	0.7	60.6	89.9	267.0	0.0	60.6	91.1	0	0.6
12-24	4/12/2016 1:54	244.6	0.7	60.8	90.6	237.6	0.7	60.5	91.3	267.0	0.0	60.4	91.1	0	0.6
12-24	4/12/2016 1:55	244.6	0.7	60.5	91.2	237.6	0.0	60.3	91.8	267.0	0.0	60.3	91.3	0	0.6
12-24	4/12/2016 1:56	244.6	0.7	60.3	91.7	237.6	0.7	60.2	92.4	267.0	0.0	60.3	91.3	0	0.6
12-24	4/12/2016 1:57	244.6	0.7	60.2	92.1	237.6	0.7	60.1	92.5	267.0	0.0	60.2	91.9	0	0.6
12-24	4/12/2016 1:58	244.6	1.5	60.2	91.8	237.6	0.7	60.0	92.2	267.0	0.7	60.1	93.2	0	0.6
12-24	4/12/2016 1:59	244.6	0.7	60.1	91.6	237.6	0.7	60.0	92.1	267.0	0.0	60.0	93.2	0	0.6
12-24	4/12/2016 2:00	244.6	0.7	60.0	91.6	237.6	0.0	60.0	92.1	267.0	0.0	60.0	93.1	0	0.6
12-24	4/12/2016 2:01	244.6	0.0	60.0	92.6	237.6	0.0	59.9	93.1	267.0	0.0	60.0	93.1	0	0.6
12-24	4/12/2016 2:02	244.6	0.0	60.0	92.9	237.6	0.0	59.9	93.1	267.0	0.0	59.9	93.0	0	0.6
12-24	4/12/2016 2:03	244.6	0.0	60.0	92.7	237.6	0.0	59.9	92.9	267.0	0.0	59.9	92.9	0	0.6
12-24	4/12/2016 2:04	212.3	0.7	60.0	93.1	208.1	0.0	59.9	93.3	267.0	0.0	59.9	93.3	0	0.6
12-24	4/12/2016 2:05	192.6	0.0	60.0	92.9	198.3	0.0	59.9	93.0	267.0	0.0	59.9	93.1	0	0.6
12-24	4/12/2016 2:06	192.6	0.7	60.0	92.7	198.3	0.7	59.8	92.9	267.0	0.0	59.8	93.9	0	0.6
12-24	4/12/2016 2:07	192.6	0.7	59.9	92.7	198.3	0.7	59.8	92.8	267.0	0.0	59.8	94.4	0	0.6
12-24	4/12/2016 2:08	191.2	1.5	59.9	92.7	194.0	0.7	59.7	92.9	267.0	0.0	59.7	94.7	0	0.6
12-24	4/12/2016 2:09	185.6	0.7	59.8	92.7	188.4	0.7	59.7	93.1	267.0	0.0	59.7	94.8	0	0.6
12-24	4/12/2016 2:10	185.6	0.7	59.8	92.8	188.4	0.7	59.7	93.1	267.0	0.0	59.7	95.0	0	0.6
12-24	4/12/2016 2:11	185.6	0.7	59.8	92.9	188.4	0.7	59.7	93.2	267.0	0.0	59.7	95.2	0	0.6
12-24	4/12/2016 2:12	185.6	0.7	59.8	93.7	188.4	0.7	59.7	93.9	267.0	0.0	59.7	95.5	0	0.6
12-24	4/12/2016 2:13	185.6	0.7	59.8	93.9	188.4	0.7	59.7	94.2	267.0	0.0	59.7	95.4	0	0.6
12-24	4/12/2016 2:14	324.6	1.5	59.9	94.3	154.1	1.5	59.8	94.7	326.0	1.5	59.7	95.5	0	0.6
12-24	4/12/2016 2:15	121.8	1.5	60.0	94.2	107.8	1.5	59.9	94.7	354.1	0.7	59.8	95.4	0	0.6
12-24	4/12/2016 2:16	112.0	1.5	60.1	93.9	105.0	1.5	60.0	94.5	354.1	0.7	59.9	95.2	0	0.6
12-24	4/12/2016 2:17	106.4	0.7	60.2	93.6	103.6	0.7	60.0	94.1	354.1	0.0	59.9	95.1	0	0.6
12-24	4/12/2016 2:18	106.4	0.0	60.3	93.4	103.6	0.0	60.0	94.1	354.1	0.0	59.9	95.0	0	0.6
12-24	4/12/2016 2:19	106.4	0.0	60.2	93.9	103.6	0.0	60.0	94.5	354.1	0.0	59.8	95.2	0	0.6
12-24	4/12/2016 2:20	106.4	0.0	60.1	94.2	103.6	0.0	59.9	94.7	354.1	0.0	59.8	95.4	0	0.6
12-24	4/12/2016 2:21	106.4	0.7	60.0	94.4	103.6	0.0	59.8	94.9	354.1	0.0	59.7	95.4	0	0.6
12-24	4/12/2016 2:22	106.4	1.5	59.9	94.7	103.6	0.0	59.8	95.0	354.1	0.7	59.7	95.7	0	0.6
12-24	4/12/2016 2:23	106.4	1.5	59.9	94.7	99.4	1.5	59.7	95.1	354.1	0.7	59.7	95.8	0	0.6
12-24	4/12/2016 2:24	106.4	1.5	59.9	94.8	98.0	0.7	59.7	95.2	355.5	0.7	59.7	95.9	0	0.6
12-24	4/12/2016 2:25	106.4	0.7	59.8	94.9	98.0	0.7	59.7	95.2	355.5	0.0	59.7	96.0	0	0.6
12-24	4/12/2016 2:26	106.4	0.7	59.8	95.0	98.0	0.0	59.7	95.3	355.5	0.0	59.6	95.9	0	0.6
12-24	4/12/2016 2:27	106.4	0.0	59.7	95.0	98.0	0.0	59.7	95.1	355.5	0.0	59.6	95.8	0	0.6
12-24	4/12/2016 2:28	106.4	0.0	59.7	94.7	98.0	0.0	59.6	94.9	355.5	0.0	59.6	95.7	0	0.6
12-24	4/12/2016 2:29	106.4	0.0	59.7	95.3	98.0	0.7	59.6	95.4	355.5	0.0	59.6	96.0	0	0.6
12-24	4/12/2016 2:30	106.4	0.7	59.7	95.4	98.0	0.7	59.6	95.7	355.5	0.0	59.5	96.1	0	0.6
12-24	4/12/2016 2:31	106.4	0.7	59.7	95.5	98.0	0.7	59.5	95.9	355.5	0.0	59.5	96.2	0	0.6
12-24	4/12/2016 2:32	106.4	0.7	59.7	95.6	98.0	0.0	59.5	96.0	355.5	0.0	59.5	96.2	0	0.6
12-24	4/12/2016 2:33	106.4	0.0	59.6	95.4	98.0	0.0	59.5	95.7	355.5	0.0	59.4	96.0	0	0.6
12-24	4/12/2016 2:34	106.4	0.0	59.6	95.3	98.0	0.0	59.4	95.5	355.5	0.0	59.4	96.2	0	0.6
12-24	4/12/2016 2:35	106.4	0.0	59.6	95.1	98.0	0.0	59.4	95.4	355.5	0.0	59.4	96.0	0	0.6
12-24	4/12/2016 2:36	106.4	0.0	59.6	95.0	98.0	0.0	59.4	95.3	355.5	0.0	59.4	95.9	0	0.6
12-24	4/12/2016 2:37	106.4	0.0	59.6	95.1	98.0	0.0	59.4	95.3	355.5	0.0	59.4	95.8	0	0.6
12-24	4/12/2016 2:38	106.4	0.0	59.6	95.4	98.0	0.0	59.4	95.7	355.5	0.0	59.4	96.1	0	0.6
12-24	4/12/2016 2:39	106.4	1.5	59.6	95.9	98.0	0.7	59.4	96.2	355.5	0.0	59.4	96.5	0	0.6
12-24	4/12/2016 2:40	106.4	1.5	59.6	96.0	98.0	0.7	59.4	96.4	355.5	0.7	59.4	96.7	0	0.6
12-24	4/12/2016 2:41	106.4	1.5	59.7	96.3	98.0	1.5	59.5	96.6	355.5	0.7	59.5	96.9	0	0.6
12-24	4/12/2016 2:42	106.4	1.5	59.7	96.4	98.0	1.5	59.6	96.7	355.5	0.7	59.5	97.1	0	0.6
12-24	4/12/2016 2:43	106.4	2.2	59.7	96.4	98.0	1.5	59.6	96.8	355.5	0.7	59.6	97.2	0	0.6
12-24	4/12/2016 2:44	106.4	2.2	59.7	96.5	96.6	1.5	59.6	96.9	355.5	0.7	59.6	97.2	0	0.6
12-24	4/12/2016 2:45	96.6	2.2	59.7	96.5	83.9	1.5	59.6	96.9	355.5	0.7	59.6	97.2	0	0.6
12-24	4/12/2016 2:46	95.2	2.2	59.7	96.5	69.9	1.5	59.6	97.0	6.7	0.7	59.6	97.3	0	0.6
12-24	4/12/2016 2:47	92.4	1.5	59.8	96.5	60.1	1.5	59.7	96.9	12.3	0.7	59.7	97.4	0	0.6
12-24	4/12/2016 2:48	92.4	1.5	59.8	96.5	60.1	1.5	59.7	97.0	12.3	0.7	59.7	97.4	0	0.6
12-24	4/12/2016 2:49	92.4	1.5	59.8	96.6	60.1	1.5	59.7	96.9	12.3	0.7	59.7	97.5	0	0.6
12-24	4/12/2016 2:50	92.4	1.5	59.8	96.6	60.1	1.5	59.7	96.9	12.3	0.7	59.7	97.5	0	0.6
12-24	4/12/2016 2:51	92.4	1.5	59.8	96.7	60.1	1.5	59.7	97.0	12.3	0.7	59.7	97.5	0	0.6
12-24	4/12/2016 2:52	92.4	0.7	59.8	96.6	60.1	0.7	59.7	96.9	12.3	0.0	59.7	97.5	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
12-24	4/12/2016 2:53	92.4	0.7	59.8	96.6	60.1	0.7	59.7	97.0	12.3	0.0	59.7	97.5	0	0.6
12-24	4/12/2016 2:54	92.4	0.0	59.8	96.6	60.1	0.0	59.7	96.9	12.3	0.0	59.7	97.3	0	0.6
12-24	4/12/2016 2:55	92.4	0.0	59.8	96.7	60.1	0.0	59.7	97.0	12.3	0.0	59.7	97.3	0	0.6
12-24	4/12/2016 2:56	92.4	0.0	59.8	96.7	60.1	0.0	59.7	97.0	12.3	0.0	59.6	97.2	0	0.6
12-24	4/12/2016 2:57	92.4	0.0	59.8	96.7	60.1	0.0	59.7	97.1	12.3	0.0	59.6	97.2	0	0.6
12-24	4/12/2016 2:58	92.4	0.0	59.8	96.7	60.1	0.0	59.6	97.1	12.3	0.0	59.6	97.0	0	0.6
12-24	4/12/2016 2:59	92.4	0.0	59.7	96.7	60.1	0.0	59.6	97.0	12.3	0.0	59.6	97.0	0	0.6
12-24	4/12/2016 3:00	92.4	0.0	59.7	96.5	60.1	0.0	59.6	97.0	12.3	0.0	59.6	96.8	0	0.6
12-24	4/12/2016 3:01	92.4	0.0	59.8	96.7	60.1	0.0	59.7	97.1	12.3	0.0	59.6	96.7	0	0.6
12-24	4/12/2016 3:02	92.4	0.7	59.9	96.9	60.1	0.0	59.7	97.2	12.3	0.0	59.6	96.7	0	0.6
12-24	4/12/2016 3:03	92.4	0.7	59.9	97.0	60.1	0.0	59.8	97.2	12.3	0.0	59.7	96.8	0	0.6
12-24	4/12/2016 3:04	92.4	0.0	59.9	96.9	60.1	0.0	59.7	97.2	12.3	0.0	59.7	96.9	0	0.6
12-24	4/12/2016 3:05	92.4	0.0	59.9	96.7	60.1	0.0	59.7	97.2	12.3	0.0	59.7	96.9	0	0.6
12-24	4/12/2016 3:06	92.4	0.0	59.8	96.6	60.1	0.0	59.7	97.0	12.3	0.0	59.7	96.8	0	0.6
12-24	4/12/2016 3:07	92.4	0.0	59.8	96.4	60.1	0.0	59.7	96.9	12.3	0.0	59.7	96.7	0	0.6
12-24	4/12/2016 3:08	92.4	0.0	59.8	96.4	60.1	0.0	59.7	96.7	12.3	0.0	59.6	96.7	0	0.6
12-24	4/12/2016 3:09	92.4	0.0	59.8	96.2	60.1	0.0	59.7	96.7	12.3	0.0	59.6	96.7	0	0.6
12-24	4/12/2016 3:10	92.4	0.7	59.8	96.2	60.1	0.0	59.7	96.6	12.3	0.0	59.7	97.0	0	0.6
12-24	4/12/2016 3:11	92.4	0.7	59.8	96.2	60.1	0.0	59.7	96.5	12.3	0.0	59.7	97.2	0	0.6
12-24	4/12/2016 3:12	92.4	0.7	59.8	96.2	60.1	0.0	59.7	96.7	12.3	0.0	59.7	97.3	0	0.6
12-24	4/12/2016 3:13	92.4	0.7	59.8	96.5	60.1	0.0	59.7	97.0	12.3	0.0	59.7	97.5	0	0.6
12-24	4/12/2016 3:14	92.4	0.7	59.8	96.7	60.1	0.0	59.7	97.1	12.3	0.0	59.7	97.5	0	0.6
12-24	4/12/2016 3:15	92.4	0.7	59.8	97.0	60.1	0.0	59.7	97.2	12.3	0.0	59.7	97.5	0	0.6
12-24	4/12/2016 3:16	92.4	0.7	59.8	97.0	60.1	0.0	59.7	97.3	12.3	0.0	59.7	97.5	0	0.6
12-24	4/12/2016 3:17	92.4	0.7	59.8	97.0	60.1	0.0	59.7	97.3	12.3	0.0	59.7	97.7	0	0.6
12-24	4/12/2016 3:18	92.4	0.7	59.8	97.0	60.1	0.0	59.7	97.2	12.3	0.0	59.7	97.7	0	0.6
12-24	4/12/2016 3:19	92.4	0.7	59.9	97.0	60.1	0.0	59.7	97.2	12.3	0.0	59.7	97.7	0	0.6
12-24	4/12/2016 3:20	92.4	0.7	59.9	97.0	60.1	0.0	59.8	97.4	12.3	0.0	59.7	97.9	0	0.6
12-24	4/12/2016 3:21	92.4	0.7	59.9	97.2	60.1	0.0	59.8	97.5	12.3	0.0	59.7	97.9	0	0.6
12-24	4/12/2016 3:22	92.4	0.7	59.9	97.2	60.1	0.0	59.7	97.5	12.3	0.0	59.7	97.9	0	0.6
12-24	4/12/2016 3:23	92.4	0.7	59.9	97.2	60.1	0.0	59.7	97.6	12.3	0.0	59.7	98.0	0	0.6
12-24	4/12/2016 3:24	92.4	0.7	59.9	97.2	60.1	0.0	59.7	97.6	12.3	0.0	59.8	97.9	0	0.6
12-24	4/12/2016 3:25	92.4	0.0	59.9	97.2	60.1	0.0	59.7	97.5	12.3	0.0	59.8	97.8	0	0.6
12-24	4/12/2016 3:26	92.4	0.0	59.9	97.0	60.1	0.0	59.7	97.4	12.3	0.0	59.8	97.7	0	0.6
12-24	4/12/2016 3:27	92.4	0.0	59.9	96.9	60.1	0.0	59.7	97.3	12.3	0.0	59.7	97.7	0	0.6
12-24	4/12/2016 3:28	92.4	0.0	59.9	96.8	60.1	0.0	59.8	97.3	12.3	0.0	59.7	97.6	0	0.6
12-24	4/12/2016 3:29	92.4	0.0	59.9	96.9	60.1	0.0	59.8	97.3	12.3	0.0	59.8	97.7	0	0.6
12-24	4/12/2016 3:30	92.4	0.7	59.9	97.1	60.1	0.0	59.8	97.5	12.3	0.0	59.8	97.9	0	0.6
12-24	4/12/2016 3:31	96.6	1.5	59.9	97.2	85.3	0.0	59.8	97.5	12.3	0.7	59.8	98.0	0	0.6
12-24	4/12/2016 3:32	110.6	1.5	59.9	97.2	116.2	1.5	59.7	97.6	12.3	0.7	59.7	98.0	0	0.6
12-24	4/12/2016 3:33	110.6	1.5	59.8	97.3	116.2	0.7	59.7	97.7	12.3	0.7	59.7	98.0	0	0.6
12-24	4/12/2016 3:34	110.6	0.7	59.8	97.3	116.2	0.7	59.7	97.7	12.3	0.7	59.7	98.0	0	0.6
12-24	4/12/2016 3:35	110.6	0.7	59.7	97.3	116.2	0.7	59.7	97.7	12.3	0.0	59.7	98.0	0	0.6
12-24	4/12/2016 3:36	110.6	0.7	59.7	97.2	116.2	0.0	59.6	97.6	12.3	0.0	59.7	97.9	0	0.6
12-24	4/12/2016 3:37	110.6	0.0	59.7	97.2	116.2	0.0	59.6	97.6	12.3	0.0	59.7	97.9	0	0.6
12-24	4/12/2016 3:38	110.6	0.0	59.7	97.3	116.2	0.0	59.6	97.7	12.3	0.0	59.7	97.8	0	0.6
12-24	4/12/2016 3:39	110.6	0.0	59.7	97.4	116.2	0.0	59.6	97.7	12.3	0.0	59.6	97.8	0	0.6
12-24	4/12/2016 3:40	110.6	0.0	59.7	97.5	116.2	0.0	59.6	97.7	12.3	0.0	59.6	97.7	0	0.6
12-24	4/12/2016 3:41	110.6	0.0	59.8	97.5	116.2	0.0	59.7	97.8	12.3	0.0	59.7	97.7	0	0.6
12-24	4/12/2016 3:42	110.6	0.0	59.8	97.5	116.2	0.0	59.7	97.7	12.3	0.0	59.7	97.6	0	0.6
12-24	4/12/2016 3:43	110.6	0.0	59.8	97.3	116.2	0.0	59.7	97.7	12.3	0.0	59.7	97.7	0	0.6
12-24	4/12/2016 3:44	110.6	0.7	59.8	97.3	116.2	0.7	59.7	97.5	12.3	0.0	59.7	97.9	0	0.6
12-24	4/12/2016 3:45	110.6	0.0	59.8	97.2	116.2	0.0	59.7	97.5	12.3	0.0	59.7	97.9	0	0.6
12-24	4/12/2016 3:46	110.6	0.0	59.9	97.5	116.2	0.0	59.7	97.7	12.3	0.0	59.7	98.0	0	0.6
12-24	4/12/2016 3:47	110.6	0.7	59.8	97.6	116.2	0.7	59.7	97.9	12.3	0.0	59.7	98.1	0	0.6
12-24	4/12/2016 3:48	110.6	0.7	59.8	97.8	116.2	0.7	59.7	98.0	12.3	0.0	59.7	98.2	0	0.6
12-24	4/12/2016 3:49	110.6	0.7	59.8	97.7	116.2	0.7	59.7	98.1	12.3	0.7	59.7	98.3	0	0.6
12-24	4/12/2016 3:50	95.2	1.5	59.8	97.9	103.6	1.5	59.7	98.2	12.3	0.7	59.7	98.4	0	0.6
12-24	4/12/2016 3:51	50.2	2.2	59.8	98.0	58.7	2.2	59.7	98.2	12.3	1.5	59.7	98.5	0	0.6
12-24	4/12/2016 3:52	47.4	1.5	59.8	98.0	53.1	1.5	59.7	98.3	12.3	0.7	59.7	98.5	0	0.6
12-24	4/12/2016 3:53	47.4	0.7	59.8	97.9	53.1	0.7	59.7	98.2	12.3	0.0	59.8	98.5	0	0.6
12-24	4/12/2016 3:54	57.3	1.5	59.9	98.0	102.2	1.5	59.8	98.3	12.3	0.7	59.8	98.5	0	0.6
12-24	4/12/2016 3:55	175.2	2.2	60.0	98.1	188.4	2.2	59.8	98.3	286.7	1.5	59.8	98.5	0	0.6
12-24	4/12/2016 3:56	198.3	1.5	59.9	98.0	198.3	1.5	59.8	98.3	210.9	0.7	59.8	98.5	0	0.6
12-24	4/12/2016 3:57	198.3	0.7	59.9	98.0	198.3	0.7	59.8	98.2	210.9	0.0	59.8	98.5	0	0.6
12-24	4/12/2016 3:58	198.3	0.0	59.9	97.9	198.3	0.0	59.7	98.2	210.9	0.0	59.8	98.5	0	0.6
12-24	4/12/2016 3:59	198.3	0.0	59.9	98.0	198.3	0.0	59.7	98.2	210.9	0.0	59.8	98.4	0	0.6
12-24	4/12/2016 4:00	198.3	0.0	59.8	98.0	198.3	0.0	59.7	98.3	210.9	0.7	59.7	98.5	0	0.6
12-24	4/12/2016 4:01	198.3	0.7	59.8	98.0	198.3	0.0	59.7	98.3	210.9	0.7	59.7	98.5	0	0.6
12-24	4/12/2016 4:02	199.7	0.7	59.8	98.1	198.3	0.0	59.7	98.4	210.9	0.0	59.7	98.4	0	0.6
12-24	4/12/2016 4:03	199.7	1.5	59.8	98.1	198.3	0.0	59.7	98.5	210.9	0.7	59.7	98.6	0	0.6
12-24	4/12/2016 4:04	199.7	1.5	59.8	98.2	198.3	0.0	59.7	98.5	210.9	0.0	59.7	98.7	0	0.6
12-24	4/12/2016 4:05	199.7	0.0	59.8	98.3	198.3	0.0	59.7	98.5	210.9	0.0	59.7	98.7	0	0.6
12-24	4/12/2016 4:06	201.1	0.0	59.8	98.2	198.3	0.0	59.7	98.5	210.9	0.0	59.7	98.6	0	0.6
12-24	4/12/2016 4:07	220.7	0.0	59.8	98.2	201.1	0.0	59.7	98.5	210.9	0.0	59.7	98.5	0	0.6
12-24	4/12/2016 4:08	237.6	0.0	59.8	98.2	201.1	0.0	59.7	98.5	210.9	0.0	59.7	98.6	0	0.6
12-24	4/12/2016 4:09	300.7	0.7	59.8	98.2	201.1	0.0	59.7	98.6	210.9	0.7	59.7	98.7	0	0.6
12-24	4/12/2016 4:10	347.1	2.2	59.8	98.3	173.8	1.5	59.7	98.5	230.5	1.5	59.7	98.8	0	0.6
12-24	4/12/2016 4:11	23.6	3.0	59.8	98.3	27.8	2.2	59.7	98.6	36.2	1.5	59.7	98.7	0	0.6
12-24	4/12/2016 4:12	34.6	3.0	59.8	98.2	36.2	3.0	59.7	98.6	46.0	2.2	59.7	98.6	0	0.6
12-24	4/12/2016 4:13	41.6	3.0	59.8	98.1	39.0	2.2	59.7	98.5	51.6	1.5	59.7	98.8	0	0.6
12-24	4/12/2016 4:14	40.4	2.2	59.9	98.0	40.4	2.2	59.7	98.5	53.1	1.5	59.7	98.6	0	0.6
12-24	4/12/2016 4:15	48.6	3.0	60.0	97.8	46.0	2.2	59.8	98.3	58.7	1.5	59.8	98.5	0	0.6
12-24	4/12/2016 4:16	44.6	1.5	60.0	97.5	39.0	1.5	59.9	98.1	58.7	0.7	59.8	98.3	0	0.6
12-24	4/12/2016 4:17	44.6	1.5	60.0	97.2	41.8	1.5	59.9	97.9	58.7	1.5	59.9	98.1	0	0.6
12-24	4/12/2016 4:18	46.0	2.2	60.1	97.1	54.5	1.5	60.0	97.7	58.7	1.5	59.9	98.0	0	0.6
12-24	4/12/2016 4:19	46.0	1.5	60.1	97.1	44.6	1.5	60.0	97.5	58.7	0.7	59.9	97.9	0	0.6
12-24	4/12/2016 4:20	46.0	0.7	60.1	97.1	44.6	0.7	60.0	97.5	58.7	0.7	59.9	97.9	0	0.6
12-24	4/12/2016 4:21	46.0	0.7	60.1	97.0	44.6	0.7	60.0	97.5	58.7	0.0	59.9	98.0	0	0.6
12-24	4/12/2016 4:22	46.0	1.5	60.0	97.2	43.2	0.7	59.9	97.7	58.7	0.0	59.8	98.0	0	0.6
12-24	4/12/2016 4:23	44.6	0.7	60.0	97.0	15.1	0.7	59.9	97.5	58.7	0.0	59.8	98.0	0	0.6
12-24	4/12/2016 4:24	46.0	1.5	60.0	97.0	58.7	1.5	59.9	97.5	60.1	0.7	59.9	98.0	0	0.6
12-24	4/12/2016 4:25	53.1	1.5	60.0	97.0	60.1	0.7	59.9	97.5	62.9	0.7	59.9	98.0	0	0.6
12-24	4/12/2016 4:26	53.1	1.5	60.0	97.0	60.1	1.5	59.9	97.5	62.9	0.7	59.8	98.0	0	0.6
12-24	4/12/2016 4:27	51.6	2.2	60.0	97.0	53.1	2.2	59.9	97.5	61.5	1.5	59.8	98.1	0	0.6
12-24	4/12/2016 4:28	47.4	3.0	60.0	97.2	43.2	3.0	59.9	97.6	58.7	2.2	59.8	98.1	0	0.6
12-24	4/12/2016 4:29	37.6	1.5	60.0	97.2	22.2	1.5	59.9	97.6	47.4	0.7	59.9	98.1	0	0.6
12-24	4/12/2016 4:30	39.0	1.5	60.0	97.2	30.6	1.5	59.9	97.6	43.2	1.5	59.9	98.0	0	0.6
12-24	4/12/2016 4:31	32.0	1.5	60.0	97.2	20.8	1.5	59.9	97.6	26.4	1.5	59.9	98.1	0	0.6
12-24	4/12/2016 4:32	37.6	2.2	60.1	97.2	36.2	2.2	60.0	97.7	51.6	2.2	60.0	98.1	0	0.6
12-24	4/12/2016 4:33	41.6	0.7	60.1	97.3	33.4	0.7	60.0	97.5	58.7	0.7	60.0	98.1	0	0.6
12-24	4/12/2016 4:34	53.1	1.5	60.1	97.3	54.5	1.5	60.0	97.6	58.7	0.7	60.0	98.0	0	0.6
12-24	4/12/2016 4:35	43.2	2.2	60.2	97.3	33.4	1.5	60.0	97.5	58.7	0.7	60.0	98.0	0	0.6
12-24	4/12/2016 4:36	36.2	1.5	60.1	97.3	48.8	1.5	60.0	97.6	58.7	0.7	60.0	98.1	0	0.6
12-24	4/12/2016 4:37	39.0	2.2	60.2	97.2	36.2	2.2	60.0	97.7	58.7	1.5	60.0	98.2	0	0.6
12-24	4/12/2016 4:38	41.6	1.5	60.2	97.3	37.6	1.5	60.0	97.6	58.7	0.7	60.0	98.2	0	0.6
12-24	4/12/2016 4:39	62.9	2.2	60.2	97.2	65.7	2.2	60.0	97.7	74.1	1.5	60.0	98.2	0	0.6
12-24	4/12/2016 4:40	46.0	3.0	60.2	97.3	46.0	2.2	60.1	97.8	46.0	1.5	60.0	98.2	0	0.6
12-24	4/12/2016 4:41	43.2	2.2	60.2	97.4	48.8	1.5	60.1	97.7	46.0	1.5	60.1	98.1	0	0.6
12-24	4/12/2016 4:42	50.2	2.2	60.2	97.3	44.6	1.5	60.1	97.6	51.6	1.5	60.0	98.2	0	0.6
12-24	4/12/2016 4:43	48.6	0.7	60.2	97.2	40.4	0.7	60.0	97.7	51.6	0.0	60.0	98.1	0	0.6
12-24	4/12/2016 4:44	50.2	1.5	60.1	97.3	61.5	1.5	60.0	97.6	51.6	0.7	60.0	98.2	0	0.6
12-24	4/12/2016 4:45	50.2	1.5	60.2	97.2	72.7	1.5	60.0	97.5	51.6	0.7	60.0	98.1	0	0.6
12-24	4/12/2016 4:46	78.3	1.5	60.2	97.3	103.6	1.5	60.0	97.6	79.7	0.7	60.0	98.0	0	0.6
12-24	4/12/2016 4:47	98.0	0.7	60.1	97.3	107.8	0.7	60.0	97.6	92.4	0.7	60.0	98.1	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
12-24	4/12/2016 4:48	98.0	0.7	60.1	97.2	107.8	0.7	60.0	97.7	92.4	0.0	60.0	98.1	0	0.6
12-24	4/12/2016 4:49	98.0	0.0	60.1	97.2	107.8	0.7	60.0	97.6	92.4	0.0	60.0	98.2	0	0.6
12-24	4/12/2016 4:50	98.0	1.5	60.1	97.3	107.8	1.5	60.0	97.5	92.4	0.7	60.0	98.2	0	0.6
12-24	4/12/2016 4:51	98.0	1.5	60.1	97.2	107.8	1.5	60.0	97.7	92.4	0.7	59.9	98.1	0	0.6
12-24	4/12/2016 4:52	98.0	0.7	60.0	97.2	107.8	0.0	59.9	97.6	92.4	0.0	59.9	98.0	0	0.6
12-24	4/12/2016 4:53	98.0	0.0	60.0	97.2	107.8	0.0	59.9	97.5	92.4	0.0	59.9	98.0	0	0.6
12-24	4/12/2016 4:54	98.0	0.0	60.0	97.2	107.8	0.0	59.8	97.7	92.4	0.0	59.8	98.0	0	0.6
12-24	4/12/2016 4:55	98.0	0.7	60.0	97.7	112.0	0.7	59.8	98.0	92.4	0.7	59.8	98.2	0	0.6
12-24	4/12/2016 4:56	98.0	1.5	59.9	97.9	119.0	1.5	59.8	98.2	92.4	0.7	59.8	98.4	0	0.6
12-24	4/12/2016 4:57	98.0	1.5	59.9	98.0	123.2	0.7	59.8	98.2	92.4	0.0	59.8	98.3	0	0.6
12-24	4/12/2016 4:58	98.0	0.7	59.9	98.0	123.2	0.7	59.8	98.3	92.4	0.0	59.8	98.3	0	0.6
12-24	4/12/2016 4:59	98.0	0.0	59.9	98.0	123.2	0.0	59.8	98.3	92.4	0.0	59.8	98.2	0	0.6
12-24	4/12/2016 5:00	98.0	0.0	59.9	98.0	123.2	0.0	59.7	98.2	92.4	0.0	59.8	98.2	0	0.6
12-24	4/12/2016 5:01	98.0	0.0	59.9	98.0	123.2	0.0	59.7	98.3	92.4	0.0	59.7	98.2	0	0.6
12-24	4/12/2016 5:02	98.0	0.0	59.9	98.0	123.2	0.0	59.7	98.4	92.4	0.0	59.8	98.3	0	0.6
12-24	4/12/2016 5:03	98.0	0.0	59.9	98.2	123.2	0.7	59.8	98.5	92.4	0.0	59.8	98.4	0	0.6
12-24	4/12/2016 5:04	98.0	0.7	59.9	98.2	123.2	0.7	59.8	98.5	92.4	0.7	59.8	98.4	0	0.6
12-24	4/12/2016 5:05	98.0	0.7	59.9	98.3	123.2	0.7	59.8	98.7	92.4	0.7	59.8	98.5	0	0.6
12-24	4/12/2016 5:06	98.0	1.5	59.9	98.5	128.9	1.5	59.8	98.8	92.4	0.7	59.8	98.6	0	0.6
12-24	4/12/2016 5:07	98.0	1.5	59.9	98.5	145.7	1.5	59.8	98.7	95.2	0.7	59.8	98.8	0	0.6
12-24	4/12/2016 5:08	98.0	0.7	59.9	98.5	149.9	0.7	59.8	98.7	99.4	0.7	59.8	98.8	0	0.6
12-24	4/12/2016 5:09	98.0	0.7	59.9	98.5	149.9	0.7	59.8	98.7	99.4	0.0	59.8	98.6	0	0.6
12-24	4/12/2016 5:10	98.0	0.7	59.9	98.4	149.9	0.7	59.8	98.8	99.4	0.0	59.8	98.7	0	0.6
12-24	4/12/2016 5:11	98.0	0.0	59.9	98.4	149.9	0.0	59.8	98.8	99.4	0.0	59.8	98.7	0	0.6
12-24	4/12/2016 5:12	68.5	1.5	59.9	98.4	165.4	1.5	59.8	98.8	76.9	0.7	59.8	98.6	0	0.6
12-24	4/12/2016 5:13	326.0	2.2	59.9	98.5	300.7	1.5	59.8	98.7	349.9	0.7	59.8	98.6	0	0.6
12-24	4/12/2016 5:14	319.0	0.7	59.9	98.5	300.7	0.0	59.8	98.8	349.9	0.0	59.8	98.6	0	0.6
12-24	4/12/2016 5:15	319.0	0.0	59.9	98.3	300.7	0.0	59.8	98.7	349.9	0.0	59.8	98.6	0	0.6
12-24	4/12/2016 5:16	319.0	0.7	59.9	98.2	300.7	0.7	59.8	98.6	349.9	0.0	59.8	98.6	0	0.6
12-24	4/12/2016 5:17	319.0	1.5	60.0	98.2	300.7	1.5	59.8	98.7	349.9	0.7	59.8	98.5	0	0.6
12-24	4/12/2016 5:18	326.0	0.7	60.0	98.3	307.8	0.7	59.8	98.8	349.9	0.7	59.8	98.7	0	0.6
12-24	4/12/2016 5:19	352.7	1.5	60.0	98.2	1.1	1.5	59.8	98.7	351.3	0.7	59.8	98.7	0	0.6
12-24	4/12/2016 5:20	352.7	0.7	60.0	98.1	1.1	0.7	59.9	98.5	351.3	0.7	59.8	98.7	0	0.6
12-24	4/12/2016 5:21	358.3	1.5	60.0	97.8	8.1	1.5	59.9	98.4	351.3	0.7	59.8	98.7	0	0.6
12-24	4/12/2016 5:22	6.7	1.5	60.0	97.8	8.1	1.5	59.9	98.3	351.3	0.7	59.9	98.6	0	0.6
12-24	4/12/2016 5:23	6.7	0.7	60.0	97.8	8.1	0.7	59.9	98.3	351.3	0.7	59.9	98.6	0	0.6
12-24	4/12/2016 5:24	6.7	1.5	60.0	97.7	8.1	0.7	59.9	98.2	351.3	0.7	59.9	98.5	0	0.6
12-24	4/12/2016 5:25	6.7	0.7	60.0	97.5	8.1	0.7	59.9	98.1	351.3	0.7	59.9	98.5	0	0.6
12-24	4/12/2016 5:26	6.7	0.7	60.0	97.5	8.1	0.7	59.9	98.0	351.3	0.0	59.9	98.4	0	0.6
12-24	4/12/2016 5:27	6.7	0.7	60.0	97.6	8.1	0.7	59.9	98.1	351.3	0.7	59.9	98.3	0	0.6
12-24	4/12/2016 5:28	29.2	1.5	60.0	97.8	79.7	1.5	59.9	98.3	351.3	0.7	59.9	98.5	0	0.6
12-24	4/12/2016 5:29	98.0	2.2	60.0	98.0	137.3	1.5	59.9	98.5	355.5	0.7	59.9	98.5	0	0.6
12-24	4/12/2016 5:30	98.0	1.5	60.0	98.1	140.1	1.5	59.8	98.5	1.1	0.7	59.8	98.6	0	0.6
12-24	4/12/2016 5:31	99.4	1.5	59.9	98.2	142.9	1.5	59.8	98.6	1.1	0.7	59.8	98.8	0	0.6
12-24	4/12/2016 5:32	130.3	1.5	59.9	98.3	154.1	1.5	59.8	98.8	1.1	0.7	59.8	98.7	0	0.6
12-24	4/12/2016 5:33	137.3	0.7	59.9	98.4	154.1	0.7	59.7	98.7	1.1	0.7	59.8	98.8	0	0.6
12-24	4/12/2016 5:34	137.3	0.7	59.9	98.5	154.1	0.7	59.8	98.7	1.1	0.0	59.8	98.8	0	0.6
12-24	4/12/2016 5:35	137.3	1.5	59.9	98.5	154.1	1.5	59.8	98.8	99.4	0.7	59.8	99.0	0	0.6
12-24	4/12/2016 5:36	138.7	0.7	59.9	98.5	152.7	0.7	59.8	98.8	120.4	0.7	59.8	98.8	0	0.6
12-24	4/12/2016 5:37	138.7	1.5	59.9	98.5	149.9	1.5	59.8	98.9	120.4	0.7	59.8	98.8	0	0.6
12-24	4/12/2016 5:38	133.1	2.2	59.9	98.5	113.4	2.2	59.8	98.8	109.2	1.5	59.8	98.9	0	0.6
12-24	4/12/2016 5:39	92.4	1.5	60.0	98.5	124.7	1.5	59.8	98.9	85.3	0.7	59.9	98.9	0	0.6
12-24	4/12/2016 5:40	93.8	1.5	60.0	98.6	144.3	0.7	59.9	98.9	117.6	0.7	59.9	99.0	0	0.6
12-24	4/12/2016 5:41	93.8	0.0	60.0	98.5	147.1	0.0	59.9	98.9	117.6	0.0	59.9	99.0	0	0.6
12-24	4/12/2016 5:42	93.8	0.0	60.0	98.5	147.1	0.0	59.9	98.9	117.6	0.0	59.9	98.9	0	0.6
12-24	4/12/2016 5:43	93.8	0.7	60.0	98.5	147.1	0.7	59.9	98.9	117.6	0.7	59.9	98.9	0	0.6
12-24	4/12/2016 5:44	93.8	0.7	60.0	98.5	147.1	0.7	59.9	98.8	117.6	0.0	59.9	98.7	0	0.6
12-24	4/12/2016 5:45	93.8	0.7	60.0	98.5	148.5	0.7	59.9	98.9	119.0	0.7	59.9	98.8	0	0.6
12-24	4/12/2016 5:46	128.9	2.2	60.0	98.5	162.6	1.5	59.9	98.9	145.7	1.5	59.9	99.0	0	0.6
12-24	4/12/2016 5:47	164.0	2.2	60.0	98.6	168.2	1.5	59.9	99.0	147.1	1.5	59.9	99.0	0	0.6
12-24	4/12/2016 5:48	172.4	2.2	60.0	98.7	175.2	2.2	59.9	99.0	162.6	1.5	59.9	99.1	0	0.6
12-24	4/12/2016 5:49	175.2	2.2	60.0	98.8	175.2	1.5	59.9	99.0	164.0	1.5	59.9	99.1	0	0.6
12-24	4/12/2016 5:50	175.2	3.0	60.0	98.7	172.4	3.0	59.9	99.1	168.2	1.5	59.9	99.2	0	0.6
12-24	4/12/2016 5:51	172.4	3.0	60.0	98.8	168.2	3.0	59.9	99.1	162.6	1.5	59.9	99.3	0	0.6
12-24	4/12/2016 5:52	169.6	3.7	60.0	98.8	162.6	3.0	59.9	99.1	168.2	2.2	59.9	99.3	0	0.6
12-24	4/12/2016 5:53	165.4	3.7	60.0	98.7	162.6	3.0	59.9	99.1	165.4	2.2	59.9	99.3	0	0.6
12-24	4/12/2016 5:54	172.4	3.7	60.0	98.8	164.0	3.7	59.9	99.1	168.8	2.2	59.9	99.3	0	0.6
12-24	4/12/2016 5:55	173.8	3.7	60.0	98.7	175.2	3.7	59.9	99.0	185.6	2.2	59.9	99.2	0	0.6
12-24	4/12/2016 5:56	201.1	3.7	60.0	98.5	181.4	3.0	60.0	98.9	185.6	2.2	59.9	99.1	0	0.6
12-24	4/12/2016 5:57	187.0	3.0	60.0	98.4	187.0	3.0	60.0	98.8	196.8	2.2	60.0	99.1	0	0.6
12-24	4/12/2016 5:58	188.4	3.7	60.1	98.1	182.8	3.0	60.0	98.5	187.0	2.2	60.0	98.9	0	0.6
12-24	4/12/2016 5:59	189.8	3.7	60.2	97.9	187.0	3.0	60.0	98.4	189.8	2.2	60.0	98.7	0	0.6
12-24	4/12/2016 6:00	188.4	3.0	60.2	97.5	188.4	3.0	60.1	98.1	188.4	2.2	60.0	98.5	0	0.6
12-24	4/12/2016 6:01	189.8	3.7	60.3	97.3	187.0	3.0	60.2	97.7	274.1	2.2	60.1	98.3	0	0.6
12-24	4/12/2016 6:02	191.2	3.0	60.3	96.8	181.4	3.0	60.2	97.4	222.1	2.2	60.1	98.0	0	0.6
12-24	4/12/2016 6:03	187.0	3.7	60.5	96.1	195.4	3.7	60.3	96.8	181.4	3.0	60.2	97.6	0	0.6
12-24	4/12/2016 6:04	181.4	3.7	60.5	96.0	185.6	3.0	60.3	96.8	187.0	2.2	60.2	97.5	0	0.6
12-24	4/12/2016 6:05	182.8	3.7	60.5	96.0	175.2	3.7	60.3	96.6	188.4	2.2	60.2	97.3	0	0.6
12-24	4/12/2016 6:06	180.0	3.7	60.4	96.0	180.0	3.0	60.3	96.6	182.8	2.2	60.2	97.3	0	0.6
12-24	4/12/2016 6:07	172.4	3.7	60.4	96.0	175.2	3.0	60.3	96.7	175.2	2.2	60.2	97.4	0	0.6
12-24	4/12/2016 6:08	206.7	3.0	60.3	96.2	194.0	3.0	60.2	96.8	181.4	2.2	60.1	97.4	0	0.6
12-24	4/12/2016 6:09	195.4	3.7	60.3	96.1	182.8	3.0	60.2	96.7	191.2	2.2	60.1	97.3	0	0.6
12-24	4/12/2016 6:10	182.8	3.7	60.4	96.1	182.8	3.0	60.3	96.6	181.4	2.2	60.2	97.2	0	0.6
12-24	4/12/2016 6:11	173.8	3.7	60.4	95.8	171.0	3.0	60.3	96.6	188.4	2.2	60.2	97.3	0	0.6
12-24	4/12/2016 6:12	175.2	3.7	60.4	95.8	173.8	3.0	60.3	96.4	210.9	2.2	60.2	97.2	0	0.6
12-24	4/12/2016 6:13	181.4	3.7	60.5	95.5	175.2	3.7	60.3	95.9	185.6	2.2	60.2	96.8	0	0.6
12-24	4/12/2016 6:14	175.2	4.5	60.6	94.7	172.4	3.7	60.5	95.4	181.4	2.2	60.3	96.3	0	0.6
12-24	4/12/2016 6:15	169.6	3.7	60.6	93.9	162.6	3.7	60.6	94.6	171.0	3.0	60.4	95.8	0	0.6
12-24	4/12/2016 6:16	165.4	5.2	60.9	93.5	165.4	4.5	60.7	94.3	166.8	3.0	60.6	95.6	0	0.6
12-24	4/12/2016 6:17	168.2	4.5	60.9	93.7	171.0	4.5	60.6	94.5	168.2	3.0	60.5	95.6	0	0.6
12-24	4/12/2016 6:18	173.8	4.5	60.6	94.5	162.6	4.5	60.5	95.0	172.4	3.0	60.4	95.9	0	0.6
12-24	4/12/2016 6:19	182.8	4.5	60.6	94.9	175.2	3.7	60.4	95.6	180.0	3.0	60.3	96.3	0	0.6
12-24	4/12/2016 6:20	180.0	5.2	60.6	94.8	184.2	4.5	60.4	95.3	189.8	3.7	60.3	96.0	0	0.6
12-24	4/12/2016 6:21	180.0	6.0	60.7	94.2	172.4	6.0	60.6	94.9	182.8	4.5	60.4	95.7	0	0.6
12-24	4/12/2016 6:22	175.2	6.0	60.9	93.3	175.2	5.2	60.8	93.8	181.4	3.7	60.6	95.0	0	0.6
12-24	4/12/2016 6:23	184.2	6.0	61.2	91.6	175.2	4.5	61.0	92.8	184.2	3.7	60.8	94.1	0	0.6
12-24	4/12/2016 6:24	189.8	4.5	61.2	91.2	175.2	4.5	61.1	92.3	181.4	3.0	60.8	93.6	0	0.6
12-24	4/12/2016 6:25	165.4	3.7	61.2	91.2	159.7	3.0	61.0	92.0	172.4	2.2	60.8	93.6	0	0.6
12-24	4/12/2016 6:26	171.0	3.7	61.1	91.8	168.2	3.0	60.9	92.7	169.6	2.2	60.7	94.0	0	0.6
12-24	4/12/2016 6:27	175.2	3.7	60.9	92.3	181.4	3.7	60.7	92.8	191.2	2.2	60.6	94.0	0	0.6
12-24	4/12/2016 6:28	189.8	3.0	60.6	92.7	187.0	2.2	60.6	93.5	202.5	1.5	60.5	94.5	0	0.6
12-24	4/12/2016 6:29	189.8	3.0	60.7	93.1	198.3	3.0	60.5	93.7	202.5	2.2	60.4	94.7	0	0.6
12-24	4/12/2016 6:30	196.8	3.0	60.6	93.5	196.8	2.2	60.5	93.9	198.3	1.5	60.4	95.0	0	0.6
12-24	4/12/2016 6:31	192.6	3.0	60.6	93.3	194.0	2.2	60.5	94.0	194.0	1.5	60.4	95.0	0	0.6
12-24	4/12/2016 6:32	203.9	2.2	60.6	93.2	201.1	1.5	60.5	94.0	205.3	1.5	60.4	95.0	0	0.6
12-24	4/12/2016 6:33	210.9	2.2	60.6	93.5	213.7	1.5	60.4	94.3	213.7	1.5	60.3	95.5	0	0.6
12-24	4/12/2016 6:34	230.5	1.5	60.5	93.9	222.1	1.5	60.3	94.8	213.7	0.7	60.3	95.7	0	0.6
12-24	4/12/2016 6:35	226.3	1.5	60.5	94.0	220.7	1.5	60.3	94.8	213.7	0.7	60.2	95.8	0	0.6
12-24	4/12/2016 6:36	223.5	1.5	60.5	94.2	220.7	1.5	60.3	94.9	213.7	0.7	60.2	95.9	0	0.6
12-24	4/12/2016 6:37	222.1	1.5	60.4	94.6	216.5	1.5	60.2	95.2	213.7	0.7	60.2	96.2	0	0.6
12-24	4/12/2016 6:38	208.1	1.5	60.3	95.0	203.9	0.7	60.1	95.7	213.7	0.7	60.1	96.5	0	0.6
12-24	4/12/2016 6:39	208.1	0.7	60.2	95.5	203.9	0.7	60.0	96.1	213.7	0.7	60.0	96.6	0	0.6
12-24	4/12/2016 6:40	206.7	1.5	60.1	95.8	202.5	1.5	60.0	96.3	213.7	0.7	60.0	96.8	0	0.6
12-24	4/12/2016 6:41	206.7	0.0	60.1	95.8	202.5	0.0	60.0	96.3	213.7	0.0	60.0	96.8	0	0.6
12-24	4/12/2016 6:42	206.7	0.7	60.1	95.5	202.5	1.5	60.0	96.1	213.7	0.7	60.0	96.6	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
12-24	4/12/2016 6:43	205.3	1.5	60.3	95.0	198.3	0.7	60.1	95.7	213.7	0.7	60.0	96.4	0	0.6
12-24	4/12/2016 6:44	196.8	0.7	60.3	95.0	192.6	0.0	60.1	95.7	213.7	0.0	60.0	96.4	0	0.6
12-24	4/12/2016 6:45	196.8	0.7	60.2	95.1	192.6	0.7	60.1	95.8	213.7	0.0	60.0	96.4	0	0.6
12-24	4/12/2016 6:46	196.8	0.0	60.2	95.0	192.6	0.7	60.0	95.6	213.7	0.0	60.0	96.3	0	0.6
12-24	4/12/2016 6:47	196.8	0.7	60.2	95.0	192.6	0.7	60.0	95.8	213.7	0.0	60.0	96.3	0	0.6
12-24	4/12/2016 6:48	196.8	0.0	60.1	95.1	192.6	0.0	60.0	95.8	213.7	0.0	60.0	96.3	0	0.6
12-24	4/12/2016 6:49	191.2	0.7	60.1	95.2	184.2	0.7	60.0	95.8	213.7	0.7	60.0	96.4	0	0.6
12-24	4/12/2016 6:50	187.0	0.7	60.2	95.2	180.0	0.7	60.1	95.8	213.7	0.7	60.0	96.5	0	0.6
12-24	4/12/2016 6:51	184.2	2.2	60.3	95.1	180.0	2.2	60.2	95.7	167.0	1.5	60.1	96.5	0	0.6
12-24	4/12/2016 6:52	180.0	0.7	60.3	94.9	175.2	0.0	60.2	95.5	162.8	0.0	60.1	96.3	0	0.6
12-24	4/12/2016 6:53	180.0	0.0	60.3	94.9	175.2	0.0	60.2	95.5	162.8	0.0	60.1	96.3	0	0.6
12-24	4/12/2016 6:54	180.0	0.7	60.3	94.9	175.2	0.0	60.2	95.5	162.8	0.0	60.1	96.3	0	0.6
12-24	4/12/2016 6:55	180.0	0.7	60.4	94.9	175.2	0.7	60.2	95.5	162.8	0.7	60.1	96.3	0	0.6
12-24	4/12/2016 6:56	180.0	0.7	60.4	94.9	175.2	0.7	60.2	95.5	162.8	0.0	60.2	96.3	0	0.6
12-24	4/12/2016 6:57	180.0	0.7	60.4	95.2	175.2	0.7	60.2	95.8	162.8	0.7	60.1	96.6	0	0.6
12-24	4/12/2016 6:58	180.0	1.5	60.3	95.3	175.2	0.7	60.2	95.9	162.8	0.7	60.1	96.7	0	0.6
12-24	4/12/2016 6:59	180.0	1.5	60.3	95.5	181.4	0.7	60.1	96.0	162.8	0.7	60.1	96.9	0	0.6
12-24	4/12/2016 7:00	195.4	1.5	60.3	95.8	198.3	1.5	60.1	96.3	164.2	0.7	60.1	97.1	0	0.6
12-24	4/12/2016 7:01	202.5	2.2	60.2	96.1	201.1	2.2	60.1	96.6	164.2	1.5	60.1	97.3	0	0.6
12-24	4/12/2016 7:02	198.3	2.2	60.2	96.2	203.9	2.2	60.1	96.7	196.8	1.5	60.1	97.3	0	0.6
12-24	4/12/2016 7:03	212.3	1.5	60.2	96.3	217.9	1.5	60.1	96.8	205.3	0.7	60.0	97.4	0	0.6
12-24	4/12/2016 7:04	212.3	0.7	60.2	96.3	212.3	1.5	60.0	96.9	205.3	0.7	60.0	97.5	0	0.6
12-24	4/12/2016 7:05	206.7	2.2	60.1	96.5	206.7	1.5	60.0	97.0	205.3	1.5	60.0	97.6	0	0.6
12-24	4/12/2016 7:06	217.9	2.2	60.1	96.7	212.3	2.2	60.0	97.2	212.3	1.5	60.0	97.8	0	0.6
12-24	4/12/2016 7:07	213.7	2.2	60.1	96.8	209.5	1.5	60.0	97.2	216.5	1.5	60.0	97.8	0	0.6
12-24	4/12/2016 7:08	213.7	1.5	60.1	97.0	209.5	1.5	60.0	97.3	216.5	0.7	60.0	97.8	0	0.6
12-24	4/12/2016 7:09	213.7	0.0	60.1	96.8	209.5	0.0	60.0	97.2	216.5	0.0	60.0	97.7	0	0.6
12-24	4/12/2016 7:10	213.7	0.0	60.1	96.7	209.5	0.0	60.0	97.1	216.5	0.0	60.0	97.6	0	0.6
12-24	4/12/2016 7:11	213.7	0.7	60.1	96.8	209.5	0.7	60.0	97.2	216.5	0.0	60.0	97.8	0	0.6
12-24	4/12/2016 7:12	213.7	0.7	60.1	96.9	209.5	0.7	60.0	97.4	216.5	0.0	60.0	97.8	0	0.6
12-24	4/12/2016 7:13	208.1	1.5	60.1	97.1	205.3	1.5	60.0	97.5	216.5	0.7	60.0	98.0	0	0.6
12-24	4/12/2016 7:14	206.7	1.5	60.2	97.2	203.9	0.7	60.1	97.5	216.5	0.7	60.0	98.0	0	0.6
12-24	4/12/2016 7:15	212.3	1.5	60.2	97.0	213.7	1.5	60.1	97.5	216.5	0.7	60.1	98.0	0	0.6
12-24	4/12/2016 7:16	227.7	1.5	60.2	97.2	227.7	1.5	60.1	97.5	216.5	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:17	227.7	2.2	60.3	97.0	222.1	2.2	60.1	97.5	216.5	1.5	60.1	98.1	0	0.6
12-24	4/12/2016 7:18	230.5	1.5	60.3	97.1	230.5	1.5	60.1	97.4	216.5	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:19	237.6	1.5	60.3	96.9	239.0	1.5	60.1	97.4	226.3	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:20	243.2	1.5	60.3	96.9	239.0	1.5	60.1	97.4	234.8	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:21	261.4	1.5	60.3	97.0	255.8	1.5	60.1	97.5	236.2	0.7	60.1	98.0	0	0.6
12-24	4/12/2016 7:22	265.6	1.5	60.3	97.0	262.8	1.5	60.1	97.5	241.6	0.7	60.1	98.0	0	0.6
12-24	4/12/2016 7:23	255.8	1.5	60.3	97.0	251.6	1.5	60.1	97.5	240.4	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:24	233.3	1.5	60.3	96.9	226.3	1.5	60.1	97.4	237.6	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:25	257.2	1.5	60.3	97.1	258.6	1.5	60.1	97.5	254.4	1.5	60.1	98.1	0	0.6
12-24	4/12/2016 7:26	274.1	1.5	60.3	97.0	272.7	1.5	60.1	97.5	265.6	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:27	274.1	1.5	60.2	97.0	271.3	0.7	60.1	97.5	265.6	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:28	274.1	1.5	60.2	97.0	271.3	0.7	60.1	97.6	265.6	0.7	60.1	98.1	0	0.6
12-24	4/12/2016 7:29	274.1	1.5	60.2	97.1	267.0	0.7	60.1	97.6	265.6	0.7	60.1	98.2	0	0.6
12-24	4/12/2016 7:30	260.0	1.5	60.2	97.1	254.4	1.5	60.0	97.6	265.6	0.7	60.1	98.3	0	0.6
12-24	4/12/2016 7:31	258.6	1.5	60.1	97.1	254.4	1.5	60.0	97.6	265.6	0.7	60.0	98.4	0	0.6
12-24	4/12/2016 7:32	258.6	0.7	60.1	97.1	253.0	0.7	60.0	97.7	265.6	0.7	60.0	98.5	0	0.6
12-24	4/12/2016 7:33	243.2	1.5	60.1	97.4	234.8	1.5	60.0	97.9	265.6	0.7	60.0	98.5	0	0.6
12-24	4/12/2016 7:34	231.9	0.7	60.1	97.6	231.9	0.7	60.0	98.1	265.6	0.7	60.0	98.6	0	0.6
12-24	4/12/2016 7:35	229.1	1.5	60.1	97.8	230.5	1.5	60.0	98.3	265.6	0.7	60.0	98.8	0	0.6
12-24	4/12/2016 7:36	220.7	1.5	60.0	98.0	226.3	1.5	59.9	98.3	265.6	0.7	60.0	98.8	0	1.9
12-24	4/12/2016 7:37	215.1	0.7	60.0	98.1	226.3	0.7	59.9	98.5	265.6	0.7	60.0	98.7	0	1.9
12-24	4/12/2016 7:38	215.1	1.5	60.0	98.2	224.9	0.7	59.9	98.5	265.6	0.7	60.0	98.6	0	1.9
12-24	4/12/2016 7:39	209.5	1.5	60.0	98.2	205.3	0.7	59.9	98.6	265.6	0.7	59.9	98.5	0	1.9
12-24	4/12/2016 7:40	205.3	0.7	60.0	98.3	203.9	0.0	59.9	98.7	265.6	0.0	59.9	98.5	0	1.9
12-24	4/12/2016 7:41	205.3	0.0	60.0	98.2	203.9	0.0	59.9	98.6	265.6	0.0	59.9	98.5	0	1.9
12-24	4/12/2016 7:42	205.3	0.0	59.9	98.3	203.9	0.0	59.9	98.6	265.6	0.0	59.9	98.5	0	1.9
12-24	4/12/2016 7:43	205.3	0.0	60.0	98.2	203.9	0.0	59.8	98.5	265.6	0.0	59.9	98.5	0	1.9
12-24	4/12/2016 7:44	205.3	0.0	59.9	98.1	203.9	0.0	59.8	98.5	265.6	0.0	59.9	98.5	0	1.9
12-24	4/12/2016 7:45	205.3	0.0	59.9	98.1	203.9	0.0	59.8	98.5	265.6	0.0	59.9	98.5	0	1.9
12-24	4/12/2016 7:46	205.3	0.0	60.0	98.2	203.9	0.0	59.9	98.5	265.6	0.0	59.9	98.7	0	1.9
12-24	4/12/2016 7:47	205.3	0.7	60.0	98.2	203.9	0.0	59.9	98.6	265.6	0.0	59.9	98.9	0	1.9
12-24	4/12/2016 7:48	212.3	1.5	60.0	98.2	212.3	0.7	59.9	98.5	265.6	0.7	59.9	98.9	0	1.9
12-24	4/12/2016 7:49	227.7	1.5	60.0	98.1	223.5	1.5	59.9	98.5	265.6	0.7	60.0	99.0	0	1.9
12-24	4/12/2016 7:50	230.5	1.5	60.0	98.1	226.3	0.7	59.9	98.5	265.6	0.7	60.0	99.0	0	1.9
12-24	4/12/2016 7:51	230.5	1.5	60.0	98.1	226.3	0.7	59.9	98.5	265.6	0.7	60.0	99.1	0	1.9
12-24	4/12/2016 7:52	230.5	0.7	60.0	98.1	229.1	0.7	59.9	98.5	265.6	0.7	60.0	99.1	0	4.4
12-24	4/12/2016 7:53	230.5	1.5	60.0	98.1	230.5	0.7	59.9	98.5	265.6	0.7	60.0	99.2	0	4.4
12-24	4/12/2016 7:54	230.5	0.7	60.0	98.2	230.5	0.7	59.9	98.6	265.6	0.7	60.0	99.2	0	6.9
12-24	4/12/2016 7:55	230.5	0.7	60.0	98.1	230.5	0.7	59.9	98.5	265.6	0.0	60.0	99.2	0	8.1
12-24	4/12/2016 7:56	230.5	0.0	60.0	98.1	230.5	0.7	59.9	98.5	265.6	0.0	60.0	99.1	0	8.1
12-24	4/12/2016 7:57	230.5	0.7	60.0	98.1	230.5	0.7	59.9	98.5	265.6	0.7	60.0	99.1	0	8.1
12-24	4/12/2016 7:58	230.5	0.7	60.0	98.1	230.5	0.7	60.0	98.5	265.6	0.7	60.0	99.0	0	6.9
12-24	4/12/2016 7:59	239.0	1.5	60.0	98.3	250.2	1.5	60.0	98.7	265.6	0.7	60.0	99.0	0	5.6
12-24	4/12/2016 8:00	246.0	1.5	60.0	98.3	257.2	1.5	60.0	98.8	265.6	0.7	60.0	99.1	0	4.4
12-24	4/12/2016 8:01	272.7	2.2	60.1	98.5	279.7	2.2	60.0	98.9	278.3	1.5	60.0	99.0	0	4.4
12-24	4/12/2016 8:02	295.1	3.0	60.1	98.6	288.1	3.0	60.0	99.0	297.9	2.2	60.1	99.0	0	3.1
12-24	4/12/2016 8:03	300.7	3.0	60.1	98.8	295.1	3.0	60.0	99.1	302.1	2.2	60.1	99.0	0	1.9
12-24	4/12/2016 8:04	312.0	3.0	60.1	98.8	300.7	3.0	60.0	99.1	313.4	2.2	60.1	99.1	0	1.9
12-24	4/12/2016 8:05	300.7	3.7	60.2	98.9	296.5	3.0	60.1	99.3	303.5	2.2	60.1	99.1	0	1.9
12-24	4/12/2016 8:06	306.4	3.0	60.1	98.9	299.3	3.0	60.0	99.3	306.4	2.2	60.1	99.1	0	1.9
12-24	4/12/2016 8:07	303.5	3.7	60.1	98.9	302.1	3.0	60.0	99.3	310.6	2.2	60.1	99.1	0	0.6
12-24	4/12/2016 8:08	307.8	3.7	60.1	98.9	296.5	3.7	60.0	99.3	300.7	2.2	60.0	99.1	0.008	0.6
12-24	4/12/2016 8:09	304.9	3.7	60.0	99.0	302.1	3.7	60.0	99.3	310.6	2.2	60.0	99.1	0.008	1.9
12-24	4/12/2016 8:10	299.3	3.7	60.0	99.0	292.3	3.7	60.0	99.3	296.5	2.2	60.0	99.2	0	1.9
12-24	4/12/2016 8:11	306.4	3.7	60.0	99.0	299.3	3.7	59.9	99.3	307.8	3.0	60.0	99.2	0	3.1
12-24	4/12/2016 8:12	306.4	3.7	60.0	99.0	293.7	3.7	59.9	99.3	299.3	3.0	60.0	99.2	0.008	5.6
12-24	4/12/2016 8:13	299.3	3.7	60.0	99.0	295.1	3.0	59.9	99.3	299.3	2.2	60.0	99.2	0	8.1
12-24	4/12/2016 8:14	288.1	3.0	60.0	98.9	289.5	2.2	59.9	99.3	281.1	1.5	60.0	99.2	0.008	10.6
12-24	4/12/2016 8:15	286.7	1.5	60.0	98.9	292.3	1.5	59.9	99.3	281.1	0.7	60.0	99.2	0.008	13.1
12-24	4/12/2016 8:16	283.9	0.7	60.0	98.8	285.3	0.7	59.9	99.2	281.1	0.0	60.0	99.3	0.008	16.9
12-24	4/12/2016 8:17	272.7	0.7	60.0	98.7	269.9	0.7	59.9	99.2	281.1	0.7	60.0	99.3	0	21.9
12-24	4/12/2016 8:18	269.9	0.7	60.0	98.7	265.6	0.7	59.9	99.2	281.1	0.7	60.0	99.3	0.008	21.9
12-24	4/12/2016 8:19	247.4	1.5	60.0	98.9	231.9	0.7	59.9	99.3	264.2	0.7	60.0	99.3	0.008	21.9
12-24	4/12/2016 8:20	155.5	2.2	60.0	99.0	156.9	2.2	60.0	99.3	195.4	1.5	60.0	99.4	0	23.1
12-24	4/12/2016 8:21	154.1	1.5	60.0	99.0	151.3	1.5	60.0	99.4	222.1	0.7	60.1	99.3	0.008	25.6
12-24	4/12/2016 8:22	144.3	2.2	60.0	99.0	141.5	2.2	59.9	99.4	158.3	1.5	60.0	99.3	0	28.1
12-24	4/12/2016 8:23	144.3	3.0	60.0	99.1	145.7	3.0	60.0	99.5	151.3	2.2	60.0	99.4	0	31.9
12-24	4/12/2016 8:24	154.1	3.7	60.0	99.3	149.9	3.0	60.0	99.5	159.7	2.2	60.1	99.5	0.008	36.9
12-24	4/12/2016 8:25	152.7	4.5	60.0	99.3	148.5	4.5	60.0	99.5	158.3	3.0	60.1	99.5	0	44.4
12-24	4/12/2016 8:26	166.8	5.2	60.0	99.3	164.0	4.5	60.0	99.6	169.6	3.0	60.1	99.5	0	49.4
12-24	4/12/2016 8:27	152.7	4.5	60.0	99.3	158.3	4.5	60.0	99.6	164.0	3.0	60.1	99.5	0	53.1
12-24	4/12/2016 8:28	165.4	4.5	60.0	99.3	159.7	4.5	59.9	99.6	165.4	3.0	60.1	99.6	0	59.4
12-24	4/12/2016 8:29	166.8	4.5	60.0	99.3	169.6	3.7	60.0	99.6	169.6	3.0	60.1	99.6	0	68.1
12-24	4/12/2016 8:30	181.4	4.5	60.1	99.3	175.2	3.7	60.0	99.6	185.6	3.0	60.1	99.6	0	80.6
12-24	4/12/2016 8:31	194.0	4.5	60.1	99.3	175.2	3.7	60.1	99.6	175.2	3.0	60.2	99.6	0	94.4
12-24	4/12/2016 8:32	187.0	4.5	60.2	99.1	180.0	4.5	60.1	99.5	182.8	3.0	60.2	99.5	0	108.1
12-24	4/12/2016 8:33	173.8	3.7	60.3	99.0	159.7	3.0	60.2	99.4	162.6	2.2	60.3	99.5	0	124.4
12-24	4/12/2016 8:34	162.6	3.7	60.4	99.0	164.0	3.0	60.3	99.3	165.4	2.2	60.5	99.5	0	138.1
12-24	4/12/2016 8:35	181.4	3.7	60.5	98.9	162.8	3.7	60.4	99.2	180.0	3.0	60.6	99.4	0.008	153.1
12-24	4/12/2016 8:36	172.4	5.2	60.6	98.6	172.4	4.5	60.5	99.0	173.8	3.0	60.7	99.1	0	166.9
12-24	4/12/2016 8:37	162.6	3.7	60.7	98.4	148.5	3.0	60.6	98.8	162.6	2.2	60.9	99.0	0	184.4

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
12-24	4/12/2016 8:38	185.4	2.2	60.9	98.1	173.8	2.2	60.9	98.6	185.6	1.5	61.2	99.0	0	248.1
12-24	4/12/2016 8:39	181.4	3.0	61.3	98.2	187.0	3.0	61.3	98.6	185.6	2.2	61.7	98.9	0	305.6
12-24	4/12/2016 8:40	192.6	3.7	61.5	97.4	175.2	3.7	61.6	98.3	184.2	3.0	62.1	98.4	0	290.6
12-24	4/12/2016 8:41	188.4	3.0	61.8	97.3	191.2	2.2	61.8	97.8	189.8	1.5	62.3	97.9	0	259.4
12-24	4/12/2016 8:42	187.0	3.7	61.8	97.2	173.8	3.7	61.7	97.5	175.2	3.0	62.1	97.8	0	128.1
12-24	4/12/2016 8:43	186.8	3.0	61.6	97.0	173.8	3.0	61.5	97.5	173.8	1.5	62.0	97.6	0	106.9
12-24	4/12/2016 8:44	184.2	3.7	61.4	97.0	198.3	3.0	61.3	97.4	181.4	2.2	61.8	97.6	0	101.9
12-24	4/12/2016 8:45	181.4	3.0	61.2	97.1	187.0	3.0	61.2	97.7	185.6	2.2	61.6	97.8	0	90.6
12-24	4/12/2016 8:46	171.0	3.0	61.2	97.4	182.8	2.2	61.2	97.9	180.0	1.5	61.5	97.9	0	69.4
12-24	4/12/2016 8:47	172.4	1.5	61.2	97.7	250.2	1.5	61.1	97.9	180.0	0.7	61.4	97.9	0	56.9
12-24	4/12/2016 8:48	165.4	2.2	61.1	97.4	161.2	2.2	61.0	97.9	184.0	1.5	61.3	97.9	0	46.9
12-24	4/12/2016 8:49	164.0	3.0	61.0	97.6	155.5	3.0	60.9	98.0	184.0	2.2	61.2	98.0	0	40.6
12-24	4/12/2016 8:50	148.5	3.0	60.9	97.7	142.9	2.2	60.9	97.9	135.9	1.5	61.2	98.1	0	34.4
12-24	4/12/2016 8:51	149.9	1.5	60.9	97.7	144.3	1.5	60.9	98.1	131.7	0.7	61.1	98.2	0	31.9
12-24	4/12/2016 8:52	142.9	1.5	60.9	97.9	138.7	1.5	60.9	98.4	131.7	0.7	61.1	98.2	0	26.9
12-24	4/12/2016 8:53	155.5	2.2	60.9	98.0	149.9	2.2	60.9	98.4	142.9	1.5	61.1	98.3	0	24.4
12-24	4/12/2016 8:54	156.9	2.2	60.9	97.8	158.9	2.2	60.8	98.2	152.7	1.5	61.0	98.3	0	29.4
12-24	4/12/2016 8:55	169.6	2.2	60.9	98.1	172.4	1.5	60.8	98.4	152.7	0.7	61.0	98.5	0	36.9
12-24	4/12/2016 8:56	171.0	0.7	60.9	98.1	173.8	0.7	60.8	98.5	152.7	0.7	61.0	98.6	0	51.9
12-24	4/12/2016 8:57	152.7	3.0	60.9	98.1	145.7	3.0	60.9	98.4	144.3	1.5	61.0	98.6	0	65.6
12-24	4/12/2016 8:58	149.9	2.2	60.9	97.8	158.3	2.2	60.9	98.3	159.7	1.5	61.1	98.5	0	74.4
12-24	4/12/2016 8:59	172.4	2.2	61.0	98.0	165.4	2.2	60.9	98.5	169.6	1.5	61.1	98.6	0	78.1
12-24	4/12/2016 9:00	148.5	2.2	61.0	98.0	147.1	2.2	60.9	98.4	133.1	1.5	61.2	98.5	0	80.6
12-24	4/12/2016 9:01	156.9	2.2	61.1	97.9	141.5	1.5	61.0	98.2	123.2	1.5	61.2	98.5	0	79.4
12-24	4/12/2016 9:02	159.7	1.5	61.1	97.9	152.7	1.5	61.0	98.3	112.0	1.5	61.2	98.4	0	73.1
12-24	4/12/2016 9:03	144.3	2.2	61.1	97.5	135.9	2.2	61.0	98.0	133.1	1.5	61.2	98.3	0	65.6
12-24	4/12/2016 9:04	155.5	3.7	61.1	97.5	151.3	3.0	61.0	97.9	154.1	2.2	61.2	98.2	0	60.6
12-24	4/12/2016 9:05	169.6	3.0	61.1	97.9	173.8	2.2	61.0	98.0	171.0	1.5	61.2	98.2	0	61.9
12-24	4/12/2016 9:06	156.9	3.0	61.1	97.7	141.5	3.0	61.0	98.1	147.1	2.2	61.2	98.2	0	63.1
12-24	4/12/2016 9:07	137.3	3.0	61.1	97.6	133.1	2.2	61.0	98.1	135.9	2.2	61.2	98.2	0	65.6
12-24	4/12/2016 9:08	152.7	2.2	61.1	97.7	148.5	1.5	61.0	98.1	140.1	1.5	61.2	98.2	0	64.4
12-24	4/12/2016 9:09	165.4	2.2	61.1	98.0	151.3	1.5	61.1	98.2	142.9	0.7	61.2	98.3	0	71.9
12-24	4/12/2016 9:10	164.0	1.5	61.1	97.7	159.7	2.2	61.0	98.1	154.1	1.5	61.2	98.2	0	68.1
12-24	4/12/2016 9:11	151.3	3.7	61.1	97.6	137.3	3.0	61.0	98.0	141.5	2.2	61.2	98.2	0	65.6
12-24	4/12/2016 9:12	154.1	3.0	61.1	97.4	158.3	3.0	61.0	97.9	161.2	2.2	61.2	98.1	0	63.1
12-24	4/12/2016 9:13	164.0	3.0	61.0	97.4	161.2	2.2	61.0	98.0	161.2	1.5	61.2	98.0	0	68.1
12-24	4/12/2016 9:14	175.2	2.2	61.1	97.7	155.5	3.0	61.0	98.0	164.0	2.2	61.2	98.2	0	70.6
12-24	4/12/2016 9:15	142.9	3.7	61.1	97.6	134.5	3.0	61.0	97.9	134.5	2.2	61.2	98.1	0	65.6
12-24	4/12/2016 9:16	147.1	3.0	61.1	97.5	156.9	3.0	61.0	98.0	161.2	2.2	61.2	98.1	0	70.6
12-24	4/12/2016 9:17	144.3	3.0	61.1	97.4	134.5	3.0	61.0	97.7	142.9	2.2	61.2	98.0	0	69.4
12-24	4/12/2016 9:18	137.3	3.0	61.1	97.4	123.2	2.2	61.0	97.9	134.5	1.5	61.2	97.9	0	65.6
12-24	4/12/2016 9:19	130.3	1.5	61.1	97.5	134.5	1.5	61.1	97.9	126.1	0.7	61.2	98.1	0	64.4
12-24	4/12/2016 9:20	109.2	2.2	61.1	97.4	71.3	1.5	61.1	98.0	82.5	1.5	61.2	98.0	0	64.4
12-24	4/12/2016 9:21	114.8	2.2	61.2	97.4	126.1	3.0	61.1	97.8	124.7	1.5	61.3	97.9	0	64.4
12-24	4/12/2016 9:22	128.9	3.7	61.1	97.3	119.0	3.0	61.1	97.7	131.7	2.2	61.2	98.0	0	68.1
12-24	4/12/2016 9:23	134.5	2.2	61.1	97.6	117.6	3.0	61.1	97.9	127.5	2.2	61.3	98.0	0	68.1
12-24	4/12/2016 9:24	124.7	3.7	61.1	97.2	131.7	3.0	61.1	97.6	130.3	2.2	61.2	97.7	0	71.9
12-24	4/12/2016 9:25	148.5	2.2	61.1	97.2	135.9	2.2	61.1	97.7	152.7	1.5	61.3	97.8	0	75.6
12-24	4/12/2016 9:26	151.3	2.2	61.2	97.5	148.5	2.2	61.2	98.0	159.7	1.5	61.3	97.9	0	83.1
12-24	4/12/2016 9:27	165.4	3.0	61.2	97.4	154.1	2.2	61.2	97.9	166.8	1.5	61.4	98.0	0	83.1
12-24	4/12/2016 9:28	133.1	2.2	61.3	97.4	126.1	2.2	61.2	97.8	135.9	1.5	61.4	98.0	0	80.6
12-24	4/12/2016 9:29	166.8	2.2	61.3	97.4	156.9	2.2	61.2	97.7	148.5	1.5	61.5	97.9	0	84.4
12-24	4/12/2016 9:30	148.5	3.0	61.3	97.2	138.7	3.0	61.3	97.7	141.5	2.2	61.5	97.9	0	95.6
12-24	4/12/2016 9:31	142.9	3.0	61.3	96.9	149.9	3.0	61.3	97.5	161.2	2.2	61.5	97.8	0	96.9
12-24	4/12/2016 9:32	149.9	3.0	61.4	97.0	142.9	2.2	61.3	97.4	142.9	1.5	61.5	97.8	0	108.9
12-24	4/12/2016 9:33	134.5	1.5	61.4	97.4	130.3	0.7	61.5	97.8	127.5	0.7	61.6	98.0	0	109.4
12-24	4/12/2016 9:34	152.7	2.2	61.5	97.2	149.9	2.2	61.5	97.5	141.5	1.5	61.7	97.9	0	129.4
12-24	4/12/2016 9:35	162.6	2.2	61.5	96.9	155.5	1.5	61.5	97.3	326.0	0.7	61.8	97.7	0	125.6
12-24	4/12/2016 9:36	187.0	1.5	61.6	97.1	175.2	2.2	61.6	97.3	271.3	1.5	61.8	97.6	0	109.4
12-24	4/12/2016 9:37	169.6	1.5	61.7	97.0	154.1	1.5	61.7	97.5	182.8	0.7	61.9	97.6	0	91.9
12-24	4/12/2016 9:38	164.0	0.0	61.7	97.1	144.3	0.7	61.7	97.5	181.4	0.0	62.0	97.8	0	71.9
12-24	4/12/2016 9:39	151.3	0.7	61.8	97.0	128.9	1.5	61.7	97.4	159.7	0.7	62.0	97.5	0	58.1
12-24	4/12/2016 9:40	152.7	1.5	61.7	96.8	154.1	1.5	61.7	97.3	171.0	0.7	62.0	97.3	0	54.4
12-24	4/12/2016 9:41	134.5	0.7	61.7	96.8	103.6	0.7	61.7	97.3	152.7	0.7	61.9	97.3	0	63.1
12-24	4/12/2016 9:42	128.9	0.0	61.7	96.8	103.6	0.0	61.7	97.2	151.3	0.0	62.0	97.5	0	66.9
12-24	4/12/2016 9:43	128.9	0.0	61.7	97.0	103.6	0.7	61.7	97.5	151.3	0.0	62.0	97.5	0	56.9
12-24	4/12/2016 9:44	131.7	0.7	61.7	97.3	124.7	1.5	61.7	97.5	151.3	0.7	62.0	97.5	0	50.6
12-24	4/12/2016 9:45	135.9	0.7	61.7	96.8	138.7	0.7	61.7	97.2	151.3	0.7	61.9	97.4	0	54.4
12-24	4/12/2016 9:46	141.5	0.7	61.7	96.8	148.5	0.7	61.6	97.3	152.7	0.7	61.9	97.4	0	64.4
12-24	4/12/2016 9:47	156.9	2.2	61.6	96.7	158.3	2.2	61.6	97.2	159.7	1.5	61.8	97.4	0	98.1
12-24	4/12/2016 9:48	175.2	2.2	61.6	96.8	166.8	1.5	61.6	97.3	162.6	1.5	61.8	97.4	0	126.9
12-24	4/12/2016 9:49	164.0	1.5	61.7	97.3	142.9	1.5	61.7	97.6	161.2	0.7	61.9	97.7	0	130.6
12-24	4/12/2016 9:50	149.9	0.7	61.8	97.2	121.8	0.7	61.8	97.6	156.9	0.0	62.1	97.6	0	114.4
12-24	4/12/2016 9:51	140.1	0.7	61.9	97.0	105.0	0.7	61.9	97.2	152.7	0.7	62.1	97.1	0	100.6
12-24	4/12/2016 9:52	140.1	0.7	61.9	96.7	137.3	0.7	62.0	97.2	159.7	0.7	62.2	97.3	0	95.6
12-24	4/12/2016 9:53	165.4	3.0	62.0	96.7	158.3	2.2	62.0	97.2	175.2	1.5	62.3	97.4	0	98.1
12-24	4/12/2016 9:54	154.1	1.5	62.0	96.9	152.7	1.5	62.0	97.4	158.3	0.7	62.3	97.4	0	99.4
12-24	4/12/2016 9:55	149.9	0.7	62.0	96.3	138.7	0.7	62.0	96.7	158.3	0.7	62.3	97.1	0	113.1
12-24	4/12/2016 9:56	138.7	0.7	62.0	96.4	120.4	0.7	62.0	96.8	158.3	0.7	62.3	96.9	0	134.4
12-24	4/12/2016 9:57	138.7	0.7	62.1	96.6	120.4	0.7	62.1	96.9	158.3	0.0	62.4	97.1	0	144.4
12-24	4/12/2016 9:58	138.7	0.7	62.1	95.9	120.4	0.7	62.1	96.4	158.3	0.7	62.4	96.5	0	128.1
12-24	4/12/2016 9:59	138.7	0.0	62.1	96.0	120.4	0.0	62.2	96.7	158.3	0.0	62.5	96.7	0	130.6
12-24	4/12/2016 10:00	138.7	0.0	62.3	96.3	120.4	0.0	62.3	96.6	158.3	0.0	62.6	96.7	0	141.9
12-24	4/12/2016 10:01	138.7	0.0	62.4	96.1	121.8	0.7	62.4	96.4	158.3	0.0	62.7	96.7	0	134.4
12-24	4/12/2016 10:02	138.7	0.0	62.4	95.8	121.8	0.0	62.5	96.4	158.3	0.0	62.8	96.4	0	128.1
12-24	4/12/2016 10:03	138.7	0.0	62.5	95.9	119.0	0.0	62.6	96.2	158.3	0.0	62.9	96.4	0	123.1
12-24	4/12/2016 10:04	133.1	0.7	62.5	95.2	69.9	0.7	62.4	95.8	158.3	0.7	62.9	96.2	0	103.1
12-24	4/12/2016 10:05	67.1	0.7	62.4	95.2	16.5	0.7	62.4	95.8	158.3	0.7	62.8	95.9	0	79.4
12-24	4/12/2016 10:06	30.6	1.5	62.4	95.7	359.7	1.5	62.3	95.8	158.3	0.7	62.7	96.2	0	68.1
12-24	4/12/2016 10:07	5.3	0.7	62.2	95.2	359.7	1.5	62.2	95.5	158.3	0.7	62.6	95.8	0	60.6
12-24	4/12/2016 10:08	1.1	1.5	62.1	95.2	340.0	1.5	62.1	96.0	158.3	0.7	62.5	95.9	0	54.4
12-24	4/12/2016 10:09	345.7	1.5	62.1	95.9	331.6	0.7	62.0	96.3	158.3	0.7	62.4	96.1	0	44.4
12-24	4/12/2016 10:10	345.7	0.7	62.0	96.4	331.6	0.7	62.0	96.8	158.3	0.7	62.4	96.3	0	39.4
12-24	4/12/2016 10:11	345.7	0.0	62.1	96.9	331.6	0.0	62.0	97.1	158.3	0.0	62.4	96.8	0	35.6
12-24	4/12/2016 10:12	345.7	0.0	62.1	96.8	331.6	0.7	62.0	97.1	158.3	0.0	62.3	96.8	0	34.4
12-24	4/12/2016 10:13	345.7	0.7	62.0	96.8	331.6	0.7	62.0	97.2	158.3	0.0	62.3	97.1	0	31.9
12-24	4/12/2016 10:14	345.7	0.7	62.0	96.9	331.6	0.7	62.0	97.3	158.3	0.7	62.2	97.4	0	28.1
12-24	4/12/2016 10:15	341.5	1.5	62.0	97.0	324.6	1.5	61.9	97.5	199.7	0.7	62.2	97.4	0	25.6
12-24	4/12/2016 10:16	327.4	2.2	61.9	96.8	323.2	1.5	61.8	97.2	309.2	0.7	62.1	97.4	0	21.9
12-24	4/12/2016 10:17	347.1	1.5	61.6	97.0	355.5	2.2	61.8	97.2	16.5	1.5	62.0	97.4	0	20.6
12-24	4/12/2016 10:18	12.3	1.5	61.6	97.1	1.1	1.5	61.7	97.5	20.8	0.7	61.9	97.5	0	21.9
12-24	4/12/2016 10:19	2.5	0.0	61.6	97.2	351.3	0.7	61.7	97.5	20.8	0.0	61.9	97.5	0	25.6
12-24	4/12/2016 10:20	309.2	0.7	61.7	97.3	278.3	1.5	61.5	97.6	281.1	0.7	61.8	97.5	0	30.6
12-24	4/12/2016 10:21	327.4	2.2	61.6	97.0	338.6	2.2	61.5	97.5	349.9	1.5	61.6	97.5	0	28.1
12-24	4/12/2016 10:22	349.9	3.0	61.6	97.2	334.4	2.2	61.5	97.6	345.7	1.5	61.7	97.6	0	24.4
12-24	4/12/2016 10:23	354.1	2.2	61.6	97.3	351.3	2.2	61.5	97.6	13.7	1.5	61.6	97.7	0	24.4
12-24	4/12/2016 10:24	349.9	1.5	61.6	97.2	351.3	1.5	61.5	97.6	2.5	0.7	61.6	97.8	0	23.1
12-24	4/12/2016 10:25	5.3	0.7	61.5	97.4	16.5	1.5	61.5	97.7	19.4	0.7	61.6	97.8	0	19.4
12-24	4/12/2016 10:26	8.1	1.5	61.5	97.3	352.7	1.5	61.5	97.5	356.9	0.7	61.6	97.8	0	18.1
12-24	4/12/2016 10:27	12.3	2.2	61.5	97.0	15.1	2.2	61.5	97.4	41.6	1.5	61.5	97.6	0	20.6
12-24	4/12/2016 10:28	303.5	1.5	61.5	97.1	286.7	1.5	61.5	97.4	313.4	1.5	61.5	97.5	0	25.6
12-24	4/12/2016 10:29	312.0	1.5	61.5	97.1	309.2	1.5	61.5	97.4	314.8	0.7	61.5	97.6	0	29.4
12-24	4/12/2016 10:30	348.5	1.5	61.5	97.1	344.3	1.5	61.5	97.5	323.2	0.7	61.5	97.7	0	36.9
12-24	4/12/2016 10:31	8.1	2.2	61.5	97.1	8.1	3.0	61.5	97.4	13.7	2.2	61.6	97.8	0	50.6
12-24	4/12/2016 10:32	342.9	2.2	61.6	97.1	330.2	1.5	61.5	97.6	352.7	1.5	61.6	97.8	0	64.4

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
12-24	4/12/2016 10:33	340.0	1.5	61.7	97.3	347.1	1.5	61.6	97.8	354.1	0.7	61.7	98.0	0	70.6
NS	4/12/2016 10:34	2.5	0.7	61.8	97.6	2.5	0.7	61.7	98.0	23.6	0.0	61.8	98.3	0	78.1
NS	4/12/2016 10:35	355.5	0.7	61.8	96.7	324.6	0.7	61.8	97.2	22.2	0.7	61.9	97.8	0	78.1
NS	4/12/2016 10:36	355.5	1.5	62.0	96.0	348.5	1.5	61.9	96.5	22.2	0.7	62.0	97.1	0	65.6
NS	4/12/2016 10:37	359.7	0.7	62.0	95.8	359.7	0.7	62.0	96.4	22.2	0.7	62.1	96.9	0	51.9
NS	4/12/2016 10:38	359.7	0.7	62.1	95.8	18.0	0.7	62.0	96.3	22.2	0.7	62.1	96.7	0	53.1
NS	4/12/2016 10:39	359.7	0.7	62.1	95.8	26.4	0.7	62.0	96.3	22.2	0.7	62.1	96.9	0	69.4
NS	4/12/2016 10:40	359.7	0.7	62.1	95.8	27.8	0.0	62.1	96.6	22.2	0.0	62.2	96.9	0	88.1
NS	4/12/2016 10:41	359.7	0.0	62.1	96.1	27.8	0.7	62.1	96.7	22.2	0.0	62.3	96.9	0	101.9
NS	4/12/2016 10:42	1.1	0.7	62.2	96.0	46.0	0.7	62.1	96.3	26.4	0.7	62.4	96.9	0	119.4
NS	4/12/2016 10:43	6.7	0.7	62.2	96.0	58.7	0.7	62.2	96.6	29.2	0.7	62.4	96.9	0	133.1
NS	4/12/2016 10:44	6.7	0.7	62.3	95.5	58.7	0.7	62.3	96.0	29.2	0.7	62.5	96.6	0	140.6
NS	4/12/2016 10:45	6.7	0.0	62.4	95.6	58.7	0.0	62.4	96.1	29.2	0.0	62.7	96.7	0	150.6
NS	4/12/2016 10:46	6.7	0.0	62.5	95.8	57.3	0.0	62.5	96.4	29.2	0.0	62.8	97.0	0	145.6
NS	4/12/2016 10:47	6.7	0.0	62.6	95.7	55.9	0.0	62.6	96.4	29.2	0.0	62.9	96.9	0	110.6
NS	4/12/2016 10:48	6.7	0.0	62.7	96.3	55.9	0.7	62.7	96.7	29.2	0.0	63.0	96.9	0	89.4
NS	4/12/2016 10:49	6.7	1.5	62.7	96.2	43.2	1.5	62.7	96.5	29.2	0.7	63.1	96.8	0	80.6
NS	4/12/2016 10:50	6.7	1.5	62.7	95.7	29.2	0.7	62.6	96.2	29.2	0.7	63.1	96.6	0	71.9
NS	4/12/2016 10:51	6.7	0.7	62.7	96.4	29.2	0.7	62.6	96.5	29.2	0.7	63.1	96.6	0	61.9
NS	4/12/2016 10:52	6.7	0.7	62.6	95.7	10.9	0.7	62.5	96.3	29.2	0.7	63.0	96.4	0	60.6
NS	4/12/2016 10:53	6.7	0.7	62.5	96.2	1.1	0.0	62.5	96.8	29.2	0.0	62.9	96.7	0	68.1
NS	4/12/2016 10:54	6.7	0.0	62.5	96.5	1.1	0.0	62.5	96.8	29.2	0.0	62.9	96.6	0	73.1
24-36	4/12/2016 10:55	6.7	0.0	62.5	96.9	1.1	0.0	62.5	97.2	29.2	0.0	62.9	97.0	0	79.4
24-36	4/12/2016 10:56	6.7	0.7	62.6	96.6	1.1	0.0	62.6	97.0	29.2	0.0	62.9	97.1	0	83.1
24-36	4/12/2016 10:57	6.7	1.5	62.5	96.5	341.5	1.5	62.5	96.9	27.8	0.7	63.0	96.9	0	86.6
24-36	4/12/2016 10:58	354.1	1.5	62.5	96.8	338.6	1.5	62.5	97.1	27.8	0.7	63.0	97.0	0	88.1
24-36	4/12/2016 10:59	345.7	0.7	62.5	96.9	337.2	0.7	62.5	97.1	27.8	0.7	63.0	97.2	0	90.6
24-36	4/12/2016 11:00	352.7	1.5	62.5	96.5	351.3	1.5	62.4	96.7	26.4	0.7	62.9	96.7	0	94.4
24-36	4/12/2016 11:01	354.1	1.5	62.4	96.6	344.3	1.5	62.4	97.1	22.2	0.7	62.8	96.9	0	99.4
24-36	4/12/2016 11:02	338.6	1.5	62.5	97.0	333.0	1.5	62.5	97.3	12.3	0.7	62.9	97.1	0	104.4
24-36	4/12/2016 11:03	341.5	1.5	62.5	96.8	342.9	1.5	62.4	97.1	12.3	0.7	62.8	97.0	0	101.9
24-36	4/12/2016 11:04	341.5	2.2	62.4	96.7	333.0	2.2	62.4	97.1	358.3	1.5	62.8	97.1	0	98.1
24-36	4/12/2016 11:05	3.9	2.2	62.4	96.9	6.7	2.2	62.4	97.1	15.1	1.5	62.7	97.0	0	100.6
24-36	4/12/2016 11:06	2.5	1.5	62.4	97.1	337.2	1.5	62.4	97.4	341.5	0.7	62.7	97.4	0	100.6
24-36	4/12/2016 11:07	344.3	1.5	62.4	97.1	341.5	1.5	62.4	97.5	340.0	0.7	62.7	97.5	0	95.6
24-36	4/12/2016 11:08	345.7	1.5	62.4	97.3	331.6	1.5	62.3	97.6	351.3	1.5	62.7	97.5	0	76.9
24-36	4/12/2016 11:09	2.5	1.5	62.3	97.2	3.9	1.5	62.3	97.7	352.7	1.5	62.6	97.5	0	80.6
24-36	4/12/2016 11:10	349.9	1.5	62.3	97.4	328.8	1.5	62.3	97.7	341.5	0.7	62.6	97.6	0	85.6
24-36	4/12/2016 11:11	331.6	2.2	62.3	97.4	317.6	2.2	62.2	97.7	337.2	0.7	62.6	97.6	0	81.9
24-36	4/12/2016 11:12	331.6	1.5	62.3	97.5	317.6	0.7	62.3	97.9	337.2	0.7	62.7	97.7	0	65.6
24-36	4/12/2016 11:13	333.0	1.5	62.3	97.6	323.2	1.5	62.3	97.9	320.4	1.5	62.6	97.6	0	50.6
24-36	4/12/2016 11:14	334.4	1.5	62.3	97.6	317.6	1.5	62.3	97.9	319.0	0.7	62.6	97.7	0	58.1
24-36	4/12/2016 11:15	328.8	1.5	62.3	97.7	308.4	0.7	62.3	98.0	319.0	0.7	62.6	97.7	0	76.9
24-36	4/12/2016 11:16	330.2	1.5	62.3	97.6	314.8	1.5	62.2	97.9	320.4	0.7	62.5	97.6	0	81.9
24-36	4/12/2016 11:17	334.4	1.5	62.2	97.3	320.4	1.5	62.2	97.8	320.4	0.7	62.5	97.6	0	83.1
24-36	4/12/2016 11:18	338.6	1.5	62.2	97.5	337.2	1.5	62.2	97.8	341.5	1.5	62.5	97.8	0	84.4
24-36	4/12/2016 11:19	326.0	3.0	62.2	97.2	317.6	2.2	62.1	97.6	327.4	1.5	62.5	97.6	0	81.9
24-36	4/12/2016 11:20	331.6	2.2	62.1	97.4	330.2	2.2	62.1	97.8	337.2	1.5	62.4	97.6	0	83.1
24-36	4/12/2016 11:21	352.7	1.5	62.2	97.5	354.1	0.7	62.2	97.9	358.3	0.7	62.4	97.8	0	89.4
24-36	4/12/2016 11:22	354.1	0.7	62.2	97.6	351.3	1.5	62.2	97.9	358.3	0.7	62.4	97.9	0	88.1
24-36	4/12/2016 11:23	355.5	0.7	62.2	97.5	348.5	0.7	62.2	97.9	358.3	0.7	62.4	97.9	0	88.1
24-36	4/12/2016 11:24	356.9	1.5	62.2	97.5	358.3	1.5	62.2	98.0	2.5	0.7	62.5	98.0	0	88.1
24-36	4/12/2016 11:25	8.1	1.5	62.2	97.5	16.5	1.5	62.2	97.9	15.1	0.7	62.4	97.9	0	93.1
24-36	4/12/2016 11:26	6.7	1.5	62.2	97.5	3.9	1.5	62.2	97.8	16.5	1.5	62.4	97.9	0	91.9
24-36	4/12/2016 11:27	2.5	1.5	62.3	97.7	351.3	1.5	62.3	98.1	18.0	0.7	62.5	97.9	0	104.4
24-36	4/12/2016 11:28	2.5	0.7	62.4	97.9	351.3	1.5	62.3	98.2	18.0	0.7	62.6	98.1	0	100.6
24-36	4/12/2016 11:29	2.5	1.5	62.4	97.7	10.9	1.5	62.4	98.2	18.0	0.7	62.6	98.2	0	109.4
24-36	4/12/2016 11:30	3.9	0.7	62.4	98.0	356.9	1.5	62.5	98.4	16.5	0.7	62.7	98.5	0	113.1
24-36	4/12/2016 11:31	341.5	2.2	62.4	97.9	320.4	2.2	62.4	98.4	328.8	1.5	62.8	98.4	0	108.1
24-36	4/12/2016 11:32	337.2	2.2	62.4	97.7	316.2	1.5	62.4	98.1	320.4	1.5	62.8	98.1	0	104.4
24-36	4/12/2016 11:33	331.6	3.0	62.4	97.6	327.4	2.2	62.3	97.9	323.2	1.5	62.7	97.9	0	119.4
24-36	4/12/2016 11:34	334.4	2.2	62.3	97.7	313.4	1.5	62.3	98.2	310.6	0.7	62.7	97.9	0	113.1
24-36	4/12/2016 11:35	333.0	0.7	62.3	97.9	320.4	0.7	62.3	98.2	317.6	0.7	62.7	97.9	0	111.9
24-36	4/12/2016 11:36	354.1	1.5	62.3	97.5	358.3	1.5	62.3	98.0	9.5	1.5	62.7	97.8	0	119.4
24-36	4/12/2016 11:37	358.3	1.5	62.2	97.7	351.3	1.5	62.3	98.3	355.5	1.5	62.6	98.0	0	140.6
24-36	4/12/2016 11:38	333.0	2.2	62.3	98.0	314.8	2.2	62.4	98.4	328.8	1.5	62.7	98.2	0	124.4
24-36	4/12/2016 11:39	321.8	0.7	62.4	97.8	313.4	0.7	62.4	98.1	326.0	0.0	62.8	98.1	0	124.4
24-36	4/12/2016 11:40	354.1	1.5	62.5	98.1	5.3	1.5	62.6	98.4	6.1	0.7	62.9	98.3	0	128.1
24-36	4/12/2016 11:41	3.9	1.5	62.6	98.1	2.5	1.5	62.6	98.4	26.4	1.5	63.0	98.4	0	136.9
24-36	4/12/2016 11:42	9.5	2.2	62.5	97.4	10.9	2.2	62.5	97.7	25.0	1.5	62.8	97.8	0	153.1
24-36	4/12/2016 11:43	10.9	0.7	62.4	97.7	1.1	0.7	62.5	98.2	23.6	0.7	62.9	98.2	0	173.1
24-36	4/12/2016 11:44	354.1	2.2	62.5	97.4	340.0	1.5	62.5	97.7	344.3	1.5	62.9	97.7	0	164.4
24-36	4/12/2016 11:45	6.7	2.2	62.5	97.3	355.5	2.2	62.5	97.7	6.1	1.5	62.9	97.8	0	161.9
24-36	4/12/2016 11:46	358.3	1.5	62.5	97.7	1.1	0.7	62.6	97.9	2.5	0.7	63.0	97.8	0	164.4
24-36	4/12/2016 11:47	352.7	0.7	62.7	97.9	337.2	0.7	62.8	98.3	347.1	0.7	63.2	98.2	0	174.4
24-36	4/12/2016 11:48	345.7	1.5	62.8	97.7	331.6	1.5	62.9	98.1	341.5	0.7	63.3	98.1	0	185.6
24-36	4/12/2016 11:49	9.5	3.0	62.8	97.6	20.8	3.0	62.8	97.8	26.4	2.2	63.2	97.5	0	198.1
24-36	4/12/2016 11:50	44.6	3.7	62.9	97.7	43.2	3.0	62.9	97.9	51.6	2.2	63.3	98.0	0	214.4
24-36	4/12/2016 11:51	61.5	2.2	63.0	97.9	55.9	2.2	63.1	98.0	62.9	1.5	63.4	98.2	0	224.4
24-36	4/12/2016 11:52	44.6	1.5	63.1	97.9	30.6	1.5	63.3	98.2	51.6	0.7	63.6	98.2	0	270.6
24-36	4/12/2016 11:53	41.8	0.7	63.3	97.8	26.4	0.7	63.5	98.1	51.6	0.7	63.9	98.3	0	215.6
24-36	4/12/2016 11:54	10.9	2.2	63.4	97.2	330.2	2.2	63.4	97.9	342.9	1.5	64.0	98.0	0	204.4
24-36	4/12/2016 11:55	324.6	0.7	63.5	97.4	321.8	0.7	63.6	98.0	310.6	0.7	64.1	97.8	0	185.6
24-36	4/12/2016 11:56	331.6	0.7	63.4	96.9	333.0	0.7	63.4	97.0	312.0	0.7	64.1	97.1	0	170.6
24-36	4/12/2016 11:57	337.2	0.7	63.4	97.2	345.7	0.7	63.5	97.5	321.8	0.7	64.1	97.3	0	168.1
24-36	4/12/2016 11:58	344.3	1.5	63.4	97.3	330.2	1.5	63.5	97.6	340.0	0.7	64.1	97.4	0	164.4
24-36	4/12/2016 11:59	354.1	1.5	63.3	96.8	6.7	1.5	63.4	97.2	10.9	1.5	64.0	96.9	0	171.9
24-36	4/12/2016 12:00	26.4	3.0	63.2	96.9	18.0	3.0	63.3	97.1	32.0	2.2	63.8	96.9	0	194.4
24-36	4/12/2016 12:01	345.7	3.0	63.0	96.5	333.0	2.2	63.1	96.9	337.2	1.5	63.6	96.8	0	214.4
24-36	4/12/2016 12:02	324.6	2.2	63.0	97.0	314.8	2.2	63.0	97.1	330.2	1.5	63.6	96.9	0	211.9
24-36	4/12/2016 12:03	335.8	3.0	63.0	96.5	335.8	2.2	63.0	96.9	338.6	1.5	63.6	96.6	0	200.6
24-36	4/12/2016 12:04	355.5	0.7	63.0	96.9	2.5	1.5	63.1	97.5	5.3	0.7	63.6	97.2	0	185.6
24-36	4/12/2016 12:05	1.1	1.5	63.1	96.9	348.5	1.5	63.0	97.0	3.9	1.5	63.6	96.8	0	166.9
24-36	4/12/2016 12:06	352.7	1.5	63.0	96.9	1.1	1.5	63.0	97.1	12.3	1.5	63.5	97.0	0	165.6
24-36	4/12/2016 12:07	356.9	2.2	63.0	96.7	345.7	2.2	63.0	97.1	355.5	1.5	63.5	97.1	0	160.6
24-36	4/12/2016 12:08	338.6	2.2	63.0	96.8	321.8	2.2	63.1	97.2	341.5	1.5	63.5	97.1	0	130.6
24-36	4/12/2016 12:09	337.2	1.5	63.1	96.9	331.6	1.5	63.1	97.3	345.7	0.7	63.6	97.3	0	135.6
24-36	4/12/2016 12:10	355.5	1.5	63.1	96.8	341.5	1.5	63.1	97.2	349.9	0.7	63.6	97.1	0	153.1
24-36	4/12/2016 12:11	352.7	0.7	63.1	96.8	341.5	1.5	63.2	97.1	356.9	0.7	63.6	96.7	0	143.1
24-36	4/12/2016 12:12	47.4	1.5	63.2	97.0	29.2	1.5	63.3	97.4	44.6	0.7	63.6	97.3	0	134.4
24-36	4/12/2016 12:13	18.0	2.2	63.2	96.7	1.1	2.2	63.2	96.9	10.9	1.5	63.5	97.1	0	129.4
24-36	4/12/2016 12:14	358.3	2.2	63.2	97.0	356.3	2.2	63.2	97.4	23.6	1.5	63.5	97.3	0	109.4
24-36	4/12/2016 12:15	327.4	3.0	63.2	97.0	320.4	2.2	63.2	97.0	351.3	1.5	63.6	97.2	0	95.6
24-36	4/12/2016 12:16	340.0	3.0	63.1	96.6	330.2	2.2	63.0	97.0	331.6	1.5	63.5	97.1	0	98.1
24-36	4/12/2016 12:17	342.9	2.2	63.0	96.7	335.8	2.2	62.9	96.9	351.3	1.5	63.3	97.0	0	114.4
24-36	4/12/2016 12:18	330.2	3.0	62.9	96.7	316.2	3.0	62.9	97.1	324.6	1.5	63.3	97.1	0	134.4
24-36	4/12/2016 12:19	2.5	3.0	62.9	97.0	20.8	2.2	63.0	97.4	25.0	1.5	63.3	97.2	0	141.9
24-36	4/12/2016 12:20	349.9	3.0	62.9	96.5	337.2	3.0	62.9	96.7	342.9	2.2	63.3	96.9	0	148.1
24-36	4/12/2016 12:21	337.2	3.7	62.9	95.9	323.2	3.7	62.8	96.4	331.6	2.2	63.3	96.5	0	156.9
24-36	4/12/2016 12:22	335.8	3.0	62.9	96.5	330.2	3.0	62.9	96.4	327.4	2.2	63.3	96.6	0	161.9
24-36	4/12/2016 12:23	324.6	5.2	62.6	95.9	309.2	4.5	62.8	96.7	310.6	3.0	63.3	96.5	0	169.4
24-36	4/12/2016 12:24	333.0	2.2	62.9	96.7	312.0	1.5	62.9	97.0	303.5	0.7	63.3	96.9	0	161.9
24-36	4/12/2016 12:25	335.8	1.5	63.0	96.5	352.7	1.5	63.0	97.0	330.2	0.7	63.4	96.8	0	156.9
24-36	4/12/2016 12:26	334.4	1.5	63.0	96.1	335.8	2.2	63.0	96.7	335.8	0.7	63.3	96.5	0	140.6
24-36	4/12/2016 12:27	347.1	1.5	63.1	96.7	338.6	1.5	63.1	97.0	345.7	0.7	63.5	97.1	0	134.4

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
24-36	4/12/2016 12:28	323.2	3.0	63.0	96.1	323.2	3.0	63.0	96.5	333.0	1.5	63.5	96.7	0	136.9
24-36	4/12/2016 12:29	16.1	1.5	63.0	96.9	348.5	1.5	63.1	97.2	12.3	0.7	63.5	97.0	0	175.6
24-36	4/12/2016 12:30	326.0	1.5	63.1	96.7	320.4	1.5	63.2	97.2	326.0	0.7	63.6	97.1	0	170.6
24-36	4/12/2016 12:31	345.7	1.5	63.3	97.0	6.7	1.5	63.3	97.2	349.9	0.7	63.7	97.0	0	174.4
24-36	4/12/2016 12:32	16.5	1.5	63.3	96.7	39.0	1.5	63.3	97.2	20.8	0.7	63.7	97.2	0	219.4
24-36	4/12/2016 12:33	358.3	1.5	63.3	96.7	335.8	1.5	63.4	97.3	352.7	0.7	63.9	97.5	0	250.6
24-36	4/12/2016 12:34	41.8	3.0	63.4	96.7	57.3	3.0	63.5	97.1	65.7	2.2	63.9	96.8	0	293.1
24-36	4/12/2016 12:35	54.5	3.0	63.5	96.8	44.6	3.0	63.6	96.8	64.3	2.2	64.1	96.9	0	359.4
24-36	4/12/2016 12:36	48.8	3.7	63.5	95.9	41.8	2.2	63.7	96.4	57.3	2.2	64.2	96.4	0	385.6
24-36	4/12/2016 12:37	47.4	1.5	63.9	96.6	32.0	1.5	64.1	96.7	54.5	1.5	64.6	97.0	0	426.9
24-36	4/12/2016 12:38	36.2	2.2	64.2	96.2	27.8	2.2	64.5	96.3	41.8	1.5	65.0	96.4	0	486.9
24-36	4/12/2016 12:39	39.0	2.2	64.5	95.9	37.6	1.5	64.8	96.1	54.5	1.5	65.4	96.3	0	508.1
24-36	4/12/2016 12:40	12.3	3.0	64.6	95.1	13.7	3.0	64.9	95.4	22.2	2.2	65.6	95.8	0	473.1
24-36	4/12/2016 12:41	27.6	1.5	64.9	94.9	32.0	1.5	65.2	94.9	34.8	1.5	65.9	94.7	0	429.4
24-36	4/12/2016 12:42	10.9	3.7	64.8	93.1	347.1	3.0	65.0	94.0	6.1	2.2	65.8	94.3	0	415.6
24-36	4/12/2016 12:43	359.7	1.5	64.9	94.3	9.5	2.2	65.1	93.9	27.8	1.5	65.8	93.5	0	404.4
24-36	4/12/2016 12:44	351.3	2.2	64.9	94.7	337.2	2.2	65.2	94.9	342.9	1.5	66.0	95.0	0	400.6
24-36	4/12/2016 12:45	352.7	2.2	64.9	93.9	346.5	2.2	65.1	94.5	355.5	1.5	66.0	94.2	0	404.4
24-36	4/12/2016 12:46	356.9	3.0	64.8	92.9	352.7	3.0	64.9	93.3	2.5	2.2	65.9	93.4	0	386.9
24-36	4/12/2016 12:47	16.5	1.5	64.8	94.6	29.2	1.5	64.9	93.9	79.7	0.7	65.9	93.5	0	304.4
24-36	4/12/2016 12:48	12.3	3.0	64.6	93.3	6.7	3.0	64.8	93.8	18.0	2.2	65.6	93.4	0	239.4
24-36	4/12/2016 12:49	12.3	2.2	64.7	94.4	10.9	1.5	64.9	94.4	3.9	1.5	65.6	94.1	0	221.9
24-36	4/12/2016 12:50	19.4	1.5	65.0	95.4	25.0	1.5	65.1	95.4	19.4	0.7	65.8	94.7	0	210.6
24-36	4/12/2016 12:51	26.4	2.2	65.0	93.8	55.9	2.2	65.1	94.1	47.4	1.5	65.6	93.6	0	224.4
24-36	4/12/2016 12:52	26.4	2.2	64.9	93.6	22.2	1.5	65.0	93.7	48.8	0.7	65.6	93.7	0	258.1
24-36	4/12/2016 12:53	40.4	2.2	64.8	92.7	50.2	2.2	65.0	93.7	57.3	1.5	65.5	93.3	0	299.4
24-36	4/12/2016 12:54	54.5	2.2	64.8	93.3	57.3	2.2	65.1	94.2	61.5	1.5	65.6	94.2	0	364.4
24-36	4/12/2016 12:55	34.6	1.5	65.1	93.6	1.1	1.5	65.2	94.1	40.4	0.7	65.8	94.2	0	366.9
24-36	4/12/2016 12:56	324.6	3.0	65.1	93.1	312.0	3.0	65.3	94.2	317.6	1.5	66.1	94.0	0	371.9
24-36	4/12/2016 12:57	317.6	3.0	65.3	94.1	312.0	2.2	65.6	94.4	316.2	1.5	66.5	94.3	0	396.9
24-36	4/12/2016 12:58	338.6	1.5	65.5	93.2	336.6	1.5	65.7	93.5	348.5	0.7	66.7	92.5	0	419.4
24-36	4/12/2016 12:59	344.3	0.7	65.7	91.8	331.6	1.5	65.9	91.9	344.3	0.7	67.0	92.6	0	420.6
24-36	4/12/2016 13:00	333.0	2.2	65.6	90.6	327.4	2.2	65.6	90.9	327.4	1.5	67.0	90.5	0	428.1
24-36	4/12/2016 13:01	344.3	1.5	65.4	91.8	337.2	1.5	65.6	91.8	344.3	1.5	66.8	90.9	0	414.4
24-36	4/12/2016 13:02	338.6	2.2	65.4	91.0	333.0	3.0	65.4	90.6	334.4	1.5	66.7	90.6	0	368.1
24-36	4/12/2016 13:03	333.0	2.2	65.3	92.0	331.6	2.2	65.4	91.7	324.6	1.5	66.6	90.5	0	341.9
24-36	4/12/2016 13:04	1.1	2.2	65.4	92.0	321.8	2.2	65.5	91.3	333.0	1.5	66.7	90.4	0	340.6
24-36	4/12/2016 13:05	349.9	3.0	65.4	91.1	356.9	2.2	65.5	92.3	351.3	1.5	66.6	91.0	0	326.9
24-36	4/12/2016 13:06	6.7	1.5	65.5	90.2	355.5	1.5	65.7	90.7	359.7	0.7	66.6	90.3	0	343.1
24-36	4/12/2016 13:07	337.2	1.5	65.7	91.7	2.5	0.7	66.0	92.9	356.9	0.7	66.9	91.7	0	389.4
24-36	4/12/2016 13:08	348.5	1.5	66.2	92.1	356.9	1.5	66.4	92.3	358.3	0.7	67.3	91.7	0	436.9
24-36	4/12/2016 13:09	16.5	2.2	66.3	90.8	30.6	1.5	66.6	92.2	34.8	0.7	67.5	91.7	0	488.1
24-36	4/12/2016 13:10	331.6	1.5	66.6	90.3	307.8	1.5	66.9	91.2	341.5	1.5	68.0	91.3	0	600.6
24-36	4/12/2016 13:11	304.9	1.5	67.0	89.3	309.2	1.5	67.2	89.9	313.4	0.7	68.4	89.9	0	820.6
24-36	4/12/2016 13:12	304.9	0.7	67.2	89.4	314.8	0.7	67.5	89.4	313.4	0.7	69.0	88.7	0	589.4
24-36	4/12/2016 13:13	327.4	1.5	67.3	89.5	337.2	2.2	67.4	89.2	314.8	1.5	69.0	88.7	0	571.9
24-36	4/12/2016 13:14	319.0	4.5	67.0	88.7	309.2	3.7	67.2	88.7	309.2	2.2	69.2	87.8	0	625.6
24-36	4/12/2016 13:15	326.0	1.5	67.3	89.8	313.4	1.5	67.8	91.0	317.6	0.7	69.6	88.8	0	830.6
24-36	4/12/2016 13:16	334.4	2.2	67.9	89.7	334.4	1.5	68.3	88.3	333.0	0.7	70.1	87.2	0	1003.1
24-36	4/12/2016 13:17	345.7	1.5	68.3	89.7	337.2	1.5	68.8	89.8	341.5	0.7	70.5	86.9	0	754.4
24-36	4/12/2016 13:18	342.9	1.5	68.7	85.5	335.8	1.5	68.9	86.3	349.9	1.5	70.7	85.3	0	1163.1
24-36	4/12/2016 13:19	2.5	2.2	68.7	86.7	356.9	1.5	69.0	86.0	16.5	1.5	71.0	86.5	0	1090.6
24-36	4/12/2016 13:20	3.9	1.5	68.7	85.5	340.0	1.5	69.0	85.1	352.7	1.5	71.1	82.8	0	576.9
24-36	4/12/2016 13:21	321.8	2.2	68.6	86.4	351.3	2.2	69.1	86.6	58.7	1.5	70.6	85.0	0	745.6
24-36	4/12/2016 13:22	3.9	2.2	68.1	84.0	26.4	2.2	68.4	84.3	32.0	1.5	69.8	82.8	0	936.9
24-36	4/12/2016 13:23	337.2	2.2	67.8	84.9	321.8	2.2	68.3	86.5	327.4	1.5	70.0	85.7	0	705.6
24-36	4/12/2016 13:24	351.3	3.0	67.8	83.9	356.9	3.0	68.2	84.9	12.3	2.2	69.9	84.3	0	711.9
24-36	4/12/2016 13:25	358.3	2.2	67.7	84.6	345.7	2.2	68.0	85.7	3.9	1.5	69.7	84.1	0	603.1
24-36	4/12/2016 13:26	338.6	3.0	67.5	84.8	330.2	3.0	67.8	85.7	327.4	1.5	69.7	84.4	0	451.9
24-36	4/12/2016 13:27	5.3	1.5	67.3	84.8	3.9	1.5	67.7	84.6	352.7	0.7	69.3	83.5	0	445.6
24-36	4/12/2016 13:28	5.3	0.7	67.5	86.0	359.7	0.7	67.9	85.5	352.7	0.0	69.5	84.4	0	568.1
24-36	4/12/2016 13:29	292.3	2.2	67.6	84.3	247.4	2.2	68.0	84.9	244.6	1.5	69.4	83.1	0	701.9
24-36	4/12/2016 13:30	279.7	2.2	68.0	85.9	313.4	2.2	68.3	85.3	314.8	1.5	69.6	84.1	0	593.1
24-36	4/12/2016 13:31	354.1	2.2	68.1	85.2	354.1	1.5	68.4	86.2	6.1	0.7	69.6	84.7	0	575.6
24-36	4/12/2016 13:32	320.4	2.2	68.5	86.2	304.9	2.2	68.8	87.2	317.6	1.5	70.2	86.0	0	581.9
24-36	4/12/2016 13:33	293.7	4.5	68.5	85.0	295.1	3.7	68.7	84.1	299.3	3.0	70.6	83.8	0	535.6
24-36	4/12/2016 13:34	309.2	4.5	68.3	84.5	302.1	3.7	68.5	84.6	309.2	3.0	70.6	83.6	0	550.6
24-36	4/12/2016 13:35	319.0	3.7	68.0	84.0	309.2	3.0	68.3	84.5	316.2	2.2	70.7	82.2	0	621.9
24-36	4/12/2016 13:36	334.4	2.2	68.2	88.0	334.4	2.2	68.8	87.2	341.5	1.5	70.8	84.7	0	650.6
24-36	4/12/2016 13:37	19.4	2.2	68.9	85.6	352.7	1.5	69.3	86.5	27.8	1.5	71.1	84.6	0	969.4
24-36	4/12/2016 13:38	351.3	1.5	69.5	83.0	349.9	1.5	69.7	82.3	5.3	1.5	71.5	81.8	0	1136.9
24-36	4/12/2016 13:39	354.1	3.0	69.0	83.0	340.0	3.0	69.3	82.8	358.3	2.2	71.0	81.6	0	563.1
24-36	4/12/2016 13:40	340.0	2.2	68.8	82.4	328.8	1.5	69.0	82.1	351.3	0.7	70.8	80.4	0	676.9
24-36	4/12/2016 13:41	331.6	2.2	68.7	84.7	314.8	2.2	69.1	84.1	333.0	1.5	70.8	82.5	0	641.9
24-36	4/12/2016 13:42	333.0	4.5	68.7	83.4	330.2	3.7	68.8	82.8	334.4	3.0	70.7	81.2	0	519.4
24-36	4/12/2016 13:43	356.9	2.2	68.5	83.3	355.5	2.2	68.7	83.4	9.5	1.5	70.4	81.9	0	433.1
24-36	4/12/2016 13:44	16.1	3.7	68.1	83.2	349.9	3.7	68.3	83.2	9.5	3.0	69.8	81.6	0	400.6
24-36	4/12/2016 13:45	303.5	4.5	68.0	83.0	297.9	4.5	68.1	83.3	303.5	3.0	69.9	82.1	0	371.9
24-36	4/12/2016 13:46	327.4	3.7	67.7	84.9	327.4	3.7	67.9	83.5	330.2	2.2	69.5	81.8	0	344.4
24-36	4/12/2016 13:47	323.2	5.2	67.6	83.1	314.8	4.5	67.6	83.4	314.8	3.0	69.3	81.6	0	324.4
24-36	4/12/2016 13:48	334.4	3.0	67.4	82.1	324.6	2.2	67.4	83.6	327.4	1.5	69.0	81.7	0	289.4
24-36	4/12/2016 13:49	345.7	2.2	67.3	83.2	334.4	2.2	67.3	83.2	341.5	1.5	68.6	81.4	0	275.6
24-36	4/12/2016 13:50	341.5	2.2	67.2	82.6	342.9	2.2	67.3	83.7	348.5	1.5	68.4	82.3	0	285.6
24-36	4/12/2016 13:51	2.5	2.2	67.3	83.7	2.5	1.5	67.5	84.3	27.8	1.5	68.4	83.0	0	320.6
24-36	4/12/2016 13:52	348.5	2.2	67.3	83.2	337.2	3.0	67.4	84.3	348.5	2.2	68.3	83.3	0	349.4
24-36	4/12/2016 13:53	16.5	1.5	67.5	84.3	3.9	0.7	67.6	84.8	6.1	0.7	68.5	83.5	0	379.4
24-36	4/12/2016 13:54	16.5	0.7	67.8	82.8	344.3	1.5	67.8	82.6	1.1	0.7	68.7	82.4	0	409.4
24-36	4/12/2016 13:55	337.2	2.2	67.8	82.6	316.2	2.2	67.9	83.1	335.8	1.5	69.0	82.8	0	444.4
24-36	4/12/2016 13:56	323.2	1.5	68.0	84.6	313.4	1.5	68.2	85.6	330.2	0.7	69.3	84.6	0	486.9
24-36	4/12/2016 13:57	333.0	1.5	68.5	84.3	328.8	1.5	68.8	84.9	330.2	0.7	69.8	83.8	0	528.1
24-36	4/12/2016 13:58	345.7	0.7	69.1	84.5	337.2	1.5	69.5	84.8	320.4	0.7	70.5	83.7	0	576.9
24-36	4/12/2016 13:59	281.1	2.2	69.5	81.8	279.7	2.2	69.8	82.1	281.1	1.5	71.0	82.1	0	605.6
24-36	4/12/2016 14:00	310.6	3.7	69.3	80.7	303.5	3.0	69.5	81.8	310.6	2.2	71.3	81.3	0	675.6
24-36	4/12/2016 14:01	306.4	2.2	69.3	80.6	297.9	1.5	69.6	80.8	314.8	0.7	71.7	80.0	0	686.1
24-36	4/12/2016 14:02	303.5	1.5	69.6	81.6	302.1	0.7	69.9	81.5	314.8	0.7	72.0	79.7	0	614.4
24-36	4/12/2016 14:03	275.5	2.2	69.8	80.9	265.6	3.0	70.1	81.2	271.3	1.5	72.1	79.3	0	584.4
24-36	4/12/2016 14:04	286.7	3.0	69.7	79.8	274.1	2.2	70.0	81.1	286.7	1.5	71.9	78.6	0	631.9
24-36	4/12/2016 14:05	306.4	2.2	69.9	80.7	304.9	2.2	70.2	81.5	297.9	1.5	72.0	79.4	0	823.1
24-36	4/12/2016 14:06	321.8	0.7	70.0	79.1	309.2	0.7	70.5	79.9	297.9	0.0	72.2	77.2	0	665.6
24-36	4/12/2016 14:07	321.8	0.7	70.4	79.9	307.8	0.7	70.8	79.9	297.9	0.0	72.4	77.7	0	675.6
24-36	4/12/2016 14:08	289.5	1.5	70.7	79.3	244.6	1.5	71.2	80.0	276.9	0.7	72.7	78.5	0	1034.4
24-36	4/12/2016 14:09	175.2	2.2	70.7	79.1	165.4	1.5	71.2	78.8	201.1	1.5	72.7	77.7	0	903.1
24-36	4/12/2016 14:10	188.4	2.2	70.7	79.8	175.2	2.2	71.2	80.4	194.0	1.5	72.7	79.5	0	798.1
24-36	4/12/2016 14:11	208.1	3.7	70.7	79.9	216.5	3.0	71.2	80.0	222.1	2.2	72.7	78.6	0	798.1
24-36	4/12/2016 14:12	234.8	2.2	70.6	81.7	224.9	3.0	71.4	80.7	224.9	1.5	72.7	79.8	0	878.9
24-36	4/12/2016 14:13	230.5	3.7	71.1	79.3	233.3	3.0	71.7	80.3	231.9	1.5	72.9	79.6	0	774.4
24-36	4/12/2016 14:14	246.0	3.0	71.4	79.3	246.0	3.0	72.1	79.3	254.4	2.2	73.0	79.0	0	668.1
24-36	4/12/2016 14:15	247.4	4.5	71.1	77.8	236.2	4.5	71.9	79.0	241.8	3.0	72.7	77.4	0	636.9
24-36	4/12/2016 14:16	246.0	3.7	70.8	78.4	244.6	3.0	71.7	78.9	247.4	2.2	72.2	77.3	0	564.4
24-36	4/12/2016 14:17	254.4	2.2	70.6	77.9	261.4	1.5	71.7	78.9	251.6	0.7	72.4	79.0	0	1090.6
24-36	4/12/2016 14:18	260.0	2.2	71.4	79.9	269.9	2.2	72.4	78.9	274.1	1.5	73.2	79.1	0	1038.1
24-36	4/12/2016 14:19	286.7	3.0	71.9	78.8	278.3	3.0	72.7	78.9	283.9	1.5	73.9	78.8	0	1019.4
24-36	4/12/2016 14:20	297.9	4.5	72.1	77.1	289.5	3.7	72.7	77.9	295.1	2.2	74.5	77.1	0	1028.1
24-36	4/12/2016 14:21	303.5	3.7	71.7	75.6	290.9	3.0	72.3	75.9	289.5	2.2	74.8	75.4	0	1030.6
24-36	4/12/2016 14:22	300.7	3.0	71.2	75.9	296.5	2.2	72.1	76.5	295.1	1.5	74.8	74.0	0	1019.4

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
24-36	4/12/2016 14:23	297.9	2.2	71.4	75.2	285.3	2.2	72.0	75.3	293.7	1.5	74.9	72.8	0	1019.4
24-36	4/12/2016 14:24	290.9	1.5	71.4	76.1	276.9	1.5	72.2	76.4	288.1	0.7	75.1	74.9	0	1049.4
24-36	4/12/2016 14:25	296.5	2.2	71.5	74.8	290.9	2.2	71.9	75.3	289.5	1.5	75.2	73.0	0	463.1
24-36	4/12/2016 14:26	292.3	3.0	71.1	75.2	283.9	2.2	71.7	76.2	285.3	1.5	74.9	73.1	0	1006.9
24-36	4/12/2016 14:27	302.1	0.7	71.3	77.8	309.2	0.7	72.1	76.4	293.7	0.7	74.9	72.4	0	823.1
24-36	4/12/2016 14:28	314.8	1.5	71.5	78.8	333.0	1.5	72.1	76.8	320.4	1.5	74.4	74.5	0	269.4
24-36	4/12/2016 14:29	328.8	3.0	71.1	76.8	321.8	3.0	71.3	76.8	327.4	1.5	73.7	73.7	0	276.9
24-36	4/12/2016 14:30	338.6	2.2	70.6	78.7	321.8	1.5	70.9	76.5	330.2	1.5	73.0	75.2	0	304.4
24-36	4/12/2016 14:31	306.4	3.7	70.4	77.3	297.9	3.7	70.5	76.9	304.9	2.2	72.9	74.6	0	351.9
24-36	4/12/2016 14:32	292.3	3.0	70.2	77.6	285.3	3.0	70.3	77.6	285.3	2.2	72.7	74.7	0	326.9
24-36	4/12/2016 14:33	300.7	3.0	70.0	77.3	300.7	3.0	70.3	76.4	303.5	2.2	72.6	75.3	0	798.1
24-36	4/12/2016 14:34	309.2	2.2	70.5	77.4	306.4	1.5	70.8	77.5	313.4	1.5	73.1	74.9	0	618.1
24-36	4/12/2016 14:35	303.5	1.5	70.9	78.2	300.7	1.5	71.1	77.3	316.2	0.7	73.5	74.8	0	345.6
24-36	4/12/2016 14:36	307.8	1.5	70.9	77.1	286.7	1.5	71.2	77.1	307.8	0.7	73.2	74.3	0	284.4
24-36	4/12/2016 14:37	303.5	1.5	70.8	76.3	279.7	1.5	71.0	77.1	295.1	0.7	73.0	74.4	0	270.6
24-36	4/12/2016 14:38	302.1	1.5	70.8	77.5	278.3	1.5	71.1	77.1	292.3	0.7	73.0	75.2	0	954.4
24-36	4/12/2016 14:39	290.9	1.5	71.3	77.7	276.9	1.5	71.8	77.7	288.1	0.7	73.6	75.1	0	1175.6
24-36	4/12/2016 14:40	290.9	1.5	72.1	77.4	274.1	0.7	72.7	77.7	288.1	0.7	74.4	75.0	0	413.1
24-36	4/12/2016 14:41	281.1	1.5	72.6	77.7	241.8	1.5	73.4	77.9	262.5	0.7	74.8	74.9	0	548.1
24-36	4/12/2016 14:42	279.7	0.7	72.9	74.6	265.6	0.7	73.6	75.9	262.5	0.7	75.2	73.6	0	1045.6
24-36	4/12/2016 14:43	262.8	1.5	73.4	75.6	243.2	2.2	74.2	75.9	260.0	1.5	75.6	73.6	0	495.6
24-36	4/12/2016 14:44	229.1	2.2	73.3	73.6	223.5	1.5	74.0	74.3	244.6	1.5	75.3	72.4	0	1195.6
24-36	4/12/2016 14:45	265.6	2.2	73.3	74.0	271.3	2.2	74.0	73.8	262.5	1.5	75.9	72.2	0	1113.1
24-36	4/12/2016 14:46	276.9	1.5	73.6	73.1	283.9	2.2	74.1	72.1	283.9	1.5	76.3	70.6	0	1081.9
24-36	4/12/2016 14:47	288.1	3.0	73.4	71.7	281.1	2.2	74.0	71.3	292.3	1.5	76.7	69.3	0	770.6
24-36	4/12/2016 14:48	272.7	2.2	73.4	73.1	257.2	2.2	74.5	74.1	265.6	0.7	77.0	71.0	0	1163.1
24-36	4/12/2016 14:49	275.5	3.0	73.7	71.7	279.7	3.0	74.2	71.2	281.1	2.2	77.1	68.5	0	300.6
24-36	4/12/2016 14:50	268.4	3.7	73.1	70.9	262.8	3.0	73.6	71.7	271.3	1.5	76.3	67.9	0	276.9
24-36	4/12/2016 14:51	261.4	3.0	72.7	72.6	260.0	3.0	73.3	72.4	267.0	2.2	75.3	68.8	0	290.6
24-36	4/12/2016 14:52	272.7	3.0	72.5	73.5	275.5	3.0	72.9	73.8	285.3	1.5	74.8	71.6	0	371.9
24-36	4/12/2016 14:53	307.8	4.5	72.5	72.8	304.9	4.5	72.9	73.7	310.6	3.0	75.0	71.8	0	1199.4
24-36	4/12/2016 14:54	319.0	3.0	73.0	75.4	295.1	2.2	73.8	75.5	302.1	1.5	75.8	72.9	0	1133.1
24-36	4/12/2016 14:55	281.1	1.5	73.7	72.4	262.8	1.5	74.5	72.7	282.5	0.7	76.3	68.6	0	1095.6
24-36	4/12/2016 14:56	272.7	0.7	74.4	73.9	268.4	1.5	75.3	73.3	282.5	0.7	77.0	71.0	0	1069.4
24-36	4/12/2016 14:57	326.0	3.0	74.9	70.8	333.0	2.2	75.3	70.1	344.3	1.5	77.2	68.8	0	1075.6
24-36	4/12/2016 14:58	347.1	2.2	74.3	68.7	340.0	1.5	74.7	69.0	344.3	1.5	76.9	67.5	0	1088.1
24-36	4/12/2016 14:59	347.1	2.2	73.9	68.5	355.5	2.2	74.4	69.5	352.7	2.2	76.4	67.0	0	1143.1
24-36	4/12/2016 15:00	349.9	2.2	73.7	71.4	324.6	1.5	74.5	71.8	349.9	0.7	76.6	70.0	0	1205.6
24-36	4/12/2016 15:01	292.3	3.7	74.5	70.4	282.5	3.7	75.0	69.2	286.7	2.2	77.5	67.8	0	1220.6
24-36	4/12/2016 15:02	289.5	3.7	74.6	69.8	285.3	4.5	75.2	70.1	289.5	3.0	78.2	67.2	0	1115.6
24-36	4/12/2016 15:03	288.1	6.7	74.5	67.6	283.9	6.0	74.9	69.3	293.7	4.5	78.0	66.3	0	879.4
24-36	4/12/2016 15:04	310.6	3.7	74.6	69.1	304.9	3.7	75.1	68.1	309.2	2.2	78.1	65.9	0	1131.9
24-36	4/12/2016 15:05	320.4	2.2	74.6	67.6	326.0	2.2	74.9	66.5	323.2	0.7	78.1	62.7	0	428.9
24-36	4/12/2016 15:06	349.9	3.0	73.9	67.6	324.6	2.2	74.1	68.6	327.4	1.5	76.9	65.3	0	418.1
24-36	4/12/2016 15:07	309.2	3.7	73.6	68.6	303.5	3.7	73.9	70.7	304.9	2.2	76.8	66.8	0	754.4
24-36	4/12/2016 15:08	281.1	5.2	73.6	67.9	274.1	4.5	73.7	68.6	278.3	3.7	76.4	64.7	0	748.1
24-36	4/12/2016 15:09	282.5	5.2	73.1	69.6	274.1	4.5	73.3	70.2	286.7	3.0	75.9	67.2	0	424.4
24-36	4/12/2016 15:10	275.5	4.5	73.0	70.1	268.4	4.5	73.2	70.3	275.5	3.0	75.3	67.2	0	308.9
24-36	4/12/2016 15:11	258.6	4.5	72.7	70.5	250.2	3.7	73.0	70.7	255.8	3.0	74.5	67.6	0	298.1
24-36	4/12/2016 15:12	258.6	4.5	72.4	71.4	262.8	3.7	72.8	71.0	268.4	3.0	73.8	69.2	0	286.9
24-36	4/12/2016 15:13	276.9	3.7	72.4	71.7	271.3	3.7	72.6	71.2	278.3	2.2	73.6	69.8	0	259.4
24-36	4/12/2016 15:14	279.7	3.7	72.2	71.6	268.4	3.0	72.4	71.8	269.9	1.5	73.4	70.0	0	234.4
24-36	4/12/2016 15:15	269.9	2.2	72.2	72.5	275.5	2.2	72.4	72.7	276.9	0.7	73.4	71.5	0	298.9
24-36	4/12/2016 15:16	272.7	2.2	72.5	72.6	269.9	2.2	72.8	71.9	282.5	1.5	73.8	71.4	0	744.4
24-36	4/12/2016 15:17	283.9	2.2	73.0	73.0	278.3	2.2	73.3	72.5	282.5	1.5	74.5	72.0	0	941.9
24-36	4/12/2016 15:18	298.5	3.0	73.4	71.6	293.7	3.0	73.8	71.2	292.3	1.5	75.4	70.4	0	1205.6
24-36	4/12/2016 15:19	320.4	3.0	74.0	72.4	303.5	3.0	74.3	71.6	299.3	2.2	76.2	70.0	0	365.6
24-36	4/12/2016 15:20	289.5	3.7	74.0	69.9	290.9	3.0	74.1	71.2	290.9	1.5	76.2	69.3	0	298.9
24-36	4/12/2016 15:21	302.1	3.0	73.6	69.2	295.1	3.0	73.6	68.9	293.7	1.5	76.0	67.3	0	261.9
24-36	4/12/2016 15:22	310.6	3.7	73.0	69.4	307.8	4.5	72.9	70.3	312.0	3.0	75.5	67.1	0	260.6
24-36	4/12/2016 15:23	309.2	4.5	72.4	69.1	304.9	3.7	72.4	69.4	313.4	2.2	74.8	66.5	0	243.1
24-36	4/12/2016 15:24	326.0	3.0	72.1	71.0	320.4	3.0	72.1	71.8	327.4	1.5	74.3	68.0	0	234.4
24-36	4/12/2016 15:25	323.2	2.2	72.1	70.5	307.8	1.5	72.1	71.8	319.0	0.7	74.0	68.6	0	235.6
24-36	4/12/2016 15:26	307.8	2.2	72.0	71.7	300.7	2.2	72.1	72.3	285.3	1.5	73.9	69.6	0	240.6
24-36	4/12/2016 15:27	293.7	2.2	72.1	72.9	288.1	2.2	72.2	72.8	271.3	1.5	73.7	70.3	0	251.9
24-36	4/12/2016 15:28	317.6	2.2	72.1	72.2	317.6	1.5	72.1	71.9	300.7	0.7	73.5	69.9	0	285.6
24-36	4/12/2016 15:29	330.2	1.5	72.0	70.8	314.8	1.5	72.1	71.5	300.7	0.7	73.3	69.8	0	286.1
24-36	4/12/2016 15:30	319.0	2.2	72.0	71.3	302.1	2.2	72.1	72.1	302.1	1.5	73.4	70.4	0	275.6
24-36	4/12/2016 15:31	327.4	3.0	72.0	71.8	337.2	3.0	72.1	71.4	330.2	1.5	73.3	69.3	0	260.6
24-36	4/12/2016 15:32	13.7	3.7	71.6	71.3	351.3	3.0	71.9	71.1	13.7	2.2	72.9	70.1	0	256.1
24-36	4/12/2016 15:33	335.8	3.7	71.6	71.9	328.8	3.7	71.9	71.7	335.8	2.2	72.8	70.6	0	269.4
24-36	4/12/2016 15:34	336.6	3.0	71.6	71.4	330.2	2.2	71.8	72.3	342.9	1.5	72.7	71.1	0	279.4
24-36	4/12/2016 15:35	327.4	2.2	71.9	72.0	316.2	2.2	71.9	71.8	321.8	1.5	72.7	71.0	0	286.9
24-36	4/12/2016 15:36	333.0	3.0	71.6	70.3	328.8	2.2	71.8	70.9	334.4	1.5	72.7	70.4	0	284.4
24-36	4/12/2016 15:37	340.0	3.7	71.7	71.4	337.2	3.0	71.7	71.7	351.3	2.2	72.6	70.5	0	264.4
24-36	4/12/2016 15:38	309.2	3.7	71.7	71.9	289.5	3.7	71.7	72.3	306.4	3.0	72.5	71.1	0	233.1
24-36	4/12/2016 15:39	278.3	4.5	71.7	72.1	279.7	3.7	71.7	72.4	288.1	3.0	72.5	71.5	0	225.6
24-36	4/12/2016 15:40	285.3	4.5	71.6	71.9	276.9	4.5	71.5	72.2	282.5	3.0	72.4	71.3	0	225.6
24-36	4/12/2016 15:41	295.1	3.7	71.5	72.7	292.3	3.0	71.5	73.5	295.1	2.2	72.3	72.1	0	226.9
24-36	4/12/2016 15:42	299.3	3.7	71.4	72.2	293.7	3.7	71.4	73.3	303.5	2.2	72.4	72.2	0	233.1
24-36	4/12/2016 15:43	302.1	3.0	71.4	73.3	297.9	3.0	71.4	72.6	302.1	1.5	72.4	71.7	0	230.6
24-36	4/12/2016 15:44	333.0	3.0	71.3	72.4	330.2	2.2	71.4	72.9	309.2	0.7	72.2	72.0	0	220.6
24-36	4/12/2016 15:45	320.4	2.2	71.4	74.2	302.1	2.2	71.4	74.6	314.8	1.5	72.2	73.3	0	228.1
24-36	4/12/2016 15:46	279.7	3.7	71.5	72.1	288.4	3.0	71.6	72.9	275.5	2.2	72.3	72.3	0	350.6
24-36	4/12/2016 15:47	292.3	3.7	71.7	72.9	293.7	3.0	71.9	73.0	296.5	2.2	72.6	72.6	0	330.6
24-36	4/12/2016 15:48	300.7	3.0	72.1	72.7	293.7	3.0	72.3	72.7	312.0	2.2	73.3	72.2	0	671.9
24-36	4/12/2016 15:49	292.3	5.2	72.4	71.6	281.1	4.5	72.7	72.3	286.7	3.7	74.0	71.3	0	1159.4
24-36	4/12/2016 15:50	283.9	5.2	72.7	70.2	281.1	4.5	73.0	70.7	279.7	3.0	74.4	69.9	0	426.9
24-36	4/12/2016 15:51	298.5	3.0	73.0	71.2	282.5	2.2	73.3	72.3	295.1	1.5	74.6	70.9	0	536.9
24-36	4/12/2016 15:52	300.7	2.2	73.5	71.2	279.7	2.2	73.8	70.2	292.3	1.5	75.2	69.6	0	423.1
24-36	4/12/2016 15:53	303.5	3.0	73.5	69.6	269.5	3.0	73.6	70.4	295.1	2.2	75.5	69.2	0	439.4
24-36	4/12/2016 15:54	285.3	3.7	73.6	69.7	286.1	3.7	73.8	69.9	286.7	2.2	75.7	68.1	0	459.4
24-36	4/12/2016 15:55	303.5	3.7	73.5	69.2	302.1	3.7	73.6	69.2	309.2	2.2	75.7	67.8	0	434.4
24-36	4/12/2016 15:56	304.9	3.0	73.4	71.1	283.9	1.5	73.8	71.6	297.9	1.5	75.6	69.7	0	799.4
24-36	4/12/2016 15:57	283.9	2.2	74.0	70.6	274.1	2.2	74.3	69.8	281.1	1.5	76.2	68.2	0	496.9
24-36	4/12/2016 15:58	282.5	3.0	74.2	67.3	278.3	3.0	74.3	68.2	286.7	2.2	76.4	65.8	0	396.9
24-36	4/12/2016 15:59	279.7	3.0	73.8	66.8	281.1	2.2	73.9	67.7	283.9	1.5	76.2	65.6	0	351.9
24-36	4/12/2016 16:00	292.3	2.2	73.5	69.0	283.9	2.2	73.7	69.0	289.5	1.5	75.9	66.6	0	315.6
24-36	4/12/2016 16:01	295.1	2.2	73.3	67.9	286.7	2.2	73.4	69.3	300.7	1.5	75.7	66.8	0	444.4
24-36	4/12/2016 16:02	310.6	3.0	73.4	68.4	314.8	3.0	73.6	68.8	314.8	1.5	75.6	66.2	0	423.1
24-36	4/12/2016 16:03	326.0	3.7	73.4	66.7	310.6	3.7	73.4	66.4	316.2	3.0	75.5	64.3	0	326.9
24-36	4/12/2016 16:04	340.0	3.0	72.9	67.6	331.6	3.0	73.0	67.5	341.5	1.5	74.8	65.2	0	351.9
24-36	4/12/2016 16:05	335.8	2.2	72.8	69.1	333.0	2.2	73.1	68.5	328.8	1.5	74.6	66.5	0	1024.4
24-36	4/12/2016 16:06	324.6	3.7	73.3	68.9	307.8	3.7	73.6	70.0	317.6	2.2	75.1	68.3	0	378.1
24-36	4/12/2016 16:07	272.7	4.5	73.6	68.3	258.6	4.5	73.9	68.6	262.8	3.0	75.2	66.3	0	346.9
24-36	4/12/2016 16:08	275.5	3.7	73.6	68.1	258.6	3.0	73.9	69.0	265.6	1.5	75.0	67.1	0	314.4
24-36	4/12/2016 16:09	272.7	3.0	73.6	67.3	268.4	3.0	73.9	67.7	271.3	1.5	74.9	66.5	0	629.4
24-36	4/12/2016 16:10	272.7	3.0	73.6	68.1	280.0	3.0	73.8	69.0	271.3	2.2	74.9	67.8	0	286.9
24-36	4/12/2016 16:11	267.0	4.5	73.3	67.9	258.6	3.7	73.6	67.7	262.8	2.2	74.5	65.9	0	465.6
24-36	4/12/2016 16:12	262.8	3.7	73.3	68.5	261.4	3.0	73.7	68.8	268.4	2.2	74.5	67.8	0	330.6
24-36	4/12/2016 16:13	262.8	3.7	73.4	68.6	265.6	3.7	73.6	68.5	269.9	2.2	74.4	68.1	0	298.1
24-36	4/12/2016 16:14	283.9	4.5	73.1	68.5	282.5	3.7	73.2	68.4	289.5	2.2	74.3	67.7	0	268.1
24-36	4/12/2016 16:15	307.8	3.7	72.8	68.2	303.5	3.0	72.9	68.6	312.0	2.2	74.2	67.8	0	238.1
24-36	4/12/2016 16:16	323.2	3.7	72.5	68.0	319.0	3.0	72.5	68.3	313.4	1.5	73.8	67.0	0	215.6
24-36	4/12/2016 16:17	331.6	3.0	72.3	69.4	319.0	2.2	72.3	69.3	317.6	1.5	73.6	67.8	0	219.4

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
24-36	4/12/2016 16:18	302.1	3.0	72.2	70.3	286.7	3.0	72.2	71.2	299.3	2.2	73.5	68.9	0	229.4
24-36	4/12/2016 16:19	302.1	3.7	72.4	70.3	295.1	3.0	72.6	70.5	302.1	2.2	73.9	69.5	0	765.6
24-36	4/12/2016 16:20	282.5	3.0	73.1	70.9	275.5	3.0	73.4	71.2	279.7	2.2	74.9	69.9	0	724.4
24-36	4/12/2016 16:21	281.1	3.7	73.8	69.4	276.9	3.7	74.1	69.5	265.3	2.2	75.7	68.8	0	716.9
24-36	4/12/2016 16:22	302.1	4.5	74.0	67.0	297.9	3.7	74.2	68.3	309.2	3.0	76.5	66.7	0	713.1
24-36	4/12/2016 16:23	302.1	3.7	74.3	68.2	296.5	3.7	74.6	68.8	303.5	2.2	77.1	66.5	0	715.6
24-36	4/12/2016 16:24	297.9	4.5	74.1	66.5	292.3	4.5	74.2	68.9	299.3	3.0	77.2	64.5	0	719.4
24-36	4/12/2016 16:25	303.5	3.7	73.9	66.8	295.1	3.7	74.1	67.9	299.3	2.2	77.3	64.6	0	718.1
24-36	4/12/2016 16:26	310.6	3.0	74.1	67.6	304.9	3.0	74.4	66.0	307.8	1.5	77.6	64.7	0	744.4
24-36	4/12/2016 16:27	297.9	3.0	74.1	67.0	290.9	3.0	74.1	67.3	296.5	2.2	77.4	63.4	0	116.9
24-36	4/12/2016 16:28	283.9	2.2	73.6	69.0	285.3	2.2	73.7	68.6	293.7	1.5	76.6	64.6	0	233.1
24-36	4/12/2016 16:29	347.1	2.2	73.1	67.3	342.9	2.2	73.0	68.0	345.7	1.5	75.1	64.1	0	328.1
24-36	4/12/2016 16:30	344.3	2.2	72.7	67.4	338.6	1.5	72.7	67.7	345.7	1.5	74.3	64.6	0	601.9
24-36	4/12/2016 16:31	334.4	2.2	72.7	67.5	320.4	1.5	72.8	68.4	334.4	0.7	74.3	66.5	0	446.9
24-36	4/12/2016 16:32	338.6	1.5	73.0	70.6	326.0	1.5	73.2	71.0	334.4	0.7	74.7	68.2	0	215.6
24-36	4/12/2016 16:33	334.4	1.5	73.6	69.5	317.6	1.5	73.9	68.7	334.4	0.7	75.4	66.8	0	781.9
24-36	4/12/2016 16:34	324.6	3.0	74.1	67.3	313.4	2.2	74.3	67.6	330.2	1.5	76.2	66.7	0	754.4
24-36	4/12/2016 16:35	303.5	2.2	74.6	66.2	293.7	2.2	74.8	67.9	293.7	1.5	77.1	65.6	0	735.6
24-36	4/12/2016 16:36	282.5	1.5	75.1	67.5	286.1	1.5	75.4	67.4	263.9	0.7	78.0	65.0	0	733.1
24-36	4/12/2016 16:37	271.3	1.5	75.5	65.2	286.7	1.5	75.6	66.2	262.5	0.7	78.8	63.5	0	723.1
24-36	4/12/2016 16:38	290.9	3.0	75.7	65.1	282.5	2.2	75.8	65.3	269.5	1.5	79.3	62.4	0	728.1
24-36	4/12/2016 16:39	285.3	2.2	75.9	66.4	281.1	2.2	76.2	66.1	269.5	1.5	79.7	62.3	0	730.6
24-36	4/12/2016 16:40	295.1	3.7	75.8	65.2	296.5	3.7	76.1	65.1	292.3	2.2	79.8	61.2	0	750.6
24-36	4/12/2016 16:41	321.8	3.7	75.6	64.0	302.1	3.7	75.7	64.4	306.4	2.2	79.7	59.9	0	735.6
24-36	4/12/2016 16:42	296.5	4.5	75.1	65.6	293.7	3.7	75.3	65.7	306.4	2.2	79.3	60.7	0	234.4
24-36	4/12/2016 16:43	313.4	3.7	74.7	64.5	304.9	3.0	74.7	65.4	309.2	2.2	78.4	60.2	0	294.4
24-36	4/12/2016 16:44	309.2	3.7	74.1	65.5	299.3	3.7	74.1	65.5	304.9	2.2	77.5	60.6	0	259.4
24-36	4/12/2016 16:45	300.7	3.7	73.6	67.4	281.1	3.0	73.8	67.9	303.5	1.5	76.7	62.9	0	248.1
24-36	4/12/2016 16:46	319.0	2.2	73.6	66.6	307.8	1.5	73.8	66.9	289.5	0.7	76.4	62.2	0	240.6
24-36	4/12/2016 16:47	328.8	1.5	73.6	67.0	306.4	1.5	73.8	67.8	297.9	0.7	75.9	63.8	0	180.6
24-36	4/12/2016 16:48	282.5	3.0	73.6	67.2	271.3	3.0	73.6	67.4	275.5	1.5	75.4	64.1	0	148.9
24-36	4/12/2016 16:49	286.7	3.7	73.3	66.4	278.3	3.7	73.2	67.3	282.5	2.2	74.8	64.9	0	128.9
24-36	4/12/2016 16:50	262.8	3.7	72.9	68.2	257.2	3.7	73.0	68.7	264.2	2.2	74.0	66.7	0	131.9
24-36	4/12/2016 16:51	258.6	3.7	72.7	69.1	254.4	3.0	72.8	69.3	268.4	2.2	73.4	68.1	0	128.1
24-36	4/12/2016 16:52	255.8	2.2	72.5	69.8	251.6	2.2	72.7	70.0	267.0	1.5	73.1	69.3	0	128.1
24-36	4/12/2016 16:53	267.0	1.5	72.7	70.5	257.2	1.5	73.0	70.5	268.4	0.7	73.5	70.1	0	668.1
24-36	4/12/2016 16:54	262.8	3.0	73.3	70.3	257.2	3.0	73.7	70.4	272.7	1.5	74.5	69.4	0	658.1
24-36	4/12/2016 16:55	254.4	3.0	74.0	69.5	248.8	3.0	74.5	70.3	255.8	2.2	75.4	69.3	0	656.9
24-36	4/12/2016 16:56	254.4	3.0	74.9	69.7	260.0	3.0	75.2	68.6	267.0	2.2	76.3	67.5	0	664.4
24-36	4/12/2016 16:57	283.9	3.7	75.2	65.8	283.9	3.7	75.3	65.9	285.3	2.2	77.0	65.1	0	676.1
24-36	4/12/2016 16:58	265.6	3.7	75.3	66.2	253.0	3.0	75.7	67.1	264.2	1.5	77.5	64.8	0	633.1
24-36	4/12/2016 16:59	265.6	3.7	75.5	65.5	253.0	3.0	75.7	66.2	262.8	2.2	77.5	63.0	0	103.1
24-36	4/12/2016 17:00	255.8	3.7	75.0	64.5	257.2	3.0	75.2	64.5	257.2	2.2	76.6	62.3	0	529.4
24-36	4/12/2016 17:01	278.3	3.0	74.7	64.5	282.5	2.2	75.0	65.8	285.3	1.5	76.7	64.1	0	640.6
24-36	4/12/2016 17:02	279.7	3.0	74.6	64.3	275.5	3.0	75.0	65.3	281.1	1.5	77.1	63.6	0	626.9
24-36	4/12/2016 17:03	274.1	3.0	75.0	65.6	271.3	3.0	75.4	65.5	281.1	2.2	77.5	62.9	0	616.9
24-36	4/12/2016 17:04	281.1	3.0	75.3	66.3	279.7	2.2	75.6	65.9	286.7	1.5	77.9	63.4	0	618.1
24-36	4/12/2016 17:05	300.7	3.0	75.6	66.2	300.7	3.0	75.9	65.4	312.0	1.5	78.4	63.0	0	610.6
24-36	4/12/2016 17:06	309.2	3.0	75.7	64.6	292.3	3.0	75.8	65.5	300.7	1.5	78.6	62.0	0	608.9
24-36	4/12/2016 17:07	293.7	3.7	75.4	63.2	292.3	3.7	75.1	63.2	299.3	3.0	78.2	60.2	0	423.1
24-36	4/12/2016 17:08	303.5	3.0	74.8	63.6	288.1	3.0	74.5	64.3	297.9	1.5	77.6	60.4	0	575.6
24-36	4/12/2016 17:09	312.0	3.7	74.5	64.3	313.4	3.0	74.5	64.3	313.4	2.2	77.5	60.6	0	593.1
24-36	4/12/2016 17:10	321.8	3.0	74.6	65.0	303.5	2.2	74.7	66.1	312.0	1.5	77.4	62.3	0	586.9
24-36	4/12/2016 17:11	261.4	3.0	75.0	65.5	260.0	3.0	75.3	65.5	267.0	2.2	77.6	62.4	0	580.6
24-36	4/12/2016 17:12	286.7	3.0	75.2	65.1	285.3	3.0	75.3	66.0	289.5	2.2	77.8	62.5	0	584.4
24-36	4/12/2016 17:13	303.5	3.7	75.4	67.1	302.1	3.0	75.7	67.5	304.9	2.2	78.1	64.2	0	581.9
24-36	4/12/2016 17:14	300.7	3.0	75.6	65.1	286.7	3.0	75.8	65.7	295.1	2.2	78.6	62.1	0	580.6
24-36	4/12/2016 17:15	300.7	3.7	75.6	63.2	295.1	3.0	75.6	64.4	302.1	2.2	78.8	60.3	0	539.4
24-36	4/12/2016 17:16	289.5	3.7	75.4	63.4	289.5	3.0	75.4	63.7	290.9	2.2	78.7	60.4	0	351.9
24-36	4/12/2016 17:17	302.1	2.2	74.9	65.0	295.1	1.5	75.0	65.2	286.7	0.7	78.2	60.9	0	104.4
24-36	4/12/2016 17:18	295.1	2.2	74.5	66.3	288.1	2.2	74.6	66.5	293.7	1.5	77.6	62.2	0	576.1
24-36	4/12/2016 17:19	299.3	3.0	74.5	65.7	293.7	2.2	74.6	66.1	300.7	1.5	77.5	62.3	0	308.9
24-36	4/12/2016 17:20	302.1	3.0	74.5	65.3	290.9	2.2	74.5	65.9	293.7	2.2	77.4	61.4	0	446.9
24-36	4/12/2016 17:21	302.1	3.0	74.6	65.5	293.7	2.2	74.7	66.8	299.3	1.5	77.7	62.4	0	541.9
24-36	4/12/2016 17:22	296.5	2.2	75.0	65.5	290.9	1.5	75.2	66.7	292.3	0.7	78.2	62.6	0	539.4
24-36	4/12/2016 17:23	302.1	1.5	75.4	62.7	299.3	1.5	75.3	64.6	293.7	0.7	78.5	60.8	0	541.9
24-36	4/12/2016 17:24	312.0	1.5	75.7	64.3	303.5	1.5	75.7	64.8	295.1	0.7	78.8	60.4	0	543.1
24-36	4/12/2016 17:25	317.6	2.2	75.9	63.6	303.5	2.2	75.7	63.7	295.1	1.5	78.9	60.5	0	543.1
24-36	4/12/2016 17:26	308.4	2.2	75.6	63.6	303.5	1.5	75.7	64.1	297.9	0.7	79.1	60.4	0	545.6
24-36	4/12/2016 17:27	304.9	0.7	75.9	63.7	299.3	0.7	76.0	65.0	297.9	0.0	79.5	60.1	0	543.1
24-36	4/12/2016 17:28	278.3	3.0	76.1	62.5	268.4	3.0	76.3	64.1	272.7	2.2	79.3	59.3	0	540.6
24-36	4/12/2016 17:29	312.0	4.5	76.9	61.8	317.6	3.7	75.9	63.1	319.0	2.2	78.9	59.1	0	536.9
24-36	4/12/2016 17:30	303.5	3.0	75.8	62.2	290.9	2.2	75.9	62.9	314.8	1.5	79.0	59.3	0	529.4
24-36	4/12/2016 17:31	309.2	2.2	75.9	63.8	296.5	2.2	76.1	63.3	312.0	1.5	79.2	59.7	0	519.4
24-36	4/12/2016 17:32	286.7	3.0	75.8	61.7	285.3	2.2	76.0	61.8	288.1	1.5	79.0	58.0	0	523.1
24-36	4/12/2016 17:33	328.8	2.2	75.6	62.2	320.4	2.2	75.6	63.6	321.8	1.5	78.5	58.8	0	136.9
24-36	4/12/2016 17:34	281.1	3.7	75.2	63.1	285.6	3.7	75.3	62.8	276.9	2.2	77.6	58.5	0	499.4
24-36	4/12/2016 17:35	267.0	4.5	75.2	63.1	284.2	3.7	75.4	63.6	267.0	3.0	77.4	60.4	0	493.1
24-36	4/12/2016 17:36	278.3	4.5	75.3	62.8	282.5	4.5	75.4	62.4	295.1	3.0	77.3	59.7	0	490.6
24-36	4/12/2016 17:37	282.3	4.5	75.1	62.6	279.7	3.7	75.0	63.4	289.5	3.0	77.2	60.4	0	74.4
24-36	4/12/2016 17:38	276.9	3.7	74.7	64.2	269.9	3.0	74.6	64.9	281.1	2.2	76.5	61.5	0	71.9
24-36	4/12/2016 17:39	283.9	3.0	74.2	63.3	283.9	3.7	74.0	63.3	290.9	2.2	75.7	61.0	0	293.1
24-36	4/12/2016 17:40	292.3	3.7	73.9	63.2	289.5	3.0	74.0	64.2	297.9	2.2	75.7	61.4	0	485.6
24-36	4/12/2016 17:41	296.5	3.0	74.3	64.1	279.7	3.0	74.4	64.6	288.1	1.5	76.1	62.2	0	485.6
24-36	4/12/2016 17:42	258.6	3.7	74.7	64.2	254.4	3.0	74.9	65.1	248.8	2.2	76.3	62.7	0	486.9
24-36	4/12/2016 17:43	267.0	3.0	75.2	62.5	284.2	3.0	75.4	63.1	268.4	2.2	76.7	61.3	0	485.6
24-36	4/12/2016 17:44	275.5	3.0	75.5	61.7	272.7	3.0	75.6	63.0	274.1	1.5	77.0	61.4	0	478.1
24-36	4/12/2016 17:45	272.7	2.2	75.7	62.6	267.0	2.2	75.9	63.3	268.4	1.5	77.4	60.5	0	475.6
24-36	4/12/2016 17:46	272.7	3.0	75.9	62.8	274.1	3.0	76.1	62.7	281.1	1.5	77.6	60.8	0	469.4
24-36	4/12/2016 17:47	304.9	3.7	76.0	62.3	297.9	3.0	76.1	61.9	300.7	2.2	78.0	60.2	0	465.6
24-36	4/12/2016 17:48	302.1	3.7	75.8	61.3	296.5	3.0	75.9	61.9	303.5	1.5	78.3	59.6	0	458.1
24-36	4/12/2016 17:49	314.8	2.2	75.9	62.1	309.2	2.2	76.0	62.7	306.4	1.5	78.6	59.8	0	460.6
24-36	4/12/2016 17:50	307.8	4.5	75.9	61.0	295.1	5.2	75.8	61.3	300.7	3.7	78.6	57.9	0	459.4
24-36	4/12/2016 17:51	290.9	6.7	75.4	61.2	283.9	5.2	75.4	61.5	289.5	3.7	78.2	57.3	0	460.6
24-36	4/12/2016 17:52	281.1	5.2	75.2	60.9	285.3	4.5	75.3	61.8	289.5	3.0	77.8	58.3	0	464.4
24-36	4/12/2016 17:53	303.5	3.7	75.2	62.1	297.9	3.0	75.3	62.1	303.5	2.2	77.6	58.8	0	465.6
24-36	4/12/2016 17:54	307.8	2.2	75.4	62.3	299.3	1.5	75.6	63.1	295.1	1.5	78.0	59.6	0	463.1
24-36	4/12/2016 17:55	268.4	2.2	75.8	61.2	246.0	3.0	76.0	61.7	254.4	1.5	77.9	58.0	0	458.1
24-36	4/12/2016 17:56	267.0	3.0	76.0	62.6	268.4	3.0	76.3	62.6	269.9	1.5	77.9	60.1	0	456.9
24-36	4/12/2016 17:57	293.7	4.5	76.0	60.9	289.5	4.5	76.0	60.9	293.7	3.0	78.0	58.8	0	453.1
24-36	4/12/2016 17:58	290.9	5.2	75.6	61.5	278.3	4.5	75.7	62.2	286.7	3.0	77.9	58.8	0	446.9
24-36	4/12/2016 17:59	281.1	4.5	75.5	60.7	276.9	3.7	75.5	61.3	283.9	3.0	77.6	58.2	0	441.9
24-36	4/12/2016 18:00	282.5	3.0	75.5	60.3	274.1	2.2	75.6	61.2	276.9	1.5	77.6	57.8	0	433.1
24-36	4/12/2016 18:01	276.9	2.2	75.6	61.1	284.2	2.2	75.8	62.1	269.9	1.5	77.6	59.2	0	424.4
24-36	4/12/2016 18:02	264.2	3.7	75.8	60.9	282.8	3.0	76.0	62.0	269.9	2.2	77.5	59.3	0	421.9
24-36	4/12/2016 18:03	268.4	3.7	75.7	62.2	258.6	3.0	76.0	62.6	262.8	2.2	77.4	60.2	0	425.6
24-36	4/12/2016 18:04	258.6	4.5	75.7	61.6	253.0	3.7	75.9	62.0	257.2	2.2	77.0	60.2	0	148.1
24-36	4/12/2016 18:05	250.2	4.5	75.2	60.6	247.4	3.7	75.5	61.2	255.8	2.2	76.2	59.8	0	273.1
24-36	4/12/2016 18:06	275.5	3.7	75.0	61.6	268.4	3.7	75.3	62.0	276.9	2.2	76.1	61.2	0	435.6
24-36	4/12/2016 18:07	269.9	4.5	75.1	61.1	261.4	3.7	75.3	61.6	268.4	3.0	76.2	60.4	0	430.6
24-36	4/12/2016 18:08	268.4	3.7	75.2	61.7	269.9	3.0	75.6	62.4	276.9	2.2	76.4	61.7	0	421.9
24-36	4/12/2016 18:09	279.7	3.7	75.3	60.6	274.1	3.7	75.5	61.3	285.3	2.2	76.7	60.3	0	411.9
24-36	4/12/2016 18:10	283.9	3.7	75.3	62.1	285.3	3.0	75.6	62.2	289.5	2.2	76.9	60.7	0	401.9
24-36	4/12/2016 18:11	300.7	3.7	75.4	62.1	288.1	3.0	75.6	63.1	297.9	2.2	77.3	61.2	0	395.6
24-36	4/12/2016 18:12	293.7	3.7	75.5	60.3	295.1	3.0	75.6	61.0	303.5	2.2	77.6	59.3	0	391.9

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
24-36	4/12/2016 18:13	297.9	3.0	75.5	61.6	293.7	3.0	75.6	61.4	299.3	1.5	77.8	58.9	0	385.6
24-36	4/12/2016 18:14	330.2	3.0	75.4	59.4	313.4	3.0	75.4	60.5	321.8	1.5	77.6	58.1	0	380.6
24-36	4/12/2016 18:15	314.8	3.0	75.4	60.9	300.7	2.2	75.5	61.2	319.0	1.5	77.8	58.6	0	379.4
24-36	4/12/2016 18:16	296.5	2.2	75.5	61.5	293.7	2.2	75.6	62.3	316.2	1.5	78.1	59.2	0	383.1
24-36	4/12/2016 18:17	271.3	3.0	75.6	62.9	262.8	3.0	75.8	63.2	275.5	1.5	77.9	59.9	0	374.4
24-36	4/12/2016 18:18	272.7	4.5	75.6	61.3	268.4	3.7	75.7	61.7	274.1	2.2	77.6	59.0	0	346.9
24-36	4/12/2016 18:19	281.1	3.7	75.3	61.6	279.7	3.0	75.2	62.2	265.3	2.2	77.0	59.8	0	144.4
24-36	4/12/2016 18:20	271.3	3.7	74.9	61.3	260.0	3.7	75.1	62.1	265.6	2.2	76.5	59.8	0	401.9
24-36	4/12/2016 18:21	274.1	4.5	74.9	62.1	265.6	3.7	75.2	62.7	269.9	2.2	76.3	60.7	0	400.6
24-36	4/12/2016 18:22	276.9	4.5	75.0	60.6	271.3	3.0	75.2	61.6	279.7	2.2	76.2	60.2	0	146.9
24-36	4/12/2016 18:23	297.9	2.2	74.9	61.7	295.1	2.2	75.1	61.9	295.1	1.5	76.5	60.3	0	391.9
24-36	4/12/2016 18:24	303.5	3.0	75.0	61.6	286.7	3.0	75.2	62.0	292.3	1.5	76.8	60.2	0	381.9
24-36	4/12/2016 18:25	281.1	3.0	75.2	61.0	275.5	2.2	75.4	61.8	283.9	1.5	77.0	59.8	0	369.4
24-36	4/12/2016 18:26	285.3	2.2	75.4	61.5	281.1	2.2	75.6	61.6	289.5	1.5	77.3	59.6	0	359.4
24-36	4/12/2016 18:27	272.7	2.2	75.5	61.2	264.2	1.5	75.8	61.5	266.7	0.7	77.3	58.3	0	350.6
24-36	4/12/2016 18:28	261.4	2.2	75.7	61.7	250.2	2.2	76.0	62.1	275.5	1.5	77.2	59.7	0	340.6
24-36	4/12/2016 18:29	267.0	3.0	75.8	62.2	269.9	3.0	76.1	61.3	265.6	1.5	77.2	59.8	0	328.1
24-36	4/12/2016 18:30	293.7	3.0	75.8	61.2	282.5	3.0	75.9	61.0	304.9	2.2	77.3	59.6	0	315.6
24-36	4/12/2016 18:31	282.5	4.5	75.5	60.0	278.3	4.5	75.5	60.8	283.9	3.0	77.1	58.8	0	306.9
24-36	4/12/2016 18:32	258.6	3.7	75.3	60.8	263.0	3.7	75.5	61.2	255.8	2.2	76.6	59.3	0	298.1
24-36	4/12/2016 18:33	261.4	4.5	75.2	60.7	258.6	3.7	75.4	61.3	264.2	3.0	76.2	59.9	0	290.6
24-36	4/12/2016 18:34	275.5	4.5	75.0	61.7	278.3	3.7	75.1	61.2	286.7	2.2	76.0	60.5	0	283.1
24-36	4/12/2016 18:35	290.9	3.7	74.9	61.4	281.1	3.0	75.0	61.9	290.9	1.5	76.2	60.6	0	276.9
24-36	4/12/2016 18:36	283.9	2.2	75.0	63.0	272.7	1.5	75.1	63.1	279.7	0.7	76.4	61.2	0	271.9
24-36	4/12/2016 18:37	295.1	1.5	75.1	63.1	281.1	1.5	75.2	63.0	262.5	0.7	76.6	61.1	0	268.9
24-36	4/12/2016 18:38	282.5	3.0	75.1	62.2	271.3	2.2	75.2	63.0	285.3	1.5	76.6	60.9	0	261.9
24-36	4/12/2016 18:39	272.7	3.0	75.0	62.1	251.6	3.0	75.2	62.8	260.0	1.5	76.3	60.8	0	258.1
24-36	4/12/2016 18:40	258.6	3.7	74.9	62.4	262.8	3.7	75.0	62.6	271.3	3.0	75.8	61.3	0	254.4
24-36	4/12/2016 18:41	257.2	5.2	74.6	61.8	253.0	4.5	74.9	61.8	255.8	3.0	75.3	60.8	0	250.6
24-36	4/12/2016 18:42	274.1	3.0	74.6	62.2	274.1	2.2	74.8	62.4	274.1	1.5	75.3	61.5	0	245.6
24-36	4/12/2016 18:43	288.1	3.0	74.6	62.6	282.5	3.0	74.7	63.0	285.3	1.5	75.5	61.7	0	241.9
24-36	4/12/2016 18:44	292.3	2.2	74.6	63.4	290.9	2.2	74.6	63.4	299.3	1.5	75.7	62.3	0	238.1
24-36	4/12/2016 18:45	286.7	4.5	74.6	61.5	276.9	4.5	74.5	61.7	282.5	3.0	75.7	60.4	0	233.1
24-36	4/12/2016 18:46	304.9	3.7	74.4	61.5	297.9	3.0	74.3	61.6	299.3	2.2	75.6	60.3	0	229.4
24-36	4/12/2016 18:47	295.1	3.7	74.2	61.2	283.9	3.0	74.2	62.1	286.7	2.2	75.6	60.2	0	225.6
24-36	4/12/2016 18:48	279.7	3.0	74.2	62.1	271.3	3.0	74.2	62.3	279.7	2.2	75.5	60.5	0	221.9
24-36	4/12/2016 18:49	292.3	3.7	74.2	61.7	285.3	3.0	74.1	62.0	290.9	2.2	75.4	60.2	0	219.4
24-36	4/12/2016 18:50	283.9	3.7	74.1	61.1	281.1	3.0	74.0	61.8	292.3	2.2	75.3	60.1	0	214.4
24-36	4/12/2016 18:51	272.7	3.7	74.0	61.4	265.6	3.0	74.0	62.2	275.5	2.2	75.1	60.6	0	210.6
24-36	4/12/2016 18:52	271.3	3.0	74.1	61.5	264.2	3.0	74.1	62.3	272.7	1.5	74.9	60.6	0	206.9
24-36	4/12/2016 18:53	282.5	3.0	74.0	61.7	276.9	3.0	74.0	62.3	285.3	1.5	74.8	61.2	0	203.1
24-36	4/12/2016 18:54	297.9	3.7	73.9	61.8	297.9	3.0	73.9	62.4	304.9	2.2	74.8	61.2	0	199.4
24-36	4/12/2016 18:55	307.8	4.5	73.8	60.6	293.7	3.7	73.7	61.5	309.2	2.2	74.8	60.2	0	196.9
24-36	4/12/2016 18:56	306.4	3.7	73.8	60.5	299.3	3.0	73.7	61.3	300.7	1.5	74.8	60.2	0	193.1
24-36	4/12/2016 18:57	304.9	2.2	73.8	60.8	293.7	2.2	73.7	62.0	297.9	1.5	74.9	60.4	0	190.6
24-36	4/12/2016 18:58	313.4	2.2	73.8	61.1	307.8	2.2	73.7	62.0	307.8	1.5	74.9	60.6	0	186.9
24-36	4/12/2016 18:59	312.0	2.2	73.8	62.0	304.9	2.2	73.6	62.6	312.0	0.7	74.9	60.8	0	183.1
24-36	4/12/2016 19:00	309.2	2.2	73.7	61.6	297.9	2.2	73.6	62.6	313.4	1.5	75.0	60.6	0	179.4
24-36	4/12/2016 19:01	307.8	2.2	73.7	61.4	293.7	2.2	73.6	62.4	304.9	1.5	75.0	60.3	0	175.6
24-36	4/12/2016 19:02	306.4	3.0	73.6	62.7	296.5	2.2	73.5	63.1	304.9	1.5	74.9	60.7	0	173.1
24-36	4/12/2016 19:03	295.1	2.2	73.6	63.4	297.9	2.2	73.5	63.7	304.9	1.5	74.9	61.4	0	170.6
24-36	4/12/2016 19:04	310.6	3.0	73.5	62.2	304.9	3.7	73.4	62.7	309.2	2.2	74.8	60.7	0	168.9
24-36	4/12/2016 19:05	309.2	3.0	73.4	62.9	300.7	2.2	73.3	63.5	310.6	1.5	74.8	61.1	0	164.4
24-36	4/12/2016 19:06	300.7	1.5	73.5	63.5	292.3	1.5	73.4	63.8	309.2	0.7	74.8	61.5	0	160.6
24-36	4/12/2016 19:07	286.7	3.0	73.5	62.8	279.7	2.2	73.4	63.7	299.3	1.5	74.7	61.5	0	156.9
24-36	4/12/2016 19:08	292.3	2.2	73.5	63.8	285.3	2.2	73.3	64.3	289.5	1.5	74.6	62.1	0	153.1
24-36	4/12/2016 19:09	309.2	2.2	73.4	63.0	303.5	2.2	73.3	64.0	302.1	1.5	74.6	61.9	0	150.6
24-36	4/12/2016 19:10	313.4	2.2	73.4	63.0	304.9	1.5	73.3	64.0	304.9	1.5	74.6	61.8	0	146.1
24-36	4/12/2016 19:11	314.8	2.2	73.3	63.8	303.5	2.2	73.2	64.1	306.4	1.5	74.5	62.2	0	144.4
24-36	4/12/2016 19:12	306.4	2.2	73.3	63.7	303.5	2.2	73.1	64.2	310.6	1.5	74.4	62.1	0	140.6
24-36	4/12/2016 19:13	297.9	3.0	73.2	63.1	292.3	2.2	73.0	64.0	307.8	1.5	74.4	61.9	0	136.9
24-36	4/12/2016 19:14	300.7	2.2	73.2	63.9	297.9	2.2	73.0	65.0	303.5	1.5	74.3	62.4	0	134.4
24-36	4/12/2016 19:15	307.8	2.2	73.1	64.4	303.5	2.2	72.9	65.1	306.4	1.5	74.2	62.7	0	130.6
24-36	4/12/2016 19:16	310.6	3.0	73.0	64.4	295.1	2.2	72.8	65.3	309.2	1.5	74.0	63.0	0	126.9
24-36	4/12/2016 19:17	316.2	2.2	72.9	64.9	299.3	2.2	72.7	65.2	309.2	1.5	73.9	63.1	0	123.1
24-36	4/12/2016 19:18	320.4	3.0	72.9	64.9	306.4	2.2	72.6	65.8	312.0	1.5	73.6	63.6	0	119.4
24-36	4/12/2016 19:19	313.4	3.0	72.8	64.9	299.3	2.2	72.6	65.7	313.4	1.5	73.6	63.8	0	114.4
24-36	4/12/2016 19:20	303.5	1.5	72.8	65.7	293.7	1.5	72.6	66.1	313.4	0.7	73.6	64.3	0	113.1
24-36	4/12/2016 19:21	296.5	1.5	72.7	66.3	288.1	1.5	72.5	66.8	312.0	0.7	73.5	64.9	0	109.4
24-36	4/12/2016 19:22	296.5	0.7	72.7	66.9	288.1	0.7	72.5	67.1	312.0	0.0	73.4	65.4	0	106.9
24-36	4/12/2016 19:23	296.5	1.5	72.7	67.0	288.1	0.7	72.4	67.5	312.0	0.7	73.4	65.8	0	103.1
24-36	4/12/2016 19:24	296.5	1.5	72.6	67.1	288.1	1.5	72.4	67.6	312.0	0.7	73.3	66.1	0	100.6
24-36	4/12/2016 19:25	295.1	1.5	72.6	66.8	288.1	1.5	72.4	66.9	309.2	0.7	73.1	65.6	0	98.1
24-36	4/12/2016 19:26	281.1	3.0	72.4	66.7	274.1	2.2	72.2	67.2	289.5	1.5	73.0	65.7	0	95.6
24-36	4/12/2016 19:27	276.9	1.5	72.2	67.3	274.1	1.5	72.0	67.9	281.1	0.7	72.9	66.1	0	91.9
24-36	4/12/2016 19:28	281.1	2.2	72.1	67.3	278.3	2.2	71.8	67.9	283.9	1.5	72.7	66.2	0	89.4
24-36	4/12/2016 19:29	285.3	1.5	72.0	67.7	279.7	1.5	71.7	68.3	283.9	0.7	72.6	66.4	0	85.6
24-36	4/12/2016 19:30	285.3	0.7	71.9	68.4	279.7	0.7	71.7	68.8	283.9	0.0	72.5	67.0	0	81.9
24-36	4/12/2016 19:31	285.3	0.7	71.8	69.0	279.7	0.7	71.5	69.2	283.9	0.0	72.4	67.4	0	79.4
24-36	4/12/2016 19:32	285.3	0.0	71.7	68.7	279.7	0.0	71.5	69.2	283.9	0.0	72.1	68.0	0	74.4
24-36	4/12/2016 19:33	285.3	0.7	71.7	68.3	279.7	0.7	71.4	69.1	283.9	0.0	71.9	68.2	0	71.9
24-36	4/12/2016 19:34	285.3	0.0	71.7	68.9	279.7	0.0	71.4	69.8	283.9	0.0	71.7	69.0	0	68.1
24-36	4/12/2016 19:35	285.3	0.0	71.5	69.7	279.7	0.0	71.1	70.3	283.9	0.0	71.4	70.2	0	64.4
24-36	4/12/2016 19:36	285.3	0.0	71.4	69.1	279.7	0.0	71.0	69.9	283.9	0.0	71.1	69.6	0	60.6
24-36	4/12/2016 19:37	285.3	0.0	71.3	70.7	279.7	0.0	70.8	71.5	283.9	0.0	70.9	71.3	0	56.1
24-36	4/12/2016 19:38	285.3	0.0	71.0	70.6	279.7	0.0	70.6	71.0	283.9	0.0	70.6	70.8	0	54.4
24-36	4/12/2016 19:39	285.3	0.7	70.9	70.6	279.7	0.0	70.5	71.2	283.9	0.0	70.7	71.2	0	50.6
24-36	4/12/2016 19:40	285.3	0.7	70.9	70.2	279.7	0.0	70.5	71.0	283.9	0.0	70.6	70.7	0	48.1
24-36	4/12/2016 19:41	285.3	1.5	70.9	70.3	279.7	0.0	70.5	71.2	283.9	0.0	70.6	70.8	0	44.4
24-36	4/12/2016 19:42	285.3	0.7	70.8	70.9	279.7	0.0	70.3	71.5	283.9	0.0	70.5	71.0	0	41.9
24-36	4/12/2016 19:43	285.3	0.0	70.6	71.7	279.7	0.0	70.2	72.1	283.9	0.0	70.3	71.7	0	39.4
24-36	4/12/2016 19:44	285.3	0.0	70.5	72.0	279.7	0.0	70.0	72.4	283.9	0.0	70.0	72.4	0	36.9
24-36	4/12/2016 19:45	285.3	0.0	70.3	72.3	279.7	0.0	69.8	72.6	283.9	0.0	69.8	72.7	0	34.4
24-36	4/12/2016 19:46	285.3	0.0	70.2	73.5	279.7	0.0	69.6	73.7	283.9	0.0	69.6	73.9	0	31.9
24-36	4/12/2016 19:47	285.3	0.0	69.7	74.1	279.7	0.0	69.1	75.0	283.9	0.0	69.2	74.7	0	29.4
24-36	4/12/2016 19:48	285.3	0.0	69.3	74.5	279.7	0.0	68.8	74.9	283.9	0.0	68.8	75.2	0	26.9
24-36	4/12/2016 19:49	285.3	0.7	69.0	75.7	279.7	0.0	68.4	76.5	283.9	0.0	68.6	75.7	0	24.4
24-36	4/12/2016 19:50	285.3	0.0	68.7	76.5	279.7	0.0	68.2	76.8	283.9	0.0	68.2	76.5	0	19.4
24-36	4/12/2016 19:51	285.3	0.0	68.4	77.4	279.7	0.0	67.9	77.1	283.9	0.0	67.9	76.8	0	14.4
24-36	4/12/2016 19:52	285.3	0.0	68.1	78.1	279.7	0.0	67.5	77.7	283.9	0.0	67.7	77.1	0	15.6
24-36	4/12/2016 19:53	285.3	0.0	67.8	78.4	279.7	0.0	67.3	78.2	283.9	0.0	67.4	79.3	0	15.6
24-36	4/12/2016 19:54	285.3	0.0	67.5	78.9	279.7	0.0	67.1	78.8	283.9	0.0	67.0	80.6	0	15.6
24-36	4/12/2016 19:55	285.3	0.0	67.3	79.1	279.7	0.0	67.0	79.1	283.9	0.0	66.7	80.0	0	13.1
24-36	4/12/2016 19:56	285.3	0.0	67.2	78.9	279.7	0.0	66.9	79.2	283.9	0.0	66.4	80.1	0	13.1
24-36	4/12/2016 19:57	285.3	0.0	67.1	79.5	279.7	0.0	66.7	79.7	283.9	0.0	66.1	81.0	0	10.6
24-36	4/12/2016 19:58	285.3	0.0	66.9	79.9	279.7	0.0	66.5	80.0	283.9	0.0	65.9	82.2	0	8.1
24-36	4/12/2016 19:59	285.3	0.0	66.7	80.3	279.7	0.0	66.3	80.3	283.9	0.0	65.7	82.8	0	8.1
24-36	4/12/2016 20:00	285.3	0.0	66.6	81.2	279.7	0.0	66.3	81.0	283.9	0.0	65.5	83.7	0	6.9
24-36	4/12/2016 20:01	285.3	0.7	66.5	81.4	279.7	0.0	66.1	81.7	283.9	0.0	65.3	84.0	0	6.9
24-36	4/12/2016 20:02	285.3	1.5	66.6	81.5	279.7	0.0	66.0	82.2	283.9	0.0	65.0	84.8	0	6.9
24-36	4/12/2016 20:03	285.3	1.5	66.4	83.2	279.7	0.0	65.7	83.1	283.9	0.0	64.7	84.5	0	5.6
24-36	4/12/2016 20:04	285.3	0.7	66.0	83.4	279.7	0.0	65.3	83.1	283.9	0.0	64.4	85.1	0	4.4
24-36	4/12/2016 20:05	285.3	0.0	65.7	83.7	279.7	0.0	65.0	83.9	283.9	0.0	64.2	84.8	0	4.4
24-36	4/12/2016 20:06	285.3	0.0	65.4	84.3	279.7	0.0	64.7	85.0	283.9	0.0	64.0	85.2	0	4.4
24-36	4/12/2016 20:07	285.3	0.7	65.1	85.0	279.7	0.0	64.5	85.4	283.9	0.0	63.8	86.8	0	3.1

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
24-36	4/12/2016 20:08	285.3	0.7	65.0	85.4	279.7	0.0	64.4	85.8	283.9	0.0	63.6	87.1	0	3.1
24-36	4/12/2016 20:09	285.3	0.0	65.0	85.4	279.7	0.0	64.2	86.3	283.9	0.0	63.5	86.8	0	1.9
24-36	4/12/2016 20:10	285.3	0.7	65.0	85.5	279.7	0.0	64.1	86.6	283.9	0.0	63.3	86.5	0	1.9
24-36	4/12/2016 20:11	285.3	0.0	64.9	85.9	279.7	0.0	64.1	86.7	283.9	0.0	63.2	87.4	0	1.9
24-36	4/12/2016 20:12	285.3	0.0	64.8	86.1	279.7	0.0	64.1	87.1	283.9	0.0	63.1	87.2	0	0.6
24-36	4/12/2016 20:13	285.3	0.0	64.8	85.7	279.7	0.0	64.2	86.5	283.9	0.0	63.2	86.5	0	0.6
24-36	4/12/2016 20:14	285.3	0.0	64.8	86.3	279.7	0.0	64.2	86.6	283.9	0.0	63.2	86.8	0	0.6
24-36	4/12/2016 20:15	285.3	0.0	64.7	86.7	279.7	0.0	64.1	87.1	283.9	0.0	63.1	86.3	0	0.6
24-36	4/12/2016 20:16	285.3	0.0	64.6	85.9	279.7	0.0	64.0	86.5	283.9	0.0	63.1	86.1	0	0.6
24-36	4/12/2016 20:17	285.3	0.0	64.5	86.1	279.7	0.0	63.9	86.7	283.9	0.0	62.9	87.8	0	0.6
24-36	4/12/2016 20:18	285.3	0.0	64.3	86.0	279.7	0.0	63.7	86.7	283.9	0.0	62.8	88.0	0	0.6
24-36	4/12/2016 20:19	285.3	0.0	64.2	86.5	279.7	0.0	63.7	87.3	283.9	0.0	62.6	88.1	0	0.6
24-36	4/12/2016 20:20	285.3	0.0	64.2	86.8	279.7	0.0	63.8	87.7	283.9	0.0	62.5	88.3	0	0.6
24-36	4/12/2016 20:21	285.3	0.0	64.2	86.6	279.7	0.0	63.8	87.4	283.9	0.0	62.3	88.5	0	0.6
24-36	4/12/2016 20:22	285.3	0.0	64.1	86.6	279.7	0.0	63.8	87.5	283.9	0.0	62.2	88.5	0	0.6
24-36	4/12/2016 20:23	285.3	0.0	64.1	87.0	279.7	0.0	63.6	87.7	283.9	0.0	62.0	88.7	0	0.6
24-36	4/12/2016 20:24	285.3	0.0	64.0	87.7	279.7	0.0	63.4	87.7	283.9	0.0	61.8	88.7	0	0.6
24-36	4/12/2016 20:25	285.3	0.0	63.9	87.3	279.7	0.0	63.3	88.0	283.9	0.0	61.7	88.9	0	0.6
24-36	4/12/2016 20:26	285.3	0.0	63.8	88.0	279.7	0.0	63.1	88.3	283.9	0.0	61.5	89.2	0	0.6
24-36	4/12/2016 20:27	285.3	0.0	63.7	87.4	279.7	0.0	63.0	88.2	283.9	0.0	61.4	89.4	0	0.6
24-36	4/12/2016 20:28	285.3	0.0	63.6	87.4	279.7	0.0	63.0	88.3	283.9	0.0	61.2	89.6	0	0.6
24-36	4/12/2016 20:29	285.3	0.0	63.6	87.5	279.7	0.0	63.0	88.4	283.9	0.0	61.1	89.7	0	0.6
24-36	4/12/2016 20:30	285.3	0.0	63.4	87.5	279.7	0.0	63.0	88.6	283.9	0.0	61.0	89.9	0	0.6
24-36	4/12/2016 20:31	285.3	0.0	63.3	87.7	279.7	0.0	63.0	88.7	283.9	0.0	60.9	90.0	0	0.6
24-36	4/12/2016 20:32	285.3	0.0	63.2	88.1	279.7	0.0	62.9	89.1	283.9	0.0	60.7	90.3	0	0.6
24-36	4/12/2016 20:33	285.3	0.0	63.2	88.6	279.7	0.0	62.9	89.1	283.9	0.0	60.6	90.4	0	0.6
24-36	4/12/2016 20:34	285.3	0.0	63.2	88.8	279.7	0.0	62.9	89.3	283.9	0.0	60.6	90.6	0	0.6
24-36	4/12/2016 20:35	285.3	0.0	63.1	89.3	279.7	0.0	62.9	89.7	283.9	0.0	60.6	90.9	0	0.6
24-36	4/12/2016 20:36	285.3	0.0	63.1	89.1	279.7	0.0	62.8	89.6	283.9	0.0	60.5	91.1	0	0.6
24-36	4/12/2016 20:37	285.3	0.0	63.0	89.3	279.7	0.0	62.7	89.7	283.9	0.0	60.4	91.2	0	0.6
24-36	4/12/2016 20:38	285.3	0.0	63.0	89.4	279.7	0.0	62.7	89.9	283.9	0.0	60.3	91.4	0	0.6
24-36	4/12/2016 20:39	285.3	0.0	62.9	89.4	279.7	0.0	62.6	89.8	283.9	0.0	60.2	91.6	0	0.6
24-36	4/12/2016 20:40	285.3	0.0	62.9	89.4	279.7	0.0	62.5	89.8	283.9	0.0	60.3	91.9	0	0.6
24-36	4/12/2016 20:41	285.3	0.0	62.6	89.6	279.7	0.0	62.4	90.0	283.9	0.0	60.3	92.1	0	0.6
24-36	4/12/2016 20:42	285.3	0.0	62.7	89.8	279.7	0.0	62.3	90.2	283.9	0.0	60.3	92.2	0	0.6
24-36	4/12/2016 20:43	285.3	0.0	62.6	90.0	279.7	0.0	62.2	90.5	283.9	0.0	60.2	92.1	0	0.6
24-36	4/12/2016 20:44	285.3	0.0	62.5	90.3	279.7	0.0	62.2	90.7	283.9	0.0	60.1	92.3	0	0.6
24-36	4/12/2016 20:45	285.3	0.0	62.4	90.5	279.7	0.0	62.1	90.9	283.9	0.0	60.0	92.3	0	0.6
24-36	4/12/2016 20:46	285.3	0.0	62.3	90.7	279.7	0.0	62.1	91.2	283.9	0.0	60.0	92.5	0	0.6
24-36	4/12/2016 20:47	285.3	0.0	62.2	90.7	279.7	0.0	62.0	91.3	283.9	0.0	59.9	92.6	0	0.6
24-36	4/12/2016 20:48	285.3	0.0	62.2	91.0	279.7	0.0	61.8	91.3	283.9	0.0	59.7	92.7	0	0.6
24-36	4/12/2016 20:49	285.3	0.0	62.2	91.3	279.7	0.0	61.7	91.3	283.9	0.0	59.7	92.9	0	0.6
24-36	4/12/2016 20:50	285.3	0.0	62.2	91.5	279.7	0.0	61.6	91.2	283.9	0.0	59.6	92.8	0	0.6
24-36	4/12/2016 20:51	285.3	0.0	62.1	91.8	279.7	0.0	61.5	91.3	283.9	0.0	59.6	92.9	0	0.6
24-36	4/12/2016 20:52	285.3	0.0	62.1	91.8	279.7	0.0	61.4	91.6	283.9	0.0	59.6	93.0	0	0.6
24-36	4/12/2016 20:53	285.3	0.0	62.1	91.9	279.7	0.0	61.4	91.7	283.9	0.0	59.5	93.1	0	0.6
24-36	4/12/2016 20:54	285.3	0.0	62.0	92.0	279.7	0.0	61.3	92.0	283.9	0.0	59.4	93.2	0	0.6
24-36	4/12/2016 20:55	285.3	0.0	61.6	92.1	279.7	0.0	61.2	92.2	283.9	0.0	59.4	93.3	0	0.6
24-36	4/12/2016 20:56	285.3	0.0	61.6	92.1	279.7	0.0	61.3	92.6	283.9	0.0	59.4	93.6	0	0.6
24-36	4/12/2016 20:57	285.3	0.0	61.7	92.6	279.7	0.0	61.3	93.2	283.9	0.0	59.3	93.6	0	0.6
24-36	4/12/2016 20:58	285.3	0.0	61.7	92.6	279.7	0.0	61.3	93.3	283.9	0.0	59.3	93.6	0	0.6
24-36	4/12/2016 20:59	285.3	0.0	61.7	93.7	279.7	0.0	61.4	94.2	283.9	0.0	59.2	93.6	0	0.6
24-36	4/12/2016 21:00	285.3	0.0	61.6	94.7	279.7	0.0	61.5	94.9	283.9	0.0	59.4	94.1	0	0.6
24-36	4/12/2016 21:01	285.3	0.0	61.9	95.1	279.7	0.0	61.7	95.3	283.9	0.0	59.5	94.3	0	0.6
24-36	4/12/2016 21:02	285.3	0.0	62.0	95.2	279.7	0.0	61.8	95.5	283.9	0.0	59.5	94.1	0	0.6
24-36	4/12/2016 21:03	285.3	0.0	62.1	95.3	279.7	0.0	61.8	95.5	283.9	0.0	59.6	94.2	0	0.6
24-36	4/12/2016 21:04	285.3	0.0	62.2	95.0	279.7	0.0	61.7	95.3	283.9	0.0	59.7	94.4	0	0.6
24-36	4/12/2016 21:05	285.3	0.0	62.2	94.8	279.7	0.0	61.7	95.3	283.9	0.0	59.7	94.4	0	0.6
24-36	4/12/2016 21:06	285.3	0.7	62.2	94.6	279.7	0.0	61.5	95.2	283.9	0.0	59.7	94.3	0	0.6
24-36	4/12/2016 21:07	285.3	0.7	62.1	94.6	279.7	0.0	61.5	95.3	283.9	0.0	59.6	94.3	0	0.6
24-36	4/12/2016 21:08	285.3	0.7	62.1	94.7	279.7	0.0	61.5	95.5	283.9	0.0	59.6	94.4	0	0.6
24-36	4/12/2016 21:09	285.3	0.7	62.0	94.7	279.7	0.0	61.6	95.5	283.9	0.0	59.6	94.4	0	0.6
24-36	4/12/2016 21:10	285.3	0.0	62.0	94.8	279.7	0.0	61.6	95.5	283.9	0.0	59.7	94.6	0	0.6
24-36	4/12/2016 21:11	285.3	0.0	62.0	94.7	279.7	0.0	61.6	95.5	283.9	0.0	60.0	94.8	0	0.6
24-36	4/12/2016 21:12	285.3	0.0	62.0	94.8	279.7	0.0	61.6	95.3	283.9	0.0	60.1	94.9	0	0.6
24-36	4/12/2016 21:13	285.3	0.0	61.9	94.7	279.7	0.0	61.6	95.2	283.9	0.0	60.2	94.9	0	0.6
24-36	4/12/2016 21:14	285.3	0.0	61.9	94.4	279.7	0.0	61.5	94.9	283.9	0.0	60.2	94.9	0	0.6
24-36	4/12/2016 21:15	285.3	0.0	61.8	94.0	279.7	0.0	61.3	94.5	283.9	0.0	60.1	94.8	0	0.6
24-36	4/12/2016 21:16	285.3	0.0	61.5	93.6	279.7	0.0	60.9	94.0	283.9	0.0	59.6	95.0	0	0.6
24-36	4/12/2016 21:17	285.3	0.0	61.3	93.6	279.7	0.0	60.8	94.1	283.9	0.0	59.4	95.1	0	0.6
24-36	4/12/2016 21:18	285.3	0.0	61.3	93.7	279.7	0.0	60.8	94.1	283.9	0.0	59.4	95.2	0	0.6
24-36	4/12/2016 21:19	285.3	0.0	61.3	94.1	279.7	0.0	60.8	94.3	283.9	0.0	59.4	95.4	0	0.6
24-36	4/12/2016 21:20	285.3	0.0	61.3	94.7	279.7	0.0	60.8	94.6	283.9	0.0	59.5	95.4	0	0.6
24-36	4/12/2016 21:21	285.3	0.0	61.4	95.1	279.7	0.0	60.8	94.7	283.9	0.0	59.7	95.8	0	0.6
24-36	4/12/2016 21:22	285.3	0.0	61.3	95.1	279.7	0.0	60.8	94.7	283.9	0.0	59.7	95.9	0	0.6
24-36	4/12/2016 21:23	285.3	0.7	61.3	95.4	279.7	0.0	60.8	94.8	283.9	0.0	59.8	96.1	0	0.6
24-36	4/12/2016 21:24	285.3	0.0	61.3	95.5	279.7	0.0	60.9	95.1	283.9	0.0	59.9	96.1	0	0.6
24-36	4/12/2016 21:25	285.3	0.0	61.2	95.2	279.7	0.0	60.7	95.0	283.9	0.0	59.8	95.8	0	0.6
24-36	4/12/2016 21:26	285.3	0.0	61.2	95.1	279.7	0.0	60.6	95.0	283.9	0.0	59.7	95.7	0	0.6
24-36	4/12/2016 21:27	285.3	0.0	61.2	95.2	279.7	0.0	60.6	95.1	283.9	0.0	59.7	95.6	0	0.6
24-36	4/12/2016 21:28	285.3	0.0	61.3	95.2	279.7	0.0	60.6	95.1	283.9	0.0	59.7	95.8	0	0.6
24-36	4/12/2016 21:29	285.3	0.0	61.3	95.2	279.7	0.0	60.5	95.1	283.9	0.0	59.7	95.8	0	0.6
24-36	4/12/2016 21:30	285.3	0.0	61.2	95.2	279.7	0.0	60.6	95.1	283.9	0.0	59.6	95.8	0	0.6
24-36	4/12/2016 21:31	285.3	0.0	61.2	95.2	279.7	0.0	60.8	95.3	283.9	0.0	59.7	95.6	0	0.6
24-36	4/12/2016 21:32	285.3	0.0	61.2	95.4	279.7	0.0	60.9	95.5	283.9	0.0	59.7	95.6	0	0.6
24-36	4/12/2016 21:33	285.3	0.0	61.3	95.7	279.7	0.0	61.0	95.6	283.9	0.0	59.7	95.7	0	0.6
24-36	4/12/2016 21:34	285.3	0.0	61.3	95.8	279.7	0.0	61.1	95.7	283.9	0.0	59.6	95.6	0	0.6
24-36	4/12/2016 21:35	285.3	0.0	61.3	95.7	279.7	0.0	61.1	95.8	283.9	0.0	59.4	95.6	0	0.6
24-36	4/12/2016 21:36	285.3	0.0	61.3	95.8	279.7	0.0	61.1	95.8	283.9	0.0	59.3	95.6	0	0.6
24-36	4/12/2016 21:37	285.3	0.0	61.3	95.8	279.7	0.0	60.9	95.7	283.9	0.0	59.2	95.7	0	0.6
24-36	4/12/2016 21:38	285.3	0.0	61.2	95.9	279.7	0.0	60.9	95.6	283.9	0.0	59.2	95.7	0	0.6
24-36	4/12/2016 21:39	285.3	0.0	61.4	96.2	279.7	0.0	60.9	95.9	283.9	0.0	59.1	95.7	0	0.6
24-36	4/12/2016 21:40	285.3	0.0	61.4	96.7	279.7	0.0	60.9	96.1	283.9	0.0	59.1	96.1	0	0.6
24-36	4/12/2016 21:41	285.3	0.0	61.4	96.8	279.7	0.0	60.9	96.4	283.9	0.0	59.3	96.4	0	0.6
24-36	4/12/2016 21:42	285.3	0.0	61.4	97.0	279.7	0.0	60.8	96.6	283.9	0.0	59.0	96.4	0	0.6
24-36	4/12/2016 21:43	285.3	0.0	61.4	97.2	279.7	0.0	60.7	96.9	283.9	0.0	59.0	96.4	0	0.6
NS	4/12/2016 21:44	285.3	0.0	61.3	97.0	279.7	0.0	60.5	96.8	283.9	0.0	59.1	96.6	0	0.6
NS	4/12/2016 21:45	285.3	0.7	61.0	96.8	279.7	0.0	60.3	96.8	283.9	0.0	59.1	96.9	0	0.6
NS	4/12/2016 21:46	285.3	0.0	60.7	96.7	279.7	0.0	60.0	96.7	283.9	0.0	59.0	96.6	0	0.6
NS	4/12/2016 21:47	285.3	0.0	60.5	96.5	279.7	0.0	59.8	96.5	283.9	0.0	58.9	96.6	0	0.6
NS	4/12/2016 21:48	285.3	0.0	60.4	96.5	279.7	0.0	59.8	96.5	283.9	0.0	59.0	96.6	0	0.6
NS	4/12/2016 21:49	285.3	0.0	60.4	96.5	279.7	0.0	59.7	96.4	283.9	0.0	58.9	96.5	0	0.6
NS	4/12/2016 21:50	285.3	0.0	60.3	96.3	279.7	0.0	59.7	96.3	283.9	0.0	58.8	96.4	0	0.6
NS	4/12/2016 21:51	285.3	0.0	60.3	96.3	279.7	0.0	59.6	96.2	283.9	0.0	58.7	96.4	0	0.6
NS	4/12/2016 21:52	285.3	0.0	60.3	96.3	279.7	0.0	59.6	96.2	283.9	0.0	58.8	96.4	0	0.6
NS	4/12/2016 21:53	285.3	0.0	60.5	96.3	279.7	0.0	59.8	96.2	283.9	0.0	58.9	96.4	0	0.6
NS	4/12/2016 21:54	285.3	0.0	60.5	96.3	279.7	0.0	59.7	96.2	283.9	0.0	58.8	96.4	0	0.6
NS	4/12/2016 21:55	285.3	0.0	60.5	96.3	279.7	0.0	59.7	96.2	283.9	0.0	58.8	96.4	0	0.6
NS	4/12/2016 21:56	285.3	0.0	60.4	96.3	279.7	0.0	59.7	96.3	283.9	0.0	58.8	96.4	0	0.6
NS	4/12/2016 21:57	285.3	0.0	60.3	96.3	279.7	0.0	59.7	96.3	283.9	0.0	58.9	96.4	0	0.6
NS	4/12/2016 21:58	285.3	0.0	60.3	96.3	279.7	0.0	59.8	96.4	283.9	0.0	59.1	96.6	0	0.6
NS	4/12/2016 21:59	285.3	0.0	60.3	96.3	279.7	0.0	59.9	96.4	283.9	0.0	59.1	96.6	0	0.6
NS	4/12/2016 22:00	285.3	0.0	60.4	96.3	279.7	0.0	59.8	96.4	283.9	0.0	59.0	96.6	0	0.6
NS	4/12/2016 22:01	285.3	0.0	60.4	96.6	279.7	0.0	59.9	96.5	283.9	0.0	59.1	96.9	0	0.6
NS	4/12/2016 22:02	285.3	0.0	60.4	97.1	279.7	0.0	60.0	97.0	283.9	0.0	59.2	97.4	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/12/2016 22:03	285.3	0.7	60.4	97.4	279.7	0.0	60.0	97.2	283.9	0.0	59.3	97.6	0	0.6
NS	4/12/2016 22:04	285.3	0.7	60.7	97.8	279.7	0.0	60.2	97.6	283.9	0.0	59.5	97.7	0	0.6
NS	4/12/2016 22:05	285.3	0.7	60.9	98.0	279.7	0.0	60.4	97.9	283.9	0.0	59.7	97.7	0	0.6
NS	4/12/2016 22:06	285.3	0.7	61.1	98.2	279.7	0.0	60.5	97.9	283.9	0.0	59.8	97.9	0	0.6
NS	4/12/2016 22:07	285.3	0.0	61.2	98.0	279.7	0.0	60.6	97.8	283.9	0.0	59.9	97.7	0	0.6
NS	4/12/2016 22:08	285.3	0.0	61.2	97.9	279.7	0.0	60.6	97.8	283.9	0.0	60.0	97.7	0	0.6
36-48	4/12/2016 22:09	285.3	0.0	61.2	97.8	279.7	0.0	60.6	97.8	283.9	0.0	60.2	97.7	0	0.6
36-48	4/12/2016 22:10	285.3	0.0	61.2	97.8	279.7	0.0	60.7	97.9	283.9	0.0	60.3	97.6	0	0.6
36-48	4/12/2016 22:11	285.3	0.0	61.3	97.8	279.7	0.0	60.9	97.9	283.9	0.0	60.3	97.6	0	0.6
36-48	4/12/2016 22:12	285.3	0.0	61.4	97.9	279.7	0.0	61.1	97.9	283.9	0.0	60.4	97.5	0	0.6
36-48	4/12/2016 22:13	285.3	0.0	61.5	98.0	279.7	0.0	61.2	97.9	283.9	0.0	60.5	97.4	0	0.6
36-48	4/12/2016 22:14	285.3	0.0	61.6	97.8	279.7	0.0	61.3	97.7	283.9	0.0	60.6	97.4	0	0.6
36-48	4/12/2016 22:15	285.3	0.0	61.7	97.8	279.7	0.0	61.4	97.7	283.9	0.0	60.7	97.3	0	0.6
36-48	4/12/2016 22:16	285.3	0.0	61.8	97.8	279.7	0.0	61.5	98.0	283.9	0.0	61.0	98.0	0	0.6
36-48	4/12/2016 22:17	285.3	0.0	61.8	97.8	279.7	0.0	61.5	98.0	283.9	0.0	61.2	98.0	0	0.6
36-48	4/12/2016 22:18	285.3	0.0	61.8	97.6	279.7	0.0	61.5	98.0	283.9	0.0	61.2	98.0	0	0.6
36-48	4/12/2016 22:19	285.3	0.7	61.8	97.6	279.7	0.0	61.5	98.0	283.9	0.0	61.3	97.9	0	0.6
36-48	4/12/2016 22:20	285.3	0.7	61.8	97.6	279.7	0.0	61.6	98.0	283.9	0.0	61.4	97.8	0	0.6
36-48	4/12/2016 22:21	285.3	0.0	61.9	97.6	279.7	0.0	61.7	98.0	283.9	0.0	61.5	97.8	0	0.6
36-48	4/12/2016 22:22	285.3	0.0	62.0	97.5	279.7	0.0	61.8	98.1	283.9	0.0	61.5	97.9	0	0.6
36-48	4/12/2016 22:23	285.3	0.7	62.4	97.0	279.7	0.0	62.0	97.8	283.9	0.0	61.7	97.9	0	0.6
36-48	4/12/2016 22:24	285.3	0.0	62.5	96.5	279.7	0.0	62.1	97.7	283.9	0.0	61.7	97.8	0	0.6
36-48	4/12/2016 22:25	285.3	0.0	62.7	96.0	279.7	0.0	62.2	97.5	283.9	0.0	61.8	97.8	0	0.6
36-48	4/12/2016 22:26	285.3	0.0	62.7	95.7	279.7	0.0	62.3	97.2	283.9	0.0	61.8	97.8	0	0.6
36-48	4/12/2016 22:27	285.3	0.0	62.8	95.4	279.7	0.0	62.3	96.9	283.9	0.0	61.8	97.8	0	0.6
36-48	4/12/2016 22:28	285.3	0.0	62.8	95.3	279.7	0.0	62.3	96.7	283.9	0.0	61.8	97.8	0	0.6
36-48	4/12/2016 22:29	285.3	0.0	62.8	95.2	279.7	0.0	62.3	96.6	283.9	0.0	61.8	97.8	0	0.6
36-48	4/12/2016 22:30	285.3	0.0	62.7	95.2	279.7	0.0	62.3	96.4	283.9	0.0	61.8	97.7	0	0.6
36-48	4/12/2016 22:31	285.3	0.0	62.7	95.3	279.7	0.0	62.2	96.4	283.9	0.0	61.8	97.7	0	0.6
36-48	4/12/2016 22:32	285.3	0.0	62.6	95.3	279.7	0.0	62.2	96.3	283.9	0.0	61.7	97.7	0	0.6
36-48	4/12/2016 22:33	285.3	0.7	62.5	95.2	279.7	0.0	62.1	96.3	283.9	0.0	61.7	97.8	0	0.6
36-48	4/12/2016 22:34	285.3	0.0	62.5	95.3	279.7	0.0	62.1	96.2	283.9	0.0	61.7	97.9	0	0.6
36-48	4/12/2016 22:35	285.3	0.7	62.7	95.4	279.7	0.0	62.2	96.2	283.9	0.0	61.8	98.3	0	0.6
36-48	4/12/2016 22:36	285.3	0.7	62.6	95.4	279.7	0.0	62.3	96.3	283.9	0.0	62.0	98.3	0	0.6
36-48	4/12/2016 22:37	285.3	0.7	62.9	95.3	279.7	0.0	62.3	96.3	283.9	0.0	62.0	98.3	0	0.6
36-48	4/12/2016 22:38	285.3	0.7	62.9	95.2	279.7	0.0	62.3	96.2	283.9	0.0	61.9	98.1	0	0.6
36-48	4/12/2016 22:39	285.3	0.0	62.6	95.3	279.7	0.0	62.2	96.3	283.9	0.0	61.8	98.1	0	0.6
36-48	4/12/2016 22:40	285.3	0.0	62.7	95.6	279.7	0.0	62.2	96.3	283.9	0.0	61.8	98.0	0	0.6
36-48	4/12/2016 22:41	285.3	0.0	62.6	95.7	279.7	0.0	62.1	96.3	283.9	0.0	61.7	97.8	0	0.6
36-48	4/12/2016 22:42	285.3	0.0	62.4	95.5	279.7	0.0	62.0	96.2	283.9	0.0	61.6	97.8	0	0.6
36-48	4/12/2016 22:43	285.3	0.0	62.3	95.4	279.7	0.0	61.9	96.3	283.9	0.0	61.5	97.9	0	0.6
36-48	4/12/2016 22:44	285.3	0.0	62.1	95.7	279.7	0.0	61.7	96.4	283.9	0.0	61.3	97.9	0	0.6
36-48	4/12/2016 22:45	285.3	0.0	61.8	95.5	279.7	0.0	61.4	96.2	283.9	0.0	61.0	97.7	0	0.6
36-48	4/12/2016 22:46	285.3	0.7	61.5	95.4	279.7	0.0	61.2	96.0	283.9	0.0	60.7	97.7	0	0.6
36-48	4/12/2016 22:47	285.3	0.7	61.3	95.5	279.7	0.0	60.9	96.1	283.9	0.0	60.5	97.8	0	0.6
36-48	4/12/2016 22:48	285.3	0.7	61.1	95.5	279.7	0.0	60.8	96.1	283.9	0.0	60.3	97.9	0	0.6
36-48	4/12/2016 22:49	285.3	0.0	61.0	95.6	279.7	0.0	60.7	96.2	283.9	0.0	60.2	97.8	0	0.6
36-48	4/12/2016 22:50	285.3	0.0	60.9	95.8	279.7	0.0	60.6	96.2	283.9	0.0	60.2	97.8	0	0.6
36-48	4/12/2016 22:51	285.3	0.0	60.9	95.8	279.7	0.0	60.6	96.3	283.9	0.0	60.1	97.6	0	0.6
36-48	4/12/2016 22:52	285.3	0.0	60.6	96.1	279.7	0.0	60.5	96.4	283.9	0.0	60.0	97.5	0	0.6
36-48	4/12/2016 22:53	285.3	0.7	60.6	96.3	279.7	0.0	60.5	96.5	283.9	0.0	59.9	97.5	0	0.6
36-48	4/12/2016 22:54	285.3	0.7	60.6	96.4	279.7	0.0	60.5	96.6	283.9	0.0	59.9	97.6	0	0.6
36-48	4/12/2016 22:55	285.3	0.7	60.6	96.7	279.7	0.0	60.5	96.7	283.9	0.0	59.8	97.7	0	0.6
36-48	4/12/2016 22:56	285.3	0.7	60.9	96.9	279.7	0.0	60.6	96.7	283.9	0.0	59.8	97.7	0	0.6
36-48	4/12/2016 22:57	285.3	0.0	61.0	97.4	279.7	0.0	60.5	96.9	283.9	0.0	59.8	97.6	0	0.6
36-48	4/12/2016 22:58	285.3	0.0	61.0	97.4	279.7	0.0	60.5	97.0	283.9	0.0	59.7	97.5	0	0.6
36-48	4/12/2016 22:59	285.3	0.0	61.0	97.7	279.7	0.0	60.6	97.4	283.9	0.0	59.7	97.6	0	0.6
36-48	4/12/2016 23:00	285.3	0.0	61.1	97.8	279.7	0.0	60.7	97.4	283.9	0.0	59.7	97.6	0	0.6
36-48	4/12/2016 23:01	285.3	0.0	61.1	97.9	279.7	0.0	60.7	97.5	283.9	0.0	59.7	97.6	0	0.6
36-48	4/12/2016 23:02	285.3	0.7	61.1	98.0	279.7	0.0	60.7	97.6	283.9	0.0	59.7	97.6	0	0.6
36-48	4/12/2016 23:03	285.3	0.7	61.1	97.9	279.7	0.0	60.7	97.5	283.9	0.0	59.7	97.6	0	0.6
36-48	4/12/2016 23:04	285.3	0.7	61.1	98.0	279.7	0.0	60.6	97.6	283.9	0.0	59.7	97.6	0	0.6
36-48	4/12/2016 23:05	285.3	0.7	61.1	98.2	279.7	0.0	60.6	97.6	283.9	0.0	59.7	97.6	0	0.6
36-48	4/12/2016 23:06	285.3	0.7	61.1	98.2	279.7	0.0	60.6	97.8	283.9	0.0	59.6	97.6	0	0.6
36-48	4/12/2016 23:07	285.3	0.7	61.1	98.2	279.7	0.0	60.6	97.8	283.9	0.0	59.6	97.7	0	0.6
36-48	4/12/2016 23:08	285.3	0.7	61.0	98.2	279.7	0.0	60.5	97.8	283.9	0.0	59.5	97.7	0	0.6
36-48	4/12/2016 23:09	285.3	0.0	60.9	98.2	279.7	0.0	60.4	97.9	283.9	0.0	59.4	97.7	0	0.6
36-48	4/12/2016 23:10	285.3	0.0	60.9	98.2	279.7	0.0	60.4	97.8	283.9	0.0	59.4	97.6	0	0.6
36-48	4/12/2016 23:11	285.3	0.0	60.9	98.3	279.7	0.0	60.3	97.8	283.9	0.0	59.3	97.6	0	0.6
36-48	4/12/2016 23:12	285.3	0.0	60.6	98.1	279.7	0.0	60.0	97.8	283.9	0.0	59.1	97.8	0	0.6
36-48	4/12/2016 23:13	285.3	0.0	60.5	98.1	279.7	0.0	60.1	98.0	283.9	0.0	59.2	98.1	0	0.6
36-48	4/12/2016 23:14	285.3	0.0	60.5	98.3	279.7	0.0	60.2	98.1	283.9	0.0	59.3	98.1	0	0.6
36-48	4/12/2016 23:15	285.3	0.0	60.5	98.4	279.7	0.0	60.1	98.1	283.9	0.0	59.3	98.0	0	0.6
36-48	4/12/2016 23:16	285.3	0.0	60.5	98.3	279.7	0.0	60.0	98.0	283.9	0.0	59.1	97.9	0	0.6
36-48	4/12/2016 23:17	285.3	0.0	60.4	98.3	279.7	0.0	59.8	97.8	283.9	0.0	58.6	97.9	0	0.6
36-48	4/12/2016 23:18	285.3	0.0	60.1	98.1	279.7	0.0	59.6	97.8	283.9	0.0	58.7	98.0	0	0.6
36-48	4/12/2016 23:19	285.3	0.0	60.0	98.3	279.7	0.0	59.4	97.9	283.9	0.0	58.5	98.0	0	0.6
36-48	4/12/2016 23:20	285.3	0.0	60.1	98.5	279.7	0.0	59.6	98.2	283.9	0.0	58.6	98.6	0	0.6
36-48	4/12/2016 23:21	285.3	0.0	60.1	98.5	279.7	0.0	59.6	98.2	283.9	0.0	58.4	98.4	0	0.6
36-48	4/12/2016 23:22	285.3	0.0	60.1	98.7	279.7	0.0	59.8	98.5	283.9	0.0	58.7	98.7	0	0.6
36-48	4/12/2016 23:23	285.3	0.0	60.1	98.6	279.7	0.0	59.6	98.3	283.9	0.0	58.7	98.6	0	0.6
36-48	4/12/2016 23:24	285.3	0.0	59.9	98.5	279.7	0.0	59.5	98.2	283.9	0.0	58.6	98.5	0	0.6
36-48	4/12/2016 23:25	285.3	0.0	59.7	98.4	279.7	0.0	59.4	98.1	283.9	0.0	58.5	98.4	0	0.6
36-48	4/12/2016 23:26	285.3	0.0	59.7	98.3	279.7	0.0	59.1	98.1	283.9	0.0	58.3	98.2	0	0.6
36-48	4/12/2016 23:27	285.3	0.0	59.3	98.1	279.7	0.0	58.8	98.0	283.9	0.0	57.9	98.2	0	0.6
36-48	4/12/2016 23:28	285.3	0.0	59.1	98.2	279.7	0.0	58.7	98.0	283.9	0.0	57.9	98.5	0	0.6
36-48	4/12/2016 23:29	285.3	0.0	59.2	98.3	279.7	0.0	58.6	98.0	283.9	0.0	57.9	98.4	0	0.6
36-48	4/12/2016 23:30	285.3	0.0	59.3	98.3	279.7	0.0	58.7	98.0	283.9	0.0	57.6	98.4	0	0.6
36-48	4/12/2016 23:31	285.3	0.0	59.4	98.2	279.7	0.0	58.8	98.0	283.9	0.0	57.7	98.4	0	0.6
36-48	4/12/2016 23:32	285.3	0.0	59.3	98.2	279.7	0.0	58.7	98.0	283.9	0.0	57.5	98.4	0	0.6
36-48	4/12/2016 23:33	285.3	0.0	59.3	98.3	279.7	0.0	58.8	98.1	283.9	0.0	57.5	98.4	0	0.6
36-48	4/12/2016 23:34	285.3	0.0	59.3	98.3	279.7	0.0	58.6	98.1	283.9	0.0	57.3	98.3	0	0.6
36-48	4/12/2016 23:35	285.3	0.0	59.1	98.4	279.7	0.0	58.6	98.2	283.9	0.0	57.2	98.3	0	0.6
36-48	4/12/2016 23:36	285.3	0.0	59.0	98.3	279.7	0.0	58.5	98.3	283.9	0.0	57.1	98.3	0	0.6
36-48	4/12/2016 23:37	285.3	0.0	59.1	98.5	279.7	0.0	58.5	98.3	283.9	0.0	57.0	98.3	0	0.6
36-48	4/12/2016 23:38	285.3	0.0	59.3	98.6	279.7	0.0	58.5	98.3	283.9	0.0	57.1	98.4	0	0.6
36-48	4/12/2016 23:39	285.3	0.0	59.0	98.4	279.7	0.0	58.3	98.3	283.9	0.0	56.9	98.3	0	0.6
36-48	4/12/2016 23:40	285.3	0.0	58.8	98.3	279.7	0.0	58.3	98.3	283.9	0.0	56.9	98.4	0	0.6
36-48	4/12/2016 23:41	285.3	0.0	58.8	98.5	279.7	0.0	58.4	98.4	283.9	0.0	57.0	98.4	0	0.6
36-48	4/12/2016 23:42	285.3	0.0	58.9	98.7	279.7	0.0	58.4	98.5	283.9	0.0	56.9	98.4	0	0.6
36-48	4/12/2016 23:43	285.3	0.0	59.0	98.7	279.7	0.0	58.6	98.6	283.9	0.0	56.9	98.4	0	0.6
36-48	4/12/2016 23:44	286.7	0.7	59.3	99.0	300.7	0.7	58.7	98.6	283.9	0.0	57.2	98.8	0	0.6
36-48	4/12/2016 23:45	289.5	0.7	59.1	98.5	314.8	0.0	58.5	98.5	283.9	0.0	57.3	98.9	0	0.6
36-48	4/12/2016 23:46	289.5	0.0	59.2	98.8	314.8	0.0	58.8	98.8	283.9	0.0	57.5	99.1	0	0.6
36-48	4/12/2016 23:47	289.5	0.7	59.6	98.8	314.8	0.7	59.2	99.0	283.9	0.0	57.7	99.1	0	0.6
36-48	4/12/2016 23:48	289.5	0.7	59.9	98.1	314.8	0.7	59.2	98.8	283.9	0.0	58.0	99.1	0	0.6
36-48	4/12/2016 23:49	289.5	0.0	60.0	97.3	314.8	0.0	59.3	98.4	283.9	0.0	58.2	99.2	0	0.6
36-48	4/12/2016 23:50	289.5	0.0	60.1	97.3	314.8	0.0	59.4	98.2	283.9	0.0	58.2	99.1	0	0.6
36-48	4/12/2016 23:51	304.9	0.7	60.2	96.7	304.9	1.5	59.7	98.1	283.9	0.0	58.5	99.3	0	0.6
36-48	4/12/2016 23:52	292.3	1.5	60.6	95.4	288.1	0.7	59.9	97.3	283.9	0.0	58.7	99.2	0	0.6
36-48	4/12/2016 23:53	292.3	0.7	60.6	95.7	288.1	0.7	60.0	97.3	283.9	0.0	58.7	99.1	0	0.6
36-48	4/12/2016 23:54	292.3	0.7	60.6	95.6	288.1	0.0	59.9	97.1	283.9	0.0	58.7	99.1	0	0.6
36-48	4/12/2016 23:55	292.3	0.0	60.4	95.6	288.1	0.0	59.8	96.9	283.9	0.0	58.7	99.0	0	0.6
36-48	4/12/2016 23:56	292.3	0.0	60.4	95.6	288.1	0.0	59.7	96.9	283.9	0.0	58.6	98.9	0	0.6
36-48	4/12/2016 23:57	292.3	0.0	60.3	95.5	288.1	0.0	59.6	96.7	283.9	0.0	58.5	98.9	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
36-48	4/12/2016 23:58	292.3	0.0	60.1	95.8	288.1	0.0	59.5	96.8	263.9	0.0	58.5	98.8	0	0.6
36-48	4/12/2016 23:59	292.3	0.0	60.0	96.0	288.1	0.0	59.5	97.0	263.9	0.0	58.5	98.8	0	0.6
36-48	4/13/2016 0:00	292.3	0.0	59.9	96.2	288.1	0.0	59.4	96.9	263.9	0.0	58.4	98.8	0	0.6
36-48	4/13/2016 0:01	292.3	0.0	59.7	96.1	288.1	0.0	59.1	97.0	263.9	0.0	58.2	98.7	0	0.6
36-48	4/13/2016 0:02	292.3	0.0	59.4	96.0	288.1	0.0	58.8	96.9	263.9	0.0	57.9	98.7	0	0.6
36-48	4/13/2016 0:03	292.3	0.0	59.0	96.1	288.1	0.0	58.5	96.7	263.9	0.0	57.9	98.8	0	0.6
36-48	4/13/2016 0:04	292.3	0.0	58.8	96.1	288.1	0.0	58.4	96.8	263.9	0.0	57.8	98.7	0	0.6
36-48	4/13/2016 0:05	292.3	0.0	58.7	96.3	288.1	0.0	58.2	96.9	263.9	0.0	57.7	98.7	0	0.6
36-48	4/13/2016 0:06	292.3	0.0	58.5	96.4	288.1	0.0	58.2	97.0	263.9	0.0	57.5	98.7	0	0.6
36-48	4/13/2016 0:07	292.3	0.0	58.4	96.5	288.1	0.0	58.0	97.1	263.9	0.0	57.4	98.7	0	0.6
36-48	4/13/2016 0:08	292.3	0.0	58.3	96.8	288.1	0.0	57.9	97.1	263.9	0.0	57.2	98.6	0	0.6
36-48	4/13/2016 0:09	292.3	0.0	58.3	97.0	288.1	0.0	57.9	97.2	263.9	0.0	57.1	98.8	0	0.6
36-48	4/13/2016 0:10	292.3	0.0	58.3	97.2	288.1	0.0	57.8	97.3	263.9	0.0	57.0	98.6	0	0.6
36-48	4/13/2016 0:11	292.3	0.0	58.3	97.5	288.1	0.0	57.7	97.4	263.9	0.0	56.9	98.7	0	0.6
36-48	4/13/2016 0:12	292.3	0.0	58.2	97.8	288.1	0.0	57.7	97.8	263.9	0.0	56.8	98.7	0	0.6
36-48	4/13/2016 0:13	292.3	0.0	58.3	97.9	288.1	0.0	57.8	98.0	263.9	0.0	56.7	98.7	0	0.6
36-48	4/13/2016 0:14	292.3	0.7	58.4	98.1	288.1	0.7	57.9	98.2	263.9	0.0	56.6	98.8	0	0.6
36-48	4/13/2016 0:15	292.3	0.7	58.6	98.3	288.1	0.7	57.9	98.3	263.9	0.0	56.7	98.8	0	0.6
36-48	4/13/2016 0:16	292.3	0.0	58.5	97.8	288.1	0.0	57.9	98.3	263.9	0.0	56.7	98.8	0	0.6
36-48	4/13/2016 0:17	292.3	0.0	58.5	98.3	288.1	0.0	58.1	98.6	263.9	0.0	56.9	99.0	0	0.6
36-48	4/13/2016 0:18	292.3	0.0	58.6	98.4	288.1	0.0	58.1	98.5	263.9	0.0	56.9	99.0	0	0.6
36-48	4/13/2016 0:19	292.3	0.0	58.6	98.4	288.1	0.0	58.1	98.6	263.9	0.0	56.9	99.0	0	0.6
36-48	4/13/2016 0:20	292.3	0.0	58.8	98.6	288.1	0.0	58.2	98.6	263.9	0.0	56.9	99.0	0	0.6
36-48	4/13/2016 0:21	292.3	0.0	58.8	98.6	288.1	0.0	58.4	98.7	263.9	0.0	57.0	99.0	0	0.6
36-48	4/13/2016 0:22	292.3	0.0	58.7	98.3	288.1	0.0	58.2	98.5	263.9	0.0	56.9	98.9	0	0.6
36-48	4/13/2016 0:23	292.3	0.0	58.6	98.1	288.1	0.0	58.1	98.5	263.9	0.0	56.8	99.0	0	0.6
36-48	4/13/2016 0:24	292.3	0.0	58.5	98.1	288.1	0.0	57.9	98.5	263.9	0.0	56.6	99.0	0	0.6
36-48	4/13/2016 0:25	292.3	0.0	58.4	98.0	288.1	0.0	57.9	98.5	263.9	0.0	56.8	99.3	0	0.6
36-48	4/13/2016 0:26	292.3	0.0	58.5	98.0	288.1	0.0	58.0	98.4	263.9	0.0	57.2	99.6	0	0.6
36-48	4/13/2016 0:27	292.3	0.0	58.4	98.0	288.1	0.0	57.9	98.3	263.9	0.0	57.2	99.4	0	0.6
36-48	4/13/2016 0:28	292.3	0.0	58.2	97.9	288.1	0.0	57.7	98.3	263.9	0.0	57.1	99.2	0	0.6
36-48	4/13/2016 0:29	292.3	0.0	58.0	97.8	288.1	0.0	57.5	98.3	263.9	0.0	56.9	99.1	0	0.6
36-48	4/13/2016 0:30	292.3	0.0	57.8	97.7	288.1	0.0	57.4	98.1	263.9	0.0	56.7	99.1	0	0.6
36-48	4/13/2016 0:31	292.3	0.0	57.8	97.9	288.1	0.0	57.3	98.2	263.9	0.0	56.5	99.1	0	0.6
36-48	4/13/2016 0:32	292.3	0.0	57.9	98.2	288.1	0.0	57.2	98.3	263.9	0.0	56.4	99.0	0	0.6
36-48	4/13/2016 0:33	292.3	0.0	57.8	98.2	288.1	0.0	57.2	98.3	263.9	0.0	56.3	99.0	0	0.6
36-48	4/13/2016 0:34	292.3	0.0	57.9	98.4	288.1	0.0	57.3	98.4	263.9	0.0	56.3	99.1	0	0.6
36-48	4/13/2016 0:35	292.3	0.0	57.9	98.6	288.1	0.0	57.5	98.6	263.9	0.0	56.3	99.1	0	0.6
36-48	4/13/2016 0:36	292.3	0.0	58.2	99.0	288.1	0.0	57.7	98.8	263.9	0.0	56.6	99.4	0	0.6
36-48	4/13/2016 0:37	292.3	0.0	58.2	98.9	288.1	0.0	57.8	98.7	263.9	0.0	56.7	99.6	0	0.6
36-48	4/13/2016 0:38	292.3	0.0	58.3	99.0	288.1	0.0	57.9	99.0	263.9	0.0	56.7	99.6	0	0.6
36-48	4/13/2016 0:39	292.3	0.0	58.1	98.8	288.1	0.0	57.5	98.7	263.9	0.0	56.6	99.5	0	0.6
36-48	4/13/2016 0:40	292.3	0.0	58.1	98.9	288.1	0.0	57.5	98.8	263.9	0.0	56.6	99.5	0	0.6
36-48	4/13/2016 0:41	292.3	0.7	58.1	99.0	288.1	0.0	57.8	99.1	263.9	0.0	56.6	99.5	0	0.6
36-48	4/13/2016 0:42	292.3	0.7	58.4	99.3	288.1	0.0	58.2	99.4	263.9	0.0	56.8	99.7	0	0.6
36-48	4/13/2016 0:43	292.3	0.0	58.7	99.5	293.7	0.0	58.2	99.4	263.9	0.0	56.9	99.8	0	0.6
36-48	4/13/2016 0:44	349.9	0.7	58.7	99.3	349.9	0.7	58.2	99.4	265.3	0.0	57.2	99.9	0	0.6
36-48	4/13/2016 0:45	358.3	0.0	58.6	98.8	349.9	0.0	58.3	99.3	265.3	0.0	57.4	99.9	0	0.6
36-48	4/13/2016 0:46	358.3	0.0	58.6	98.2	349.9	0.7	58.2	99.0	265.3	0.0	57.4	100.0	0	0.6
36-48	4/13/2016 0:47	358.3	0.0	58.6	97.8	349.9	0.0	57.9	98.7	265.3	0.0	57.2	99.8	0	0.6
36-48	4/13/2016 0:48	358.3	0.7	58.7	98.1	349.9	0.7	58.2	99.0	265.3	0.0	57.3	99.8	0	0.6
36-48	4/13/2016 0:49	358.3	0.7	58.9	98.3	349.9	0.7	58.5	99.0	265.3	0.0	57.5	99.9	0	0.6
36-48	4/13/2016 0:50	358.3	0.7	59.2	97.4	349.9	0.7	58.7	98.6	265.3	0.0	57.8	100.0	0	0.6
36-48	4/13/2016 0:51	9.5	1.5	59.4	96.0	30.6	1.5	58.7	97.5	331.6	0.7	57.8	99.7	0	0.6
36-48	4/13/2016 0:52	15.1	0.7	59.4	95.9	34.8	0.7	58.7	97.4	337.2	0.0	57.8	99.5	0	0.6
36-48	4/13/2016 0:53	15.1	0.7	59.4	95.7	34.8	0.7	58.7	97.1	337.2	0.0	57.8	99.3	0	0.6
36-48	4/13/2016 0:54	15.1	0.7	59.4	95.4	34.8	0.7	58.7	96.8	337.2	0.0	57.7	99.2	0	0.6
36-48	4/13/2016 0:55	15.1	0.7	59.4	95.6	34.8	1.5	59.0	96.9	337.2	0.0	57.9	99.2	0	0.6
36-48	4/13/2016 0:56	16.5	1.5	59.7	95.1	34.8	1.5	59.1	96.4	337.2	0.0	58.2	99.0	0	0.6
36-48	4/13/2016 0:57	16.5	0.7	59.9	94.6	34.8	0.7	59.3	95.9	337.2	0.0	58.3	98.8	0	0.6
36-48	4/13/2016 0:58	16.5	0.7	59.9	94.5	34.8	0.7	59.4	95.7	337.2	0.0	58.3	98.6	0	0.6
36-48	4/13/2016 0:59	16.5	0.7	59.8	94.0	34.8	0.7	59.2	95.3	337.2	0.0	58.2	98.3	0	0.6
36-48	4/13/2016 1:00	16.5	0.7	59.6	94.4	34.8	0.7	59.1	95.6	337.2	0.0	58.1	98.0	0	0.6
36-48	4/13/2016 1:01	16.5	0.7	59.7	94.4	34.8	0.7	59.2	95.6	337.2	0.0	58.2	97.9	0	0.6
36-48	4/13/2016 1:02	16.5	0.7	59.7	94.1	34.8	0.7	59.1	95.4	337.2	0.0	58.1	97.8	0	0.6
36-48	4/13/2016 1:03	13.7	1.5	59.6	94.2	20.8	1.5	59.1	95.6	341.5	0.0	58.2	98.0	0	0.6
36-48	4/13/2016 1:04	15.1	1.5	59.6	94.1	19.4	1.5	59.1	95.4	344.3	0.0	58.3	97.6	0	0.6
36-48	4/13/2016 1:05	15.1	1.5	59.8	93.6	18.0	1.5	59.2	94.8	344.3	0.0	58.4	97.4	0	0.6
36-48	4/13/2016 1:06	15.1	0.7	59.6	93.9	18.0	0.7	59.0	95.0	344.3	0.0	58.2	97.2	0	0.6
36-48	4/13/2016 1:07	16.5	2.2	59.6	94.1	18.0	1.5	59.1	95.2	349.9	0.7	58.3	97.3	0	0.6
36-48	4/13/2016 1:08	16.5	2.2	59.7	93.8	20.8	2.2	59.4	94.9	9.5	0.7	58.6	97.2	0	0.6
36-48	4/13/2016 1:09	23.6	1.5	59.8	93.4	27.8	1.5	59.4	94.6	40.4	0.0	58.6	96.7	0	0.6
36-48	4/13/2016 1:10	15.1	3.0	60.0	93.4	19.4	3.0	59.6	94.4	10.9	1.5	58.8	96.6	0	0.6
36-48	4/13/2016 1:11	22.2	2.2	60.0	92.9	1.1	1.5	59.5	94.2	19.4	0.0	58.8	96.3	0	0.6
36-48	4/13/2016 1:12	12.3	2.2	59.8	93.1	8.1	2.2	59.4	94.1	356.9	0.0	58.7	96.2	0	0.6
36-48	4/13/2016 1:13	10.9	2.2	59.7	93.3	6.7	2.2	59.4	94.4	12.3	0.7	58.7	96.3	0	0.6
36-48	4/13/2016 1:14	19.4	2.2	59.8	93.1	9.5	2.2	59.5	94.2	34.8	0.7	58.9	96.2	0	0.6
36-48	4/13/2016 1:15	347.1	1.5	59.9	93.0	351.3	1.5	59.6	93.9	12.3	0.0	58.9	95.8	0	0.6
36-48	4/13/2016 1:16	27.8	1.5	59.9	92.7	10.9	0.7	59.5	93.8	26.4	0.0	58.9	95.8	0	0.6
36-48	4/13/2016 1:17	26.4	0.7	59.8	92.8	12.3	0.7	59.4	93.9	26.4	0.0	58.9	95.6	0	0.6
36-48	4/13/2016 1:18	34.8	1.5	59.7	92.6	19.4	1.5	59.4	93.7	26.4	0.0	58.8	95.4	0	0.6
36-48	4/13/2016 1:19	22.2	3.0	60.1	92.2	18.0	3.0	59.9	93.2	36.2	1.5	59.3	95.3	0	0.6
36-48	4/13/2016 1:20	6.7	1.5	60.4	91.7	358.3	1.5	60.0	92.6	10.9	0.0	59.4	94.8	0	0.6
36-48	4/13/2016 1:21	19.4	1.5	60.5	91.2	355.5	1.5	60.1	92.3	9.5	0.0	59.4	94.5	0	0.6
36-48	4/13/2016 1:22	30.6	2.2	60.3	91.1	9.5	2.2	60.0	92.2	10.9	0.7	59.4	94.3	0	0.6
36-48	4/13/2016 1:23	33.4	1.5	60.5	91.0	26.4	1.5	60.0	92.1	12.3	0.7	59.5	94.2	0	0.6
36-48	4/13/2016 1:24	34.8	1.5	60.3	91.0	37.6	0.7	59.8	92.2	12.3	0.0	59.3	94.2	0	0.6
36-48	4/13/2016 1:25	23.6	1.5	60.2	91.0	8.1	1.5	59.8	92.1	9.5	0.7	59.3	94.1	0	0.6
36-48	4/13/2016 1:26	9.5	1.5	60.2	91.0	3.9	1.5	59.8	92.1	6.1	0.0	59.2	94.1	0	0.6
36-48	4/13/2016 1:27	9.5	2.2	60.4	90.7	2.5	2.2	60.2	91.7	10.9	1.5	59.5	94.0	0	0.6
36-48	4/13/2016 1:28	345.7	1.5	60.4	90.4	341.5	0.7	60.1	91.5	12.3	0.0	59.5	93.7	0	0.6
36-48	4/13/2016 1:29	351.3	0.7	60.3	90.5	354.1	1.5	60.0	91.6	10.9	0.0	59.4	93.4	0	0.6
36-48	4/13/2016 1:30	18.0	3.0	60.3	90.5	16.5	2.2	60.0	91.4	19.4	1.5	59.5	93.4	0	0.6
36-48	4/13/2016 1:31	32.0	0.7	60.2	90.5	23.6	0.7	59.8	91.5	34.8	0.0	59.3	93.4	0	0.6
36-48	4/13/2016 1:32	25.0	1.5	60.0	90.7	20.8	1.5	59.7	91.8	34.8	0.7	59.2	93.6	0	0.6
36-48	4/13/2016 1:33	25.0	1.5	59.9	91.0	22.2	1.5	59.6	91.9	34.8	0.7	59.1	93.6	0	0.6
36-48	4/13/2016 1:34	29.2	2.2	59.9	90.9	23.6	2.2	59.5	92.0	34.8	0.0	59.0	93.7	0	0.6
36-48	4/13/2016 1:35	16.5	1.5	59.8	90.9	6.7	1.5	59.4	91.9	34.8	0.0	58.9	93.8	0	0.6
36-48	4/13/2016 1:36	5.3	1.5	59.8	91.0	3.9	1.5	59.4	92.0	34.8	0.0	58.9	93.8	0	0.6
36-48	4/13/2016 1:37	352.7	0.7	59.7	91.1	9.5	0.7	59.3	92.2	34.8	0.0	58.8	94.0	0	0.6
36-48	4/13/2016 1:38	25.0	2.2	59.6	91.1	25.0	2.2	59.3	92.1	47.4	0.7	58.8	93.8	0	0.6
36-48	4/13/2016 1:39	29.2	2.2	59.7	91.0	18.0	1.5	59.3	92.0	50.2	0.0	58.8	93.8	0	0.6
36-48	4/13/2016 1:40	27.8	1.5	59.7	90.9	19.4	1.5	59.3	92.0	50.2	0.0	58.8	93.8	0	0.6
36-48	4/13/2016 1:41	27.8	0.7	59.7	90.9	19.4	0.7	59.2	92.0	50.2	0.0	58.7	93.7	0	0.6
36-48	4/13/2016 1:42	19.4	2.2	59.7	90.7	22.2	2.2	59.3	91.9	32.0	1.5	58.8	93.7	0	0.6
36-48	4/13/2016 1:43	44.6	2.2	59.8	90.6	44.6	1.5	59.4	91.7	48.8	0.0	59.0	93.6	0	0.6
36-48	4/13/2016 1:44	44.6	1.5	59.6	90.6	43.2	1.5	59.2	91.7	48.8	0.0	58.8	93.3	0	0.6
36-48	4/13/2016 1:45	43.2	1.5	59.4	90.8	41.8	1.5	59.0	92.0	48.8	0.0	58.6	93.5	0	0.6
36-48	4/13/2016 1:46	41.8	0.7	59.2	91.2	36.2	0.7	58.8	92.1	48.8	0.0	58.4	93.6	0	0.6
36-48	4/13/2016 1:47	43.2	2.2	59.2	91.4	32.0	2.2	58.9	92.4	48.8	1.5	58.5	93.9	0	0.6
36-48	4/13/2016 1:48	359.7	1.5	59.2	91.3	356.9	1.5	58.9	92.3	19.4	0.0	58.5	93.7	0	0.6
36-48	4/13/2016 1:49	34.8	3.0	59.3	91.3	34.8	2.2	58.9	92.3	46.0	0.7	58.5	93.9	0	0.6
36-48	4/13/2016 1:50	33.4	1.5	59.2	91.3	22.2	1.5	58.8	92.3	46.0	0.0	58.4	93.9	0	0.6
36-48	4/13/2016 1:51	37.6	2.2	59.3	91.2	32.0	2.2	59.0	92.1	46.0	0.7	58.5	93.7	0	0.6
36-48	4/13/2016 1:52	41.8	3.0	59.4	90.9	39.0	2.2	59.1	91.9	54.5	1.5	58.6	93.5	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
36-48	4/13/2016 1:53	44.6	1.5	59.4	90.9	46.0	1.5	59.1	91.9	60.1	0.0	58.6	93.6	0	0.6
36-48	4/13/2016 1:54	43.2	2.2	59.3	90.9	43.2	2.2	59.0	92.0	58.7	0.7	58.5	93.4	0	0.6
36-48	4/13/2016 1:55	43.2	2.2	59.2	91.0	36.2	1.5	58.8	91.9	60.1	0.0	58.4	93.5	0	0.6
36-48	4/13/2016 1:56	34.6	2.2	59.1	91.2	34.8	2.2	58.8	92.2	58.7	0.7	58.4	93.7	0	0.6
36-48	4/13/2016 1:57	40.4	3.0	59.3	91.1	34.8	2.2	58.9	92.0	46.0	0.7	58.5	93.7	0	0.6
36-48	4/13/2016 1:58	37.6	1.5	59.1	91.1	29.2	2.2	58.8	92.0	46.0	0.7	58.4	93.5	0	0.6
36-48	4/13/2016 1:59	29.2	3.0	59.2	91.1	32.0	3.0	58.9	92.0	50.2	1.5	58.5	93.6	0	0.6
36-48	4/13/2016 2:00	43.2	3.0	59.2	91.0	46.0	1.5	58.9	91.9	57.3	0.7	58.4	93.6	0	0.6
36-48	4/13/2016 2:01	37.6	2.2	59.1	91.2	29.2	2.2	58.7	92.2	57.3	0.7	58.3	93.7	0	0.6
36-48	4/13/2016 2:02	39.0	3.0	59.1	91.4	32.0	2.2	58.7	92.3	54.5	0.7	58.3	93.9	0	0.6
36-48	4/13/2016 2:03	32.0	1.5	59.1	91.3	30.6	2.2	58.7	92.2	53.1	0.7	58.3	93.7	0	0.6
36-48	4/13/2016 2:04	47.4	3.7	59.2	91.1	44.6	3.0	58.8	92.0	64.3	1.5	58.4	93.6	0	0.6
36-48	4/13/2016 2:05	43.2	3.0	59.2	90.9	36.2	3.0	58.9	92.0	51.6	2.2	58.5	93.6	0	0.6
36-48	4/13/2016 2:06	37.6	2.2	59.1	90.8	29.2	2.2	58.8	91.8	46.0	0.7	58.5	93.3	0	0.6
36-48	4/13/2016 2:07	23.6	1.5	59.2	90.7	13.7	1.5	58.9	91.8	44.6	0.0	58.5	93.3	0	0.6
36-48	4/13/2016 2:08	30.6	1.5	59.2	90.6	23.6	1.5	58.9	91.7	44.6	0.0	58.5	93.2	0	0.6
36-48	4/13/2016 2:09	34.6	3.0	59.1	90.8	32.0	2.2	58.8	91.6	44.6	1.5	58.5	93.2	0	0.6
36-48	4/13/2016 2:10	40.4	2.2	59.1	90.7	37.6	2.2	58.7	91.7	47.4	0.7	58.3	93.2	0	0.6
36-48	4/13/2016 2:11	48.6	2.2	59.1	90.9	48.8	1.5	58.8	91.9	50.2	0.7	58.4	93.4	0	0.6
36-48	4/13/2016 2:12	48.6	1.5	59.1	90.8	48.8	1.5	58.7	91.9	50.2	0.0	58.3	93.2	0	0.6
36-48	4/13/2016 2:13	53.1	3.0	59.0	90.8	48.8	3.0	58.7	91.9	61.5	1.5	58.3	93.3	0	0.6
36-48	4/13/2016 2:14	40.4	3.0	59.1	90.9	39.0	2.2	58.8	91.9	67.1	1.5	58.4	93.4	0	0.6
36-48	4/13/2016 2:15	41.6	2.2	59.0	90.8	43.2	1.5	58.6	91.9	65.7	0.7	58.2	93.3	0	0.6
36-48	4/13/2016 2:16	39.0	1.5	58.9	91.0	23.6	1.5	58.6	91.9	58.7	0.7	58.2	93.4	0	0.6
36-48	4/13/2016 2:17	50.2	2.2	58.9	91.1	37.6	2.2	58.5	92.0	53.1	0.7	58.1	93.5	0	0.6
36-48	4/13/2016 2:18	39.0	3.0	58.9	91.0	40.4	2.2	58.5	92.0	53.1	1.5	58.2	93.4	0	0.6
36-48	4/13/2016 2:19	44.6	2.2	59.0	91.0	46.0	1.5	58.5	92.0	53.1	0.7	58.2	93.5	0	0.6
36-48	4/13/2016 2:20	43.2	1.5	58.8	91.0	44.6	1.5	58.4	92.0	53.1	0.0	58.0	93.4	0	0.6
36-48	4/13/2016 2:21	40.4	3.0	58.8	91.0	37.6	2.2	58.5	92.1	54.5	0.7	58.0	93.5	0	0.6
36-48	4/13/2016 2:22	32.0	2.2	58.9	91.0	26.4	2.2	58.6	92.0	51.6	0.7	58.2	93.6	0	0.6
36-48	4/13/2016 2:23	30.6	1.5	58.8	91.2	23.6	1.5	58.5	92.1	47.4	0.0	58.0	93.4	0	0.6
36-48	4/13/2016 2:24	30.6	1.5	58.7	91.1	22.2	1.5	58.3	92.1	47.4	0.0	57.9	93.4	0	0.6
36-48	4/13/2016 2:25	26.4	1.5	58.7	91.1	8.1	1.5	58.4	92.2	47.4	0.0	57.8	93.7	0	0.6
36-48	4/13/2016 2:26	25.0	1.5	58.7	91.1	15.1	1.5	58.3	92.1	47.4	0.0	57.8	93.7	0	0.6
36-48	4/13/2016 2:27	25.0	0.7	58.6	91.0	20.8	0.7	58.2	92.0	47.4	0.0	57.7	93.6	0	0.6
36-48	4/13/2016 2:28	25.0	0.7	58.5	91.3	20.8	0.7	58.0	92.2	47.4	0.0	57.5	93.6	0	0.6
36-48	4/13/2016 2:29	25.0	1.5	58.3	91.8	20.8	0.7	57.9	92.6	47.4	0.0	57.5	94.1	0	0.6
36-48	4/13/2016 2:30	25.0	0.7	58.3	91.6	20.8	0.7	57.9	92.4	47.4	0.0	57.4	93.9	0	0.6
36-48	4/13/2016 2:31	25.0	0.7	58.3	91.6	20.8	0.7	57.9	92.4	47.4	0.0	57.4	93.8	0	0.6
36-48	4/13/2016 2:32	25.0	2.2	58.5	91.4	23.6	2.2	58.2	92.3	47.4	1.5	57.7	94.1	0	0.6
36-48	4/13/2016 2:33	22.2	0.7	58.6	91.1	26.4	0.7	58.2	92.1	47.4	0.0	57.6	93.8	0	0.6
36-48	4/13/2016 2:34	61.5	1.5	58.5	91.0	44.6	1.5	58.1	92.1	47.4	0.0	57.6	93.6	0	0.6
36-48	4/13/2016 2:35	53.1	2.2	58.6	91.1	36.2	2.2	58.3	92.1	51.6	0.7	57.7	93.7	0	0.6
36-48	4/13/2016 2:36	8.1	1.5	58.7	90.7	5.3	2.2	58.4	91.8	20.8	0.7	57.8	93.6	0	0.6
36-48	4/13/2016 2:37	40.4	2.2	58.5	90.7	50.2	2.2	58.2	91.8	40.4	0.7	57.7	93.3	0	0.6
36-48	4/13/2016 2:38	40.4	2.2	58.5	91.1	43.2	2.2	58.1	92.0	43.2	0.0	57.6	93.6	0	0.6
36-48	4/13/2016 2:39	50.2	2.2	58.5	91.0	48.8	2.2	58.2	92.1	43.2	1.5	57.7	93.6	0	0.6
36-48	4/13/2016 2:40	37.6	1.5	58.5	90.8	48.8	1.5	58.2	91.8	43.2	0.0	57.7	93.4	0	0.6
36-48	4/13/2016 2:41	37.6	1.5	58.5	90.7	47.4	1.5	58.1	91.8	43.2	0.0	57.7	93.3	0	0.6
36-48	4/13/2016 2:42	44.6	1.5	58.3	90.9	47.4	1.5	58.0	91.8	43.2	0.0	57.5	93.4	0	0.6
36-48	4/13/2016 2:43	51.6	1.5	58.2	91.1	50.2	1.5	57.9	91.9	43.2	0.0	57.4	93.4	0	0.6
36-48	4/13/2016 2:44	50.2	3.0	58.3	91.1	48.8	2.2	57.9	92.0	54.5	1.5	57.5	93.6	0	0.6
36-48	4/13/2016 2:45	54.5	1.5	58.3	90.9	54.5	1.5	57.9	91.8	56.7	0.7	57.5	93.3	0	0.6
36-48	4/13/2016 2:46	47.4	2.2	58.3	90.8	44.6	1.5	57.9	91.8	56.7	0.7	57.5	93.2	0	0.6
36-48	4/13/2016 2:47	32.0	2.2	58.4	90.8	30.6	3.0	58.1	91.7	46.0	1.5	57.6	93.3	0	0.6
36-48	4/13/2016 2:48	46.0	3.0	58.5	90.3	37.6	3.0	58.2	91.3	64.3	1.5	57.7	92.9	0	0.6
36-48	4/13/2016 2:49	33.4	3.0	58.5	90.2	30.6	3.0	58.2	91.3	57.3	1.5	57.8	92.7	0	0.6
36-48	4/13/2016 2:50	41.6	2.2	58.4	90.1	36.2	1.5	58.1	91.1	39.0	0.7	57.8	92.6	0	0.6
36-48	4/13/2016 2:51	43.2	3.0	58.4	90.2	44.6	3.0	58.1	91.2	50.2	1.5	57.8	92.6	0	0.6
36-48	4/13/2016 2:52	47.4	3.7	58.5	89.9	39.0	3.0	58.2	91.0	54.5	2.2	57.9	92.4	0	0.6
36-48	4/13/2016 2:53	50.2	3.0	58.6	89.8	50.2	3.0	58.2	90.9	50.2	1.5	57.9	92.3	0	0.6
36-48	4/13/2016 2:54	39.0	3.7	58.5	89.6	34.8	3.0	58.2	90.8	48.8	1.5	57.8	92.1	0	0.6
36-48	4/13/2016 2:55	23.6	2.2	58.5	89.5	12.3	2.2	58.1	90.8	48.8	0.7	57.7	92.3	0	0.6
36-48	4/13/2016 2:56	20.6	2.2	58.4	89.7	23.6	1.5	57.9	90.7	48.8	0.7	57.6	92.4	0	0.6
36-48	4/13/2016 2:57	36.2	2.2	58.2	89.7	34.8	2.2	57.9	90.5	50.2	0.7	57.5	91.9	0	0.6
36-48	4/13/2016 2:58	27.6	3.0	58.4	89.5	26.4	2.2	58.0	90.7	50.2	1.5	57.6	92.3	0	0.6
36-48	4/13/2016 2:59	43.2	3.7	58.5	89.2	43.2	3.7	58.2	90.2	53.1	2.2	57.8	91.7	0	0.6
36-48	4/13/2016 3:00	36.2	3.7	58.6	88.5	29.2	3.0	58.2	89.6	43.2	2.2	57.8	91.2	0	0.6
36-48	4/13/2016 3:01	19.4	2.2	58.5	88.7	23.6	1.5	58.1	89.8	33.4	0.7	57.7	91.4	0	0.6
36-48	4/13/2016 3:02	25.0	1.5	58.3	88.7	26.4	1.5	57.9	89.7	33.4	0.7	57.5	91.3	0	0.6
36-48	4/13/2016 3:03	18.0	2.2	58.2	88.6	18.0	2.2	57.9	89.8	30.6	0.7	57.5	91.3	0	0.6
36-48	4/13/2016 3:04	20.6	2.2	58.2	88.4	26.4	2.2	57.8	89.6	37.6	0.7	57.4	91.0	0	0.6
36-48	4/13/2016 3:05	46.0	2.2	58.2	88.2	40.4	1.5	57.8	89.6	47.4	0.7	57.5	91.1	0	0.6
36-48	4/13/2016 3:06	44.6	0.7	58.1	88.4	40.4	0.7	57.7	89.4	47.4	0.0	57.3	91.0	0	0.6
36-48	4/13/2016 3:07	20.6	1.5	58.0	88.1	12.3	1.5	57.6	89.3	22.2	0.7	57.2	90.7	0	0.6
36-48	4/13/2016 3:08	27.6	2.2	58.1	88.0	27.8	2.2	57.7	89.0	23.6	1.5	57.3	90.7	0	0.6
36-48	4/13/2016 3:09	23.6	1.5	58.2	87.2	29.2	1.5	57.8	88.4	25.0	0.7	57.3	90.2	0	0.6
36-48	4/13/2016 3:10	33.4	2.2	58.2	87.0	37.6	1.5	57.8	88.5	40.4	0.7	57.3	90.1	0	0.6
36-48	4/13/2016 3:11	44.6	0.7	58.1	86.8	39.0	1.5	57.6	88.1	44.6	0.0	57.2	89.8	0	0.6
36-48	4/13/2016 3:12	44.6	2.2	58.0	87.0	39.0	1.5	57.6	88.3	44.6	0.7	57.2	89.8	0	0.6
36-48	4/13/2016 3:13	44.6	2.2	58.0	86.7	41.8	2.2	57.7	87.8	48.8	1.5	57.3	89.4	0	0.6
36-48	4/13/2016 3:14	44.6	1.5	58.1	86.5	41.8	1.5	57.7	87.7	51.6	0.7	57.2	89.2	0	0.6
36-48	4/13/2016 3:15	40.4	1.5	57.9	86.1	34.8	1.5	57.5	87.2	50.2	0.7	57.1	88.9	0	0.6
36-48	4/13/2016 3:16	33.4	2.2	58.0	86.1	34.8	2.2	57.6	87.2	50.2	1.5	57.1	88.8	0	0.6
36-48	4/13/2016 3:17	39.0	3.0	58.1	85.6	34.8	2.2	57.6	87.0	51.6	1.5	57.1	88.8	0	0.6
36-48	4/13/2016 3:18	36.2	1.5	57.9	85.7	30.6	1.5	57.5	87.2	51.6	0.7	57.0	88.9	0	0.6
36-48	4/13/2016 3:19	39.0	1.5	57.9	85.7	40.4	2.2	57.6	86.8	51.6	1.5	57.2	88.4	0	0.6
36-48	4/13/2016 3:20	47.4	2.2	58.0	85.5	64.3	1.5	57.6	86.9	50.2	0.7	57.1	88.4	0	0.6
36-48	4/13/2016 3:21	50.2	0.7	58.0	85.5	69.9	0.0	57.5	87.0	50.2	0.0	57.0	88.6	0	0.6
36-48	4/13/2016 3:22	50.2	0.7	57.8	85.5	69.9	0.7	57.4	86.8	50.2	0.0	56.9	88.3	0	0.6
36-48	4/13/2016 3:23	47.4	2.2	57.8	84.8	57.3	2.2	57.3	86.3	50.2	0.7	56.7	88.2	0	0.6
36-48	4/13/2016 3:24	44.6	3.0	57.8	84.8	43.2	3.0	57.3	86.2	51.6	1.5	56.8	88.2	0	0.6
36-48	4/13/2016 3:25	41.6	3.0	57.8	84.5	44.6	2.2	57.4	86.0	51.6	1.5	56.9	87.8	0	0.6
36-48	4/13/2016 3:26	36.2	2.2	57.8	84.3	33.4	1.5	57.4	85.9	50.2	1.5	56.8	87.8	0	0.6
36-48	4/13/2016 3:27	47.4	2.2	57.8	84.3	44.6	2.2	57.4	85.7	50.2	1.5	56.8	87.5	0	0.6
36-48	4/13/2016 3:28	46.0	2.2	57.8	84.3	39.0	1.5	57.3	85.8	51.6	0.7	56.8	87.7	0	0.6
36-48	4/13/2016 3:29	43.2	2.2	57.7	84.0	37.6	2.2	57.3	85.6	51.6	1.5	56.8	87.5	0	0.6
36-48	4/13/2016 3:30	37.6	1.5	57.6	84.3	33.4	1.5	57.2	85.7	51.6	0.7	56.6	87.6	0	0.6
36-48	4/13/2016 3:31	40.4	2.2	57.6	83.9	39.0	2.2	57.2	85.4	50.2	1.5	56.7	87.2	0	0.6
36-48	4/13/2016 3:32	43.2	3.7	57.9	83.5	40.4	3.0	57.4	84.9	50.2	2.2	56.9	86.8	0	0.6
36-48	4/13/2016 3:33	41.6	3.7	57.9	83.0	39.0	3.0	57.5	84.5	50.2	2.2	57.1	86.4	0	0.6
36-48	4/13/2016 3:34	33.4	3.0	58.1	82.6	26.4	3.0	57.8	83.8	47.4	2.2	57.2	85.6	0	0.6
36-48	4/13/2016 3:35	25.0	3.7	58.2	82.1	26.4	3.0	57.8	83.6	37.6	2.2	57.3	85.5	0	0.6
36-48	4/13/2016 3:36	39.0	2.2	58.2	82.2	39.0	2.2	57.8	83.9	53.1	1.5	57.3	85.7	0	0.6
36-48	4/13/2016 3:37	48.6	0.7	57.9	83.0	47.4	0.7	57.5	84.4	54.5	0.0	57.1	86.1	0	0.6
36-48	4/13/2016 3:38	47.4	2.2	57.8	82.6	47.4	1.5	57.4	84.2	53.1	0.7	56.9	86.0	0	0.6
36-48	4/13/2016 3:39	46.0	1.5	57.5	83.4	46.0	0.7	57.1	84.6	53.1	0.0	56.6	86.4	0	0.6
36-48	4/13/2016 3:40	46.0	0.7	57.5	83.3	43.2	0.7	57.1	84.7	53.1	0.7	56.6	86.3	0	0.6
36-48	4/13/2016 3:41	43.2	2.2	57.5	82.7	47.4	2.2	57.2	84.3	53.1	0.7	56.7	85.8	0	0.6
36-48	4/13/2016 3:42	40.4	1.5	57.6	83.2	47.4	1.5	57.2	84.7	53.1	0.7	56.6	86.3	0	0.6
36-48	4/13/2016 3:43	40.4	0.7	57.6	83.0	47.4	0.7	57.1	84.6	53.1	0.0	56.6	86.5	0	0.6
36-48	4/13/2016 3:44	40.4	1.5	57.6	82.8	47.4	1.5	57.2	84.5	53.1	0.7	56.6	86.3	0	0.6
36-48	4/13/2016 3:45	40.4	0.7	57.4	83.2	47.4	0.7	56.9	84.7	53.1	0.0	56.3	86.7	0	0.6
36-48	4/13/2016 3:46	40.4	1.5	57.3	83.0	46.0	1.5	56.9	84.4	53.1	0.7	56.3	86.5	0	0.6
36-48	4/13/2016 3:47	40.4	1.5	57.3	82.5	43.2	1.5	56.9	84.0	53.1	0.7	56.3	86.2	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
36-48	4/13/2016 3:48	40.4	1.5	57.4	82.5	43.2	0.7	56.9	84.1	53.1	0.0	56.3	86.2	0	0.6
36-48	4/13/2016 3:49	40.4	0.7	57.1	83.3	43.2	0.7	56.6	84.9	53.1	0.0	56.0	86.7	0	0.6
36-48	4/13/2016 3:50	40.4	0.7	56.9	83.4	43.2	0.7	56.5	84.8	53.1	0.0	55.9	86.9	0	0.6
36-48	4/13/2016 3:51	40.4	1.5	57.0	82.9	43.2	1.5	56.5	84.6	53.1	0.7	55.9	86.6	0	0.6
36-48	4/13/2016 3:52	40.4	1.5	57.1	83.0	43.2	1.5	56.6	84.5	53.1	0.7	55.8	86.6	0	0.6
36-48	4/13/2016 3:53	40.4	1.5	57.0	83.0	43.2	1.5	56.5	84.5	53.1	0.0	55.7	87.0	0	0.6
36-48	4/13/2016 3:54	40.4	1.5	57.0	82.6	43.2	1.5	56.5	84.5	53.1	0.7	55.7	86.7	0	0.6
36-48	4/13/2016 3:55	40.4	1.5	57.1	82.3	43.2	1.5	56.6	84.1	53.1	0.7	55.8	86.5	0	0.6
36-48	4/13/2016 3:56	40.4	1.5	57.1	82.7	43.2	1.5	56.5	84.5	53.1	0.7	55.8	87.0	0	0.6
36-48	4/13/2016 3:57	40.4	0.7	57.0	82.9	43.2	0.7	56.4	84.7	53.1	0.0	55.7	87.2	0	0.6
36-48	4/13/2016 3:58	40.4	1.5	56.9	82.8	43.2	1.5	56.4	84.4	53.1	0.7	55.6	87.0	0	0.6
36-48	4/13/2016 3:59	40.4	1.5	56.9	82.7	43.2	1.5	56.3	84.4	53.1	0.0	55.5	87.1	0	0.6
36-48	4/13/2016 4:00	40.4	2.2	56.9	82.3	41.8	2.2	56.4	84.0	53.1	1.5	55.6	86.7	0	0.6
36-48	4/13/2016 4:01	37.6	1.5	56.8	82.9	39.0	1.5	56.2	84.4	53.1	0.0	55.5	86.9	0	0.6
36-48	4/13/2016 4:02	37.6	1.5	56.6	82.9	39.0	1.5	56.0	84.7	53.1	0.7	55.4	87.0	0	0.6
36-48	4/13/2016 4:03	46.0	1.5	56.5	83.2	39.0	0.7	55.9	85.0	53.1	0.0	55.2	87.3	0	0.6
36-48	4/13/2016 4:04	46.0	1.5	56.3	83.2	39.0	1.5	55.8	84.9	53.1	0.0	55.1	87.3	0	0.6
36-48	4/13/2016 4:05	44.6	1.5	56.4	83.1	33.4	1.5	55.8	84.8	53.1	0.7	55.1	87.3	0	0.6
36-48	4/13/2016 4:06	44.6	1.5	56.6	82.7	30.6	1.5	55.9	84.7	53.1	0.7	55.2	87.2	0	0.6
36-48	4/13/2016 4:07	44.6	0.7	56.4	83.1	30.6	0.7	55.7	84.9	53.1	0.0	55.0	87.4	0	0.6
36-48	4/13/2016 4:08	44.6	0.7	56.1	83.5	30.6	0.7	55.5	85.2	53.1	0.0	54.9	87.5	0	0.6
36-48	4/13/2016 4:09	44.6	0.7	55.9	84.4	30.6	0.7	55.2	86.0	53.1	0.0	54.6	88.1	0	0.6
36-48	4/13/2016 4:10	44.6	0.7	55.6	85.1	30.6	0.7	55.0	86.7	53.1	0.0	54.4	88.5	0	0.6
36-48	4/13/2016 4:11	44.6	0.7	55.3	85.4	30.6	0.7	54.8	86.8	53.1	0.0	54.3	88.8	0	0.6
36-48	4/13/2016 4:12	44.6	0.7	55.2	85.5	30.6	0.7	54.7	87.0	53.1	0.0	54.1	89.1	0	0.6
36-48	4/13/2016 4:13	44.6	1.5	55.3	85.3	32.0	1.5	54.8	86.8	53.1	0.0	54.2	89.0	0	0.6
36-48	4/13/2016 4:14	44.6	0.7	55.4	85.1	32.0	0.7	54.8	86.6	53.1	0.0	54.1	88.9	0	0.6
36-48	4/13/2016 4:15	44.6	0.7	55.5	84.8	33.4	0.7	54.9	86.5	53.1	0.0	54.2	88.6	0	0.6
36-48	4/13/2016 4:16	44.6	0.7	55.6	84.6	34.8	0.7	55.0	86.4	53.1	0.0	54.3	88.6	0	0.6
36-48	4/13/2016 4:17	44.6	0.7	55.6	85.2	34.8	0.7	55.0	87.2	53.1	0.0	54.3	89.4	0	0.6
36-48	4/13/2016 4:18	44.6	0.7	55.3	87.4	34.8	0.7	54.7	88.6	53.1	0.0	54.1	89.9	0	0.6
36-48	4/13/2016 4:19	44.6	0.0	55.0	88.4	34.8	0.0	54.5	89.0	53.1	0.0	54.0	90.3	0	0.6
36-48	4/13/2016 4:20	44.6	0.0	54.8	88.6	34.8	0.0	54.3	89.1	53.1	0.0	53.8	90.5	0	0.6
36-48	4/13/2016 4:21	44.6	0.0	54.6	88.8	34.8	0.0	54.1	89.5	53.1	0.0	53.6	91.0	0	0.6
36-48	4/13/2016 4:22	44.6	0.0	54.5	88.7	34.8	0.0	54.0	89.4	53.1	0.0	53.5	91.0	0	0.6
36-48	4/13/2016 4:23	44.6	0.0	54.3	88.5	34.8	0.0	53.9	89.3	53.1	0.0	53.3	90.9	0	0.6
36-48	4/13/2016 4:24	44.6	0.0	54.2	88.3	34.8	0.0	53.8	89.1	53.1	0.0	53.1	90.9	0	0.6
36-48	4/13/2016 4:25	44.6	0.0	54.1	88.3	34.8	0.0	53.5	89.1	53.1	0.0	52.9	90.8	0	0.6
36-48	4/13/2016 4:26	44.6	0.0	53.9	88.5	34.8	0.0	53.3	89.2	53.1	0.0	52.6	90.8	0	0.6
36-48	4/13/2016 4:27	44.6	0.0	53.7	88.7	34.8	0.0	53.1	89.5	53.1	0.0	52.4	91.0	0	0.6
36-48	4/13/2016 4:28	44.6	0.0	53.5	89.3	34.8	0.0	52.9	89.9	53.1	0.0	52.2	91.2	0	0.6
36-48	4/13/2016 4:29	44.6	0.0	53.4	90.9	34.8	0.0	52.9	90.8	53.1	0.0	52.1	92.0	0	0.6
36-48	4/13/2016 4:30	44.6	0.0	53.3	91.1	34.8	0.0	52.7	91.3	53.1	0.0	52.0	92.6	0	0.6
36-48	4/13/2016 4:31	44.6	0.7	53.2	93.0	34.8	0.7	52.7	93.2	53.1	0.0	51.9	93.6	0	0.6
36-48	4/13/2016 4:32	44.6	0.7	53.1	93.2	34.8	0.7	52.6	93.8	53.1	0.0	51.8	94.5	0	0.6
36-48	4/13/2016 4:33	44.6	1.5	53.1	93.1	34.8	0.7	52.5	93.9	53.1	0.0	51.7	94.3	0	0.6
36-48	4/13/2016 4:34	44.6	0.7	53.1	93.6	34.8	0.7	52.6	94.2	53.1	0.0	51.7	94.3	0	0.6
36-48	4/13/2016 4:35	44.6	0.7	53.1	93.9	34.8	0.7	52.6	94.4	53.1	0.0	51.6	94.5	0	0.6
36-48	4/13/2016 4:36	44.6	0.0	53.1	93.3	34.8	0.0	52.5	94.2	53.1	0.0	51.6	94.6	0	0.6
36-48	4/13/2016 4:37	44.6	0.0	53.0	93.1	34.8	0.0	52.4	93.9	53.1	0.0	51.5	94.9	0	0.6
36-48	4/13/2016 4:38	44.6	0.0	52.9	93.4	34.8	0.0	52.3	94.1	53.1	0.0	51.4	94.8	0	0.6
36-48	4/13/2016 4:39	44.6	0.7	52.6	93.7	34.8	0.7	52.1	94.2	53.1	0.0	51.2	94.7	0	0.6
36-48	4/13/2016 4:40	44.6	0.7	52.6	93.8	34.8	0.7	51.9	94.3	53.1	0.0	51.1	94.8	0	0.6
36-48	4/13/2016 4:41	44.6	0.7	52.5	94.2	34.8	0.7	52.0	94.8	53.1	0.0	51.0	94.7	0	0.6
36-48	4/13/2016 4:42	44.6	0.7	52.6	94.2	34.8	0.7	52.1	95.0	53.1	0.0	51.0	95.0	0	0.6
36-48	4/13/2016 4:43	44.6	0.0	52.6	93.6	34.8	0.0	52.0	94.6	53.1	0.0	51.1	95.7	0	0.6
36-48	4/13/2016 4:44	44.6	0.7	52.6	93.8	34.8	0.7	51.9	94.7	53.1	0.0	51.0	95.7	0	0.6
36-48	4/13/2016 4:45	44.6	0.0	52.4	94.1	34.8	0.0	51.6	94.9	53.1	0.0	50.9	96.1	0	0.6
36-48	4/13/2016 4:46	44.6	0.7	52.3	94.5	34.8	0.7	51.7	95.3	53.1	0.0	50.9	96.2	0	0.6
36-48	4/13/2016 4:47	44.6	0.7	52.2	94.1	34.8	0.7	51.6	95.2	53.1	0.0	50.9	96.6	0	0.6
36-48	4/13/2016 4:48	44.6	0.0	52.2	94.6	34.8	0.0	51.6	95.4	53.1	0.0	50.9	96.6	0	0.6
36-48	4/13/2016 4:49	44.6	0.0	52.1	94.7	34.8	0.0	51.6	95.5	53.1	0.0	50.9	96.6	0	0.6
36-48	4/13/2016 4:50	44.6	0.0	52.2	95.1	34.8	0.0	51.6	95.8	53.1	0.0	50.9	96.8	0	0.6
36-48	4/13/2016 4:51	44.6	0.0	52.4	95.3	34.8	0.0	51.9	96.0	53.1	0.0	50.9	96.6	0	0.6
36-48	4/13/2016 4:52	44.6	0.0	52.5	95.0	34.8	0.0	51.9	95.8	53.1	0.0	51.0	96.8	0	0.6
36-48	4/13/2016 4:53	44.6	0.0	52.6	94.7	34.8	0.0	51.9	95.6	53.1	0.0	51.0	96.8	0	0.6
36-48	4/13/2016 4:54	44.6	0.0	52.6	94.7	34.8	0.0	52.0	95.6	53.1	0.0	51.0	96.7	0	0.6
36-48	4/13/2016 4:55	44.6	0.0	52.5	94.5	34.8	0.0	51.9	95.4	53.1	0.0	51.0	96.8	0	0.6
36-48	4/13/2016 4:56	44.6	0.0	52.4	94.4	34.8	0.0	51.9	95.3	53.1	0.0	50.9	96.6	0	0.6
36-48	4/13/2016 4:57	44.6	0.0	52.3	94.5	34.8	0.0	51.6	95.4	53.1	0.0	50.8	96.6	0	0.6
36-48	4/13/2016 4:58	44.6	0.0	52.2	94.6	34.8	0.0	51.6	95.4	53.1	0.0	50.9	96.7	0	0.6
36-48	4/13/2016 4:59	44.6	0.0	52.2	94.4	34.8	0.0	51.6	95.2	53.1	0.0	50.9	96.6	0	0.6
36-48	4/13/2016 5:00	44.6	0.0	52.1	94.5	34.8	0.0	51.7	95.2	53.1	0.0	50.8	96.5	0	0.6
36-48	4/13/2016 5:01	44.6	0.0	52.0	94.5	34.8	0.0	51.6	95.2	53.1	0.0	50.7	96.4	0	0.6
36-48	4/13/2016 5:02	44.6	0.0	51.9	94.6	34.8	0.0	51.5	95.1	53.1	0.0	50.6	96.3	0	0.6
36-48	4/13/2016 5:03	44.6	0.0	51.9	94.5	34.8	0.0	51.5	95.0	53.1	0.0	50.5	96.4	0	0.6
36-48	4/13/2016 5:04	44.6	0.0	51.9	94.6	34.8	0.0	51.4	95.0	53.1	0.0	50.4	96.4	0	0.6
36-48	4/13/2016 5:05	44.6	0.0	51.7	94.6	34.8	0.0	51.3	95.0	53.1	0.0	50.4	96.6	0	0.6
36-48	4/13/2016 5:06	44.6	0.0	51.7	95.0	34.8	0.0	51.3	95.3	53.1	0.0	50.5	96.9	0	0.6
36-48	4/13/2016 5:07	44.6	0.0	51.7	95.8	34.8	0.0	51.3	96.0	53.1	0.0	50.4	97.1	0	0.6
36-48	4/13/2016 5:08	44.6	0.7	51.8	96.1	34.8	0.7	51.4	96.2	53.1	0.0	50.5	97.3	0	0.6
36-48	4/13/2016 5:09	44.6	0.0	51.8	96.1	34.8	0.0	51.4	96.4	53.1	0.0	50.5	97.6	0	0.6
36-48	4/13/2016 5:10	44.6	0.0	51.9	96.3	34.8	0.0	51.4	96.2	53.1	0.0	50.5	97.5	0	0.6
36-48	4/13/2016 5:11	44.6	0.0	51.8	96.0	34.8	0.0	51.3	96.2	53.1	0.0	50.5	97.4	0	0.6
36-48	4/13/2016 5:12	44.6	0.0	51.7	95.7	34.8	0.0	51.2	96.0	53.1	0.0	50.5	97.4	0	0.6
36-48	4/13/2016 5:13	44.6	0.0	51.6	95.7	34.6	0.0	51.2	96.1	53.1	0.0	50.4	97.2	0	0.6
36-48	4/13/2016 5:14	44.6	0.0	51.6	95.7	34.6	0.0	51.1	96.2	53.1	0.0	50.3	97.0	0	0.6
36-48	4/13/2016 5:15	44.6	0.0	51.5	95.6	34.6	0.0	51.1	96.0	53.1	0.0	50.2	97.0	0	0.6
36-48	4/13/2016 5:16	44.6	0.0	51.5	95.5	34.6	0.0	51.1	95.9	53.1	0.0	50.2	97.1	0	0.6
36-48	4/13/2016 5:17	44.6	0.0	51.5	95.5	34.6	0.0	51.1	96.0	53.1	0.0	50.2	97.1	0	0.6
36-48	4/13/2016 5:18	44.6	0.0	51.6	95.8	34.6	0.0	51.1	96.0	53.1	0.0	50.1	97.1	0	0.6
36-48	4/13/2016 5:19	44.6	0.0	51.6	96.0	34.6	0.0	51.1	96.1	53.1	0.0	50.1	97.1	0	0.6
36-48	4/13/2016 5:20	44.6	0.0	51.6	96.3	34.6	0.0	51.2	96.4	53.1	0.0	50.2	97.3	0	0.6
36-48	4/13/2016 5:21	44.6	0.0	51.7	96.5	34.6	0.0	51.1	96.5	53.1	0.0	50.2	97.4	0	0.6
36-48	4/13/2016 5:22	44.6	0.0	51.7	96.6	34.6	0.0	51.0	96.6	53.1	0.0	50.0	97.2	0	0.6
36-48	4/13/2016 5:23	44.6	0.0	51.6	96.7	34.6	0.0	51.0	96.8	53.1	0.0	49.9	97.3	0	0.6
36-48	4/13/2016 5:24	44.6	0.0	51.6	96.6	34.6	0.0	51.0	96.7	53.1	0.0	49.9	97.1	0	0.6
36-48	4/13/2016 5:25	44.6	0.0	51.5	96.3	34.6	0.0	50.9	96.6	53.1	0.0	49.9	97.4	0	0.6
36-48	4/13/2016 5:26	44.6	0.0	51.4	96.2	34.6	0.0	50.9	96.6	53.1	0.0	50.0	97.5	0	0.6
36-48	4/13/2016 5:27	44.6	0.0	51.3	96.2	34.6	0.0	50.6	96.5	53.1	0.0	50.0	97.5	0	0.6
36-48	4/13/2016 5:28	44.6	0.0	51.2	96.0	34.6	0.0	50.7	96.5	53.1	0.0	49.9	97.4	0	0.6
36-48	4/13/2016 5:29	44.6	0.0	51.1	96.0	34.6	0.0	50.7	96.4	53.1	0.0	50.0	97.5	0	0.6
36-48	4/13/2016 5:30	44.6	0.0	51.2	96.2	34.6	0.0	50.6	96.4	53.1	0.0	50.0	97.7	0	0.6
36-48	4/13/2016 5:31	44.6	0.0	51.1	96.2	34.6	0.0	50.6	96.4	53.1	0.0	49.9	97.5	0	0.6
36-48	4/13/2016 5:32	44.6	0.0	51.1	96.2	34.6	0.0	50.4	96.4	53.1	0.0	49.8	97.5	0	0.6
36-48	4/13/2016 5:33	44.6	0.0	50.9	96.2	34.6	0.0	50.5	96.6	53.1	0.0	49.7	97.5	0	0.6
36-48	4/13/2016 5:34	44.6	0.0	51.0	96.5	34.6	0.0	50.6	96.8	53.1	0.0	49.6	97.5	0	0.6
36-48	4/13/2016 5:35	44.6	0.0	51.1	96.7	34.6	0.0	50.6	97.0	53.1	0.0	49.6	97.5	0	0.6
36-48	4/13/2016 5:36	44.6	0.0	51.1	97.2	34.6	0.7	50.6	97.4	53.1	0.0	49.5	97.7	0	0.6
36-48	4/13/2016 5:37	44.6	0.0	51.2	97.3	34.6	0.7	50.9	97.6	53.1	0.0	49.6	97.7	0	0.6
36-48	4/13/2016 5:38	44.6	0.0	51.4	97.5	34.6	0.7	51.1	97.8	53.1	0.0	49.6	97.7	0	0.6
36-48	4/13/2016 5:39	44.6	0.0	51.5	97.6	34.6	0.7	51.1	97.9	53.1	0.0	49.6	97.9	0	0.6
36-48	4/13/2016 5:40	44.6	0.0	51.4	97.2	34.6	0.0	50.9	97.7	53.1	0.0	49.7	98.2	0	0.6
36-48	4/13/2016 5:41	44.6	0.0	51.5	97.5	34.6	0.0	51.1	97.9	53.1	0.0	49.8	98.3	0	0.6
36-48	4/13/2016 5:42	44.6	0.0	51.4	97.0	34.6	0.7	50.9	97.6	53.1	0.0	49.9	98.5	0	0.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
36-48	4/13/2016 5:43	44.6	0.0	51.2	96.5	34.8	0.0	50.8	97.3	53.1	0.0	49.8	98.5	0	0.6
36-48	4/13/2016 5:44	44.6	0.0	51.1	96.5	34.8	0.0	50.6	97.3	53.1	0.0	49.8	98.5	0	0.6
36-48	4/13/2016 5:45	44.6	0.0	51.0	96.6	34.8	0.0	50.5	97.2	53.1	0.0	49.7	98.5	0	0.6
36-48	4/13/2016 5:46	44.6	0.0	51.0	97.1	34.8	0.7	50.6	97.4	53.1	0.0	49.8	98.7	0	0.6
36-48	4/13/2016 5:47	44.6	0.0	51.0	97.4	34.8	0.0	50.7	97.6	53.1	0.0	49.8	98.7	0	0.6
36-48	4/13/2016 5:48	44.6	0.0	51.2	97.8	34.8	0.0	50.8	97.7	53.1	0.0	49.8	98.7	0	0.6
36-48	4/13/2016 5:49	44.6	0.0	51.2	97.5	34.8	0.0	50.8	97.6	53.1	0.0	49.8	98.7	0	0.6
36-48	4/13/2016 5:50	44.6	0.0	51.2	97.3	34.8	0.0	50.7	97.6	53.1	0.0	49.7	98.7	0	0.6
36-48	4/13/2016 5:51	44.6	0.0	51.1	97.2	34.8	0.0	50.6	97.4	53.1	0.0	49.7	98.6	0	0.6
36-48	4/13/2016 5:52	44.6	0.0	51.1	97.0	34.8	0.0	50.6	97.3	53.1	0.0	49.7	98.5	0	0.6
36-48	4/13/2016 5:53	44.6	0.0	51.1	97.0	34.8	0.0	50.6	97.3	53.1	0.0	49.6	98.6	0	0.6
36-48	4/13/2016 5:54	44.6	0.0	51.1	97.0	34.8	0.0	50.5	97.3	53.1	0.0	49.5	98.4	0	0.6
36-48	4/13/2016 5:55	44.6	0.0	51.2	97.0	34.8	0.0	50.5	97.3	53.1	0.0	49.5	98.5	0	0.6
36-48	4/13/2016 5:56	44.6	0.0	51.1	96.9	34.8	0.0	50.5	97.4	53.1	0.0	49.5	98.6	0	0.6
36-48	4/13/2016 5:57	44.6	0.0	51.2	97.1	34.8	0.0	50.6	97.5	53.1	0.0	49.5	98.8	0	0.6
36-48	4/13/2016 5:58	44.6	0.0	51.2	97.1	34.8	0.0	50.7	97.5	53.1	0.0	49.6	98.8	0	0.6
36-48	4/13/2016 5:59	44.6	0.0	51.3	97.2	34.8	0.0	50.7	97.6	53.1	0.0	49.6	98.7	0	0.6
36-48	4/13/2016 6:00	44.6	0.0	51.3	97.5	34.8	0.0	50.8	97.9	53.1	0.0	49.6	99.0	0	0.6
36-48	4/13/2016 6:01	44.6	0.0	51.4	97.8	34.8	0.0	50.9	98.0	53.1	0.0	49.7	99.2	0	0.6
36-48	4/13/2016 6:02	44.6	0.0	51.4	97.7	34.8	0.0	50.9	97.9	53.1	0.0	49.8	99.4	0	0.6
36-48	4/13/2016 6:03	44.6	0.7	51.4	97.6	34.8	0.0	50.9	97.9	53.1	0.0	49.8	99.4	0	0.6
36-48	4/13/2016 6:04	44.6	0.7	51.6	97.6	34.8	0.0	50.9	97.9	53.1	0.0	49.7	99.3	0	0.6
36-48	4/13/2016 6:05	44.6	0.0	51.6	97.5	34.8	0.0	50.8	97.9	53.1	0.0	49.7	99.2	0	0.6
36-48	4/13/2016 6:06	44.6	0.0	51.5	97.2	34.8	0.0	50.7	97.7	53.1	0.0	49.6	99.2	0	0.6
36-48	4/13/2016 6:07	44.6	0.0	51.5	97.2	34.8	0.0	50.6	97.7	53.1	0.0	49.5	99.1	0	0.6
36-48	4/13/2016 6:08	44.6	0.0	51.5	97.3	34.8	0.0	50.7	97.8	53.1	0.0	49.4	99.0	0	0.6
36-48	4/13/2016 6:09	44.6	0.0	51.4	97.2	34.8	0.0	50.5	97.6	53.1	0.0	49.2	99.0	0	0.6
36-48	4/13/2016 6:10	44.6	0.0	51.3	97.0	34.8	0.7	50.4	97.5	53.1	0.0	49.2	99.0	0	0.6
36-48	4/13/2016 6:11	44.6	0.7	51.2	96.9	34.8	0.7	50.2	97.5	53.1	0.0	49.1	99.1	0	0.6
36-48	4/13/2016 6:12	44.6	0.7	51.1	97.0	34.8	0.0	50.0	97.4	53.1	0.0	49.0	99.0	0	0.6
36-48	4/13/2016 6:13	44.6	0.0	51.1	97.0	34.8	0.0	50.0	97.4	53.1	0.0	48.9	99.0	0	0.6
36-48	4/13/2016 6:14	44.6	0.0	50.9	96.9	34.8	0.0	49.9	97.4	53.1	0.0	49.0	99.0	0	0.6
36-48	4/13/2016 6:15	44.6	0.0	50.8	97.1	34.8	0.0	50.0	97.5	53.1	0.0	49.1	99.0	0	0.6
36-48	4/13/2016 6:16	44.6	0.0	50.7	97.0	34.8	0.0	49.9	97.5	53.1	0.0	49.1	98.9	0	0.6
36-48	4/13/2016 6:17	44.6	0.0	50.6	97.2	34.8	0.0	50.0	97.8	53.1	0.0	49.2	99.2	0	0.6
36-48	4/13/2016 6:18	44.6	0.0	50.6	97.5	34.8	0.0	50.1	98.0	53.1	0.0	49.3	99.2	0	0.6
36-48	4/13/2016 6:19	44.6	0.0	50.6	97.7	34.8	0.0	50.1	98.0	53.1	0.0	49.4	99.3	0	0.6
36-48	4/13/2016 6:20	44.6	0.0	50.7	98.1	34.8	0.0	50.4	98.2	53.1	0.0	49.5	99.4	0	0.6
36-48	4/13/2016 6:21	44.6	0.0	51.0	98.5	34.8	0.0	50.6	98.3	53.1	0.0	49.5	99.3	0	0.6
36-48	4/13/2016 6:22	44.6	0.0	51.1	98.6	34.8	0.0	50.7	98.4	53.1	0.0	49.5	99.2	0	0.6
36-48	4/13/2016 6:23	44.6	0.7	51.1	98.6	34.8	0.0	50.7	98.4	53.1	0.0	49.5	99.2	0	0.6
36-48	4/13/2016 6:24	44.6	0.0	51.1	98.6	34.8	0.0	50.7	98.4	53.1	0.0	49.5	99.2	0	0.6
36-48	4/13/2016 6:25	44.6	0.0	51.0	98.5	34.8	0.0	50.6	98.3	53.1	0.0	49.5	99.2	0	0.6
36-48	4/13/2016 6:26	44.6	0.0	50.9	98.3	34.8	0.0	50.4	98.2	53.1	0.0	49.4	99.2	0	0.6
36-48	4/13/2016 6:27	44.6	0.0	50.8	98.2	34.8	0.0	50.4	98.3	53.1	0.0	49.4	99.2	0	0.6
36-48	4/13/2016 6:28	44.6	0.0	50.8	98.2	34.8	0.0	50.4	98.3	53.1	0.0	49.4	99.2	0	0.6
36-48	4/13/2016 6:29	44.6	0.0	50.8	98.2	34.8	0.0	50.4	98.3	53.1	0.0	49.3	99.2	0	0.6
36-48	4/13/2016 6:30	44.6	0.0	50.8	98.2	34.8	0.0	50.5	98.3	53.1	0.0	49.3	99.2	0	0.6
36-48	4/13/2016 6:31	44.6	0.0	50.9	98.3	34.8	0.0	50.6	98.3	53.1	0.0	49.4	99.2	0	0.6
36-48	4/13/2016 6:32	44.6	0.0	51.0	98.5	34.8	0.0	50.8	98.5	53.1	0.0	49.5	99.3	0	0.6
36-48	4/13/2016 6:33	44.6	0.0	51.1	98.6	34.8	0.0	50.8	98.5	53.1	0.0	49.5	99.3	0	0.6
36-48	4/13/2016 6:34	44.6	0.0	51.1	98.6	34.8	0.0	50.8	98.5	53.1	0.0	49.5	99.2	0	0.6
36-48	4/13/2016 6:35	44.6	0.0	51.1	98.6	34.8	0.0	50.7	98.4	53.1	0.0	49.5	99.3	0	0.6
36-48	4/13/2016 6:36	44.6	0.0	50.9	98.5	34.8	0.0	50.5	98.3	53.1	0.0	49.5	99.2	0	0.6
36-48	4/13/2016 6:37	44.6	0.0	50.9	98.5	34.8	0.0	50.4	98.3	53.1	0.0	49.6	99.2	0	0.6
36-48	4/13/2016 6:38	44.6	0.0	50.9	98.5	34.8	0.0	50.4	98.3	53.1	0.0	49.6	99.2	0	0.6
36-48	4/13/2016 6:39	44.6	0.0	51.0	98.5	34.8	0.0	50.4	98.3	53.1	0.0	49.5	99.2	0	0.6
36-48	4/13/2016 6:40	44.6	0.0	51.1	98.5	34.8	0.0	50.4	98.3	53.1	0.0	49.5	99.2	0	0.6
36-48	4/13/2016 6:41	44.6	0.0	51.0	98.5	34.8	0.7	50.4	98.2	53.1	0.0	49.4	99.2	0	0.6
36-48	4/13/2016 6:42	44.6	0.0	50.9	98.4	34.8	0.7	50.4	98.4	53.1	0.0	49.4	99.2	0	0.6
36-48	4/13/2016 6:43	44.6	0.0	50.9	98.5	34.8	0.0	50.5	98.4	53.1	0.0	49.3	99.2	0	0.6
36-48	4/13/2016 6:44	44.6	0.0	50.9	98.5	34.8	0.0	50.6	98.6	53.1	0.0	49.2	99.2	0	0.6
36-48	4/13/2016 6:45	44.6	0.0	51.0	98.8	34.8	0.0	50.7	98.8	53.1	0.0	49.3	99.2	0	0.6
36-48	4/13/2016 6:46	44.6	0.0	51.1	99.1	34.8	0.0	50.7	98.9	53.1	0.0	49.3	99.3	0	0.6
36-48	4/13/2016 6:47	44.6	0.0	51.0	98.9	34.8	0.0	50.6	98.8	53.1	0.0	49.3	99.4	0	0.6
36-48	4/13/2016 6:48	44.6	0.0	50.9	99.0	34.8	0.0	50.3	98.7	53.1	0.0	49.2	99.4	0	0.6
36-48	4/13/2016 6:49	44.6	0.0	50.7	99.0	34.8	0.7	50.0	98.6	53.1	0.0	48.9	99.3	0	0.6
36-48	4/13/2016 6:50	44.6	0.7	50.5	99.0	34.8	0.7	49.6	98.6	53.1	0.0	48.7	99.3	0	0.6
36-48	4/13/2016 6:51	44.6	0.0	50.5	99.3	34.8	0.0	49.6	98.7	53.1	0.0	48.6	99.3	0	0.6
36-48	4/13/2016 6:52	44.6	0.7	50.9	99.6	34.8	0.0	49.6	99.2	53.1	0.0	48.7	99.5	0	0.6
36-48	4/13/2016 6:53	44.6	1.5	51.1	99.7	34.8	0.7	50.0	99.5	53.1	0.0	48.9	99.7	0	0.6
36-48	4/13/2016 6:54	44.6	1.5	50.9	99.5	34.8	0.7	49.9	99.5	53.1	0.0	48.9	99.9	0	0.6
36-48	4/13/2016 6:55	44.6	0.7	50.7	99.4	34.8	0.7	49.6	99.4	53.1	0.0	49.0	100.0	0	0.6
36-48	4/13/2016 6:56	44.6	1.5	50.5	99.4	34.8	0.7	49.7	99.4	53.1	0.0	49.0	100.0	0	0.6
36-48	4/13/2016 6:57	44.6	1.5	50.7	99.4	34.8	1.5	49.9	99.6	53.1	0.0	49.2	100.0	0	0.6
36-48	4/13/2016 6:58	44.6	0.7	50.8	99.5	34.8	0.7	50.1	99.6	53.1	0.0	49.3	100.0	0	0.6
36-48	4/13/2016 6:59	44.6	0.7	50.9	99.4	34.8	0.7	50.1	99.6	53.1	0.0	49.4	100.0	0	0.6
36-48	4/13/2016 7:00	44.6	0.7	50.9	99.4	34.8	0.7	50.2	99.6	53.1	0.0	49.5	100.0	0	0.6
36-48	4/13/2016 7:01	44.6	0.7	50.8	99.3	34.8	0.7	50.1	99.5	53.1	0.0	49.4	100.0	0	0.6
36-48	4/13/2016 7:02	44.6	0.7	50.7	99.2	34.8	0.7	50.0	99.5	53.1	0.0	49.3	100.0	0	0.6
36-48	4/13/2016 7:03	44.6	0.7	50.7	99.3	34.8	0.7	50.2	99.6	53.1	0.0	49.5	100.0	0	0.6
36-48	4/13/2016 7:04	44.6	0.0	50.6	99.2	34.8	0.0	50.0	99.4	53.1	0.0	49.4	100.0	0	0.6
36-48	4/13/2016 7:05	44.6	0.0	50.5	99.1	34.8	0.7	49.9	99.4	53.1	0.0	49.2	100.0	0	1.9
36-48	4/13/2016 7:06	44.6	0.7	50.4	99.1	34.8	0.7	49.7	99.3	53.1	0.0	49.1	100.0	0	1.9
36-48	4/13/2016 7:07	44.6	0.0	50.1	98.8	34.8	0.0	49.6	99.3	53.1	0.0	49.1	100.0	0	1.9
36-48	4/13/2016 7:08	44.6	0.0	50.0	99.1	34.6	0.0	49.5	99.4	53.1	0.0	49.0	100.0	0	1.9
36-48	4/13/2016 7:09	44.6	0.7	50.0	99.3	34.6	0.0	49.4	99.5	53.1	0.0	48.9	100.0	0	1.9
36-48	4/13/2016 7:10	44.6	0.7	50.0	99.3	34.6	0.0	49.4	99.5	53.1	0.0	48.9	100.0	0	3.1
36-48	4/13/2016 7:11	44.6	0.0	49.9	99.3	34.6	0.0	49.3	99.5	53.1	0.0	48.9	100.0	0	3.1
36-48	4/13/2016 7:12	44.6	0.0	50.0	99.3	34.6	0.0	49.6	99.5	53.1	0.0	49.1	100.0	0	4.4
36-48	4/13/2016 7:13	44.6	0.0	50.1	99.3	34.6	0.0	49.7	99.5	53.1	0.0	49.2	100.0	0	4.4
36-48	4/13/2016 7:14	44.6	0.0	50.2	99.3	34.6	0.0	49.7	99.4	53.1	0.0	49.2	100.0	0	5.6
36-48	4/13/2016 7:15	44.6	0.0	50.1	99.3	34.6	0.0	49.7	99.4	53.1	0.0	49.2	100.0	0	5.6
36-48	4/13/2016 7:16	44.6	0.0	50.0	99.2	34.6	0.0	49.6	99.3	53.1	0.0	49.2	100.0	0	6.9
36-48	4/13/2016 7:17	44.6	0.0	50.0	99.3	34.6	0.0	49.7	99.4	53.1	0.0	49.2	100.0	0	6.9
36-48	4/13/2016 7:18	44.6	0.0	50.1	99.3	34.6	0.0	49.6	99.4	53.1	0.0	49.3	100.0	0	8.1
36-48	4/13/2016 7:19	44.6	0.0	50.2	99.4	34.6	0.0	49.6	99.5	53.1	0.0	49.3	100.0	0	8.1
36-48	4/13/2016 7:20	44.6	0.0	50.2	99.3	34.6	0.0	49.7	99.4	53.1	0.0	49.3	100.0	0	9.4
36-48	4/13/2016 7:21	44.6	0.0	50.2	99.4	34.6	0.0	49.6	99.5	53.1	0.0	49.3	100.0	0	10.6
36-48	4/13/2016 7:22	44.6	0.7	50.4	99.3	34.6	0.7	50.0	99.6	53.1	0.0	49.4	100.0	0	10.6
36-48	4/13/2016 7:23	44.6	0.7	50.7	99.4	34.6	0.7	50.1	99.6	53.1	0.0	49.5	100.0	0	11.9
36-48	4/13/2016 7:24	44.6	0.7	50.8	99.4	34.6	0.7	50.2	99.5	53.1	0.0	49.6	100.0	0	13.1
36-48	4/13/2016 7:25	44.6	0.7	50.8	99.2	34.6	0.7	50.3	99.5	53.1	0.0	49.8	100.0	0	13.1
36-48	4/13/2016 7:26	44.6	0.7	50.8	98.9	34.6	0.7	50.3	99.5	53.1	0.0	49.8	100.0	0	13.1
36-48	4/13/2016 7:27	44.6	1.5	51.0	98.7	34.6	0.7	50.4	99.5	53.1	0.0	50.0	100.0	0	13.1
36-48	4/13/2016 7:28	44.6	0.7	51.1	98.3	34.6	0.7	50.5	99.3	53.1	0.0	50.0	100.0	0	14.4
36-48	4/13/2016 7:29	44.6	0.7	51.1	98.1	34.6	0.7	50.5	99.2	53.1	0.0	50.0	100.0	0	14.4
36-48	4/13/2016 7:30	44.6	0.7	51.3	98.2	34.6	0.7	50.7	99.2	53.1	0.0	50.1	100.0	0	14.4
36-48	4/13/2016 7:31	44.6	1.5	51.7	98.1	34.6	1.5	51.0	99.3	53.1	0.0	50.4	100.0	0	15.6
36-48	4/13/2016 7:32	44.6	0.7	51.9	97.8	34.6	0.7	51.3	99.1	53.1	0.0	50.6	100.0	0	15.6
36-48	4/13/2016 7:33	44.6	0.7	52.0	97.5	34.6	0.7	51.3	98.8	53.1	0.0	50.7	100.0	0	16.9
36-48	4/13/2016 7:34	44.6	0.7	51.8	97.3	34.6	0.7	51.2	98.7	53.1	0.0	50.6	100.0	0	16.9
36-48	4/13/2016 7:35	44.6	1.5	52.0	96.5	36.2	0.7	51.4	98.5	53.1	0.0	50.7	100.0	0	16.9
36-48	4/13/2016 7:36	44.6	0.7	52.0	96.3	36.2	0.0	51.4	98.1	53.1	0.0	50.7	100.0	0	18.1
36-48	4/13/2016 7:37	44.6	0.0	52.1	96.0	36.2	0.0	51.5	98.0	53.1	0.0	50.8	100.0	0	18.1

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
36-48	4/13/2016 7:38	44.6	0.0	52.1	95.9	36.2	0.0	51.5	97.7	53.1	0.0	50.8	100.0	0	19.4
36-48	4/13/2016 7:39	44.6	0.0	52.2	95.6	32.0	0.7	51.7	97.4	53.1	0.0	50.9	99.8	0	19.4
36-48	4/13/2016 7:40	44.6	0.0	52.2	95.6	32.0	0.0	51.6	97.4	53.1	0.0	50.9	99.7	0	19.4
36-48	4/13/2016 7:41	44.6	0.7	52.3	95.5	37.6	0.7	51.7	97.3	53.1	0.0	51.0	99.6	0	19.4
36-48	4/13/2016 7:42	44.6	0.0	52.3	95.4	39.0	0.0	51.7	97.3	53.1	0.0	51.1	99.4	0	20.6
36-48	4/13/2016 7:43	44.6	0.7	52.5	95.4	39.0	0.7	51.8	97.1	53.1	0.0	51.1	99.5	0	20.6
36-48	4/13/2016 7:44	44.6	0.7	52.7	95.0	39.0	0.7	52.1	96.9	53.1	0.0	51.3	99.1	0	21.9
36-48	4/13/2016 7:45	44.6	0.7	52.9	94.2	39.0	0.7	52.3	96.4	53.1	0.0	51.5	99.0	0	21.9
36-48	4/13/2016 7:46	44.6	0.7	53.1	93.4	39.0	0.7	52.5	95.7	53.1	0.0	51.6	98.5	0	21.9
36-48	4/13/2016 7:47	44.6	1.5	53.5	93.0	39.0	0.7	52.8	95.4	53.1	0.0	51.9	98.1	0	21.9
36-48	4/13/2016 7:48	44.6	0.7	53.7	92.6	39.0	0.7	52.9	95.1	53.1	0.0	52.0	97.9	0	23.1
36-48	4/13/2016 7:49	44.6	1.5	53.9	91.7	39.0	1.5	53.2	94.2	53.1	0.0	52.3	97.1	0	23.1
36-48	4/13/2016 7:50	44.6	0.7	54.0	91.7	39.0	0.7	53.3	94.2	53.1	0.0	52.4	97.1	0	30.6
36-48	4/13/2016 7:51	44.6	0.7	54.0	92.1	39.0	0.7	53.3	94.2	53.1	0.0	52.4	97.1	0	41.9
36-48	4/13/2016 7:52	44.6	0.0	54.0	91.7	39.0	0.7	53.4	93.8	53.1	0.0	52.6	96.7	0	50.6
36-48	4/13/2016 7:53	44.6	1.5	54.2	91.1	39.0	0.7	53.6	93.3	53.1	0.0	52.8	96.3	0	48.1
36-48	4/13/2016 7:54	44.6	1.5	54.5	90.6	39.0	1.5	53.9	92.9	53.1	0.0	53.2	95.7	0	45.6
36-48	4/13/2016 7:55	44.6	0.7	54.7	90.4	39.0	0.7	54.1	92.8	53.1	0.0	53.3	95.6	0	41.9
36-48	4/13/2016 7:56	44.6	0.7	54.8	90.2	39.0	0.7	54.2	92.6	53.1	0.0	53.5	95.5	0	40.6
36-48	4/13/2016 7:57	44.6	0.0	54.9	90.7	39.0	0.0	54.3	92.6	53.1	0.0	53.6	95.5	0	40.6
36-48	4/13/2016 7:58	44.6	0.7	55.0	89.5	39.0	0.7	54.5	91.8	53.1	0.0	53.9	94.6	0	40.6
36-48	4/13/2016 7:59	44.6	0.7	55.3	88.9	34.8	0.7	54.8	91.4	53.1	0.0	54.2	93.7	0	66.6
36-48	4/13/2016 8:00	44.6	0.0	55.4	89.0	29.2	0.7	54.9	91.3	53.1	0.0	54.3	93.5	0	101.9
36-48	4/13/2016 8:01	40.4	0.7	55.5	88.8	16.5	0.7	55.0	90.9	50.2	0.0	54.3	93.9	0	129.4
36-48	4/13/2016 8:02	36.2	0.7	55.7	88.6	13.7	0.7	55.1	90.7	50.2	0.0	54.4	93.1	0	134.4
36-48	4/13/2016 8:03	36.2	0.7	56.0	88.6	13.7	0.7	55.4	90.9	50.2	0.0	54.7	93.4	0	133.1
36-48	4/13/2016 8:04	36.2	0.0	56.2	88.5	13.7	0.0	55.6	90.7	50.2	0.0	55.0	93.0	0	138.1
36-48	4/13/2016 8:05	36.2	0.7	56.6	87.2	13.7	0.7	56.0	89.8	50.2	0.0	55.5	92.5	0	143.1
36-48	4/13/2016 8:06	36.2	0.7	56.8	87.1	13.7	0.7	56.3	89.7	50.2	0.0	55.9	92.1	0	145.6
36-48	4/13/2016 8:07	36.2	0.7	57.0	86.9	13.7	0.0	56.5	89.1	50.2	0.0	56.3	92.1	0	149.4
36-48	4/13/2016 8:08	36.2	0.7	57.1	86.2	23.6	1.5	56.7	88.4	51.6	0.0	56.6	90.6	0	151.9
36-48	4/13/2016 8:09	64.3	2.2	57.3	86.0	75.5	2.2	57.0	88.3	75.5	1.5	56.9	89.2	0	153.1
36-48	4/13/2016 8:10	65.7	2.2	57.5	84.8	51.6	2.2	57.2	86.9	67.1	1.5	57.2	88.6	0	154.4
36-48	4/13/2016 8:11	57.3	0.7	57.8	85.8	47.4	0.7	57.5	87.9	64.3	0.0	57.5	89.5	0	156.6
36-48	4/13/2016 8:12	57.3	0.0	58.1	85.8	50.2	0.0	57.8	87.1	65.7	0.0	57.9	89.2	0	156.9
36-48	4/13/2016 8:13	65.7	2.2	58.2	83.6	62.9	3.0	57.9	85.5	79.7	1.5	58.0	87.3	0	156.9
36-48	4/13/2016 8:14	72.7	3.0	58.2	83.1	69.9	2.2	58.0	84.9	86.7	1.5	58.1	86.5	0	158.1
36-48	4/13/2016 8:15	30.6	3.0	58.2	82.7	23.6	2.2	58.0	84.7	13.7	0.7	58.2	86.6	0	159.4
36-48	4/13/2016 8:16	30.6	1.5	58.3	83.7	356.9	1.5	58.1	84.9	2.5	0.7	58.4	86.7	0	161.9
36-48	4/13/2016 8:17	18.0	1.5	58.4	83.4	9.5	1.5	58.2	84.6	2.5	0.7	58.5	85.6	0	165.6
36-48	4/13/2016 8:18	19.4	1.5	58.6	82.8	20.8	1.5	58.4	84.9	6.7	0.7	58.8	85.8	0	168.1
36-48	4/13/2016 8:19	34.6	3.0	58.8	82.2	46.0	3.0	58.6	83.9	44.6	2.2	58.9	83.9	0	171.9
36-48	4/13/2016 8:20	61.5	3.0	58.9	81.8	61.5	3.0	58.7	83.7	62.9	1.5	59.0	84.4	0	174.4
36-48	4/13/2016 8:21	64.3	1.5	59.0	81.9	51.6	1.5	58.8	83.8	67.1	0.7	59.1	84.6	0	178.1
36-48	4/13/2016 8:22	64.3	1.5	59.2	81.9	48.8	1.5	59.0	82.8	61.5	0.7	59.3	83.4	0	181.9
36-48	4/13/2016 8:23	41.6	2.2	59.3	80.9	32.0	1.5	59.1	82.6	20.8	0.7	59.5	83.5	0	184.4
36-48	4/13/2016 8:24	39.0	0.7	59.5	82.7	40.4	0.7	59.4	83.5	32.0	0.7	59.9	84.0	0	188.1
36-48	4/13/2016 8:25	78.3	2.2	59.7	82.0	88.1	1.5	59.5	83.2	64.3	0.7	60.0	84.5	0	191.9
36-48	4/13/2016 8:26	81.1	0.7	59.7	82.6	88.1	0.7	59.7	84.2	64.3	0.0	60.3	84.7	0	194.4
36-48	4/13/2016 8:27	81.1	1.5	60.0	81.3	78.3	2.2	59.9	83.0	89.6	1.5	60.5	82.8	0	198.1
36-48	4/13/2016 8:28	68.5	1.5	60.1	81.0	67.1	1.5	60.0	82.4	86.1	0.7	60.5	81.9	0	201.9
36-48	4/13/2016 8:29	67.1	0.7	60.4	81.7	56.9	1.5	60.2	82.1	79.7	0.7	60.7	82.0	0	204.4
36-48	4/13/2016 8:30	51.6	3.7	60.2	80.4	56.9	3.7	60.1	81.6	54.5	2.2	60.5	81.4	0	208.1
36-48	4/13/2016 8:31	46.0	4.5	60.0	79.6	40.4	3.7	59.9	81.1	53.1	2.2	60.3	81.6	0	211.9
36-48	4/13/2016 8:32	33.4	3.7	59.9	80.6	34.8	3.0	59.8	81.9	41.8	1.5	60.3	82.3	0	215.6
36-48	4/13/2016 8:33	39.0	3.0	59.9	81.1	34.8	2.2	59.9	82.7	44.6	1.5	60.3	83.7	0	219.4
36-48	4/13/2016 8:34	22.2	1.5	60.0	81.4	13.7	1.5	60.0	82.6	41.8	0.7	60.5	83.4	0	223.1
36-48	4/13/2016 8:35	29.2	4.5	60.0	79.8	32.0	4.5	60.0	81.4	41.8	3.0	60.4	81.9	0	225.6
36-48	4/13/2016 8:36	37.6	4.5	60.0	80.0	30.6	3.7	59.9	81.6	43.2	2.2	60.3	82.0	0	229.4
36-48	4/13/2016 8:37	25.0	2.2	60.1	81.2	25.0	1.5	60.0	82.3	40.4	0.7	60.5	82.8	0	233.1
36-48	4/13/2016 8:38	27.6	3.0	60.2	80.3	33.4	3.0	60.1	81.4	47.4	2.2	60.6	81.5	0	236.6
36-48	4/13/2016 8:39	46.0	4.5	60.1	79.7	39.0	3.7	60.0	81.1	48.8	3.0	60.5	81.5	0	239.4
36-48	4/13/2016 8:40	41.6	3.0	60.1	80.3	41.8	2.2	60.1	81.6	39.0	1.5	60.6	82.0	0	243.1
36-48	4/13/2016 8:41	41.6	3.0	60.2	80.8	43.2	2.2	60.3	82.1	48.8	1.5	60.8	82.1	0	248.1
36-48	4/13/2016 8:42	43.2	4.5	60.2	79.5	34.8	4.5	60.2	80.8	43.2	3.0	60.6	81.3	0	251.9
36-48	4/13/2016 8:43	26.4	4.5	60.1	79.8	22.2	3.7	60.0	81.3	29.2	2.2	60.5	82.1	0	255.6
36-48	4/13/2016 8:44	32.0	3.7	60.1	80.0	36.2	3.7	60.0	81.5	39.0	2.2	60.5	81.9	0	258.1
36-48	4/13/2016 8:45	44.6	4.5	60.1	80.3	39.0	5.2	60.0	81.0	44.6	3.7	60.4	81.7	0	261.9
36-48	4/13/2016 8:46	43.2	6.0	60.1	80.6	41.8	4.5	60.0	81.0	51.6	3.7	60.4	81.5	0	265.6
36-48	4/13/2016 8:47	32.0	4.5	60.2	80.4	25.0	3.7	60.1	81.0	33.4	2.2	60.5	81.5	0	270.6
36-48	4/13/2016 8:48	36.2	4.5	60.2	80.7	30.6	4.5	60.2	81.4	40.4	3.0	60.6	82.2	0	274.4
36-48	4/13/2016 8:49	32.0	4.5	60.3	80.3	40.4	4.5	60.3	81.6	44.6	3.0	60.7	82.1	0	278.1
36-48	4/13/2016 8:50	50.2	4.5	60.4	80.7	46.0	3.7	60.5	81.7	48.8	2.2	60.9	82.1	0	281.9
36-48	4/13/2016 8:51	50.2	4.5	60.6	80.5	54.5	3.7	60.6	81.6	65.7	2.2	61.0	81.9	0	286.9
36-48	4/13/2016 8:52	72.7	3.0	60.9	80.6	54.5	3.0	60.9	81.0	64.3	2.2	61.3	81.5	0	290.6
36-48	4/13/2016 8:53	32.0	4.5	60.8	80.5	33.4	3.7	60.8	81.6	40.4	2.2	61.3	82.1	0	294.4
36-48	4/13/2016 8:54	83.9	3.7	60.9	80.3	83.9	3.7	61.0	81.2	86.7	3.0	61.5	81.4	0	300.6
36-48	4/13/2016 8:55	57.3	3.7	61.0	80.8	58.7	3.7	61.1	81.5	67.1	2.2	61.5	81.9	0	304.4
36-48	4/13/2016 8:56	50.2	3.0	61.2	81.0	39.0	2.2	61.3	82.1	43.2	1.5	61.8	82.6	0	305.6
36-48	4/13/2016 8:57	55.9	0.7	61.7	80.5	55.9	0.7	61.8	81.9	56.7	0.0	62.4	82.5	0	310.6
36-48	4/13/2016 8:58	44.6	3.7	61.7	79.2	26.4	3.7	61.7	80.0	41.8	3.0	62.3	80.0	0	315.6
36-48	4/13/2016 8:59	55.9	3.0	61.6	80.1	50.2	2.2	61.7	80.9	41.8	1.5	62.4	80.7	0	320.6
36-48	4/13/2016 9:00	36.2	1.5	62.0	80.3	22.2	1.5	62.0	80.7	36.2	0.7	62.7	80.5	0	325.6
36-48	4/13/2016 9:01	57.3	3.0	61.9	79.2	32.0	2.2	61.9	80.4	50.2	1.5	62.7	80.9	0	330.6
36-48	4/13/2016 9:02	69.9	2.2	61.9	79.6	74.1	2.2	62.0	80.6	79.7	1.5	62.8	80.0	0	335.6
36-48	4/13/2016 9:03	50.2	3.0	62.1	81.0	33.4	3.0	62.1	81.3	47.4	1.5	63.0	80.7	0	339.4
36-48	4/13/2016 9:04	48.8	3.7	62.1	81.5	47.4	3.0	62.3	81.9	54.5	2.2	63.0	81.5	0	344.4
36-48	4/13/2016 9:05	61.5	0.7	62.5	81.7	60.1	0.7	62.7	82.2	61.5	0.7	63.5	81.6	0	350.6
36-48	4/13/2016 9:06	76.9	3.0	62.7	81.0	67.1	3.0	62.9	81.7	86.7	2.2	63.6	81.5	0	358.1
36-48	4/13/2016 9:07	54.5	3.0	62.7	81.0	54.5	2.2	63.0	81.5	69.9	1.5	63.7	80.7	0	365.6
36-48	4/13/2016 9:08	72.7	3.0	62.7	79.3	54.5	3.0	62.9	80.6	60.1	1.5	63.6	80.5	0	371.9
NS	4/13/2016 9:09	55.9	1.5	63.0	80.7	39.0	1.5	63.3	81.7	51.6	0.7	64.0	81.3	0	374.4
NS	4/13/2016 9:10	79.7	3.0	63.0	80.0	75.5	3.0	63.3	81.3	81.1	1.5	64.0	81.2	0	371.9
NS	4/13/2016 9:11	50.2	1.5	63.2	80.4	47.4	1.5	63.5	80.4	67.1	0.7	64.3	80.1	0	368.1
NS	4/13/2016 9:12	44.6	1.5	63.3	80.8	43.2	1.5	63.6	81.8	67.1	0.0	64.6	81.6	0	363.1
NS	4/13/2016 9:13	32.0	3.0	63.3	79.8	26.4	3.0	63.5	80.7	53.1	2.2	64.5	80.0	0	363.1
NS	4/13/2016 9:14	44.6	2.2	63.2	80.5	40.4	1.5	63.6	81.2	54.5	0.7	64.5	80.5	0	366.9
NS	4/13/2016 9:15	34.6	1.5	63.5	80.9	26.4	2.2	63.6	81.4	36.2	1.5	64.6	81.0	0	351.9
NS	4/13/2016 9:16	43.2	3.7	63.3	80.4	47.4	3.7	63.4	80.7	51.6	3.0	64.3	79.7	0	373.1
NS	4/13/2016 9:17	39.0	3.0	63.0	80.8	41.8	3.0	63.2	81.5	46.0	1.5	64.1	81.5	0	335.6
NS	4/13/2016 9:18	62.9	2.2	63.0	81.1	62.9	2.2	63.3	81.4	64.3	0.7	64.2	81.0	0	324.4
NS	4/13/2016 9:19	67.1	2.2	63.3	81.7	71.3	3.0	63.4	81.7	69.9	2.2	64.3	80.4	0	341.9
NS	4/13/2016 9:20	54.5	4.5	63.0	80.8	56.9	3.7	63.1	81.3	60.1	3.0	63.9	80.2	0	360.6
NS	4/13/2016 9:21	67.1	3.0	63.0	81.7	57.3	3.0	63.2	82.3	62.9	2.2	63.9	81.8	0	380.6
NS	4/13/2016 9:22	36.2	1.5	63.3	82.5	22.2	0.7	63.6	82.7	64.3	0.0	64.3	82.5	0	378.1
NS	4/13/2016 9:23	41.6	1.5	63.7	82.6	47.4	2.2	63.9	82.2	62.9	0.7	64.8	81.9	0	385.6
NS	4/13/2016 9:24	79.7	2.2	63.8	80.6	61.5	2.2	63.9	81.4	78.3	1.5	64.7	80.9	0	384.4
NS	4/13/2016 9:25	58.7	2.2	64.0	82.7	30.6	1.5	64.2	82.9	43.2	0.7	65.0	82.4	0	400.6
NS	4/13/2016 9:26	40.4	2.2	64.2	80.9	51.6	2.2	64.3	81.3	60.1	1.5	65.1	80.5	0	371.9
NS	4/13/2016 9:27	65.7	2.2	64.1	81.5	54.5	1.5	64.4	81.9	69.9	0.7	65.1	81.5	0	369.4
NS	4/13/2016 9:28	55.9	2.2	64.2	80.9	40.4	1.5	64.5	81.8	50.2	0.7	65.1	81.9	0	349.4
NS	4/13/2016 9:29	34.6	3.7	64.0	80.4	23.6	4.5	64.0	81.2	30.6	3.0	64.8	80.8	0	336.9
NS	4/13/2016 9:30	50.2	4.5	63.7	82.3	47.4	3.7	63.8	82.2	54.5	2.2	64.5	81.9	0	360.6
NS	4/13/2016 9:31	57.3	3.0	63.5	81.6	79.7	3.0	63.6	82.1	79.7	1.5	64.3	81.3	0	290.6
NS	4/13/2016 9:32	68.5	3.0	63.4	81.8	76.9	3.7	63.4	82.1	85.3	2.2	64.0	81.5	0	245.6

Sample Period[1]	Date and Time, GMT-06:00	Wind Direction ø (1.5m)	Wind Speed mph (1.5m)	Temp °F (1.5m)	RH % (1.5m)	Wind Direction ø (1m)	Wind Speed mph (1m)	Temp °F (1m)	RH % (1m)	Wind Direction ø (0.5m)	Wind Speed mph (0.5m)	Temp °F (0.5m)	RH % (0.5m)	Rain inches (1m)	Solar Radiation, W/m²
NS	4/13/2016 9:33	48.8	4.5	63.2	82.1	33.4	3.0	63.3	82.7	43.2	2.2	63.8	82.2	0	359.4
NS	4/13/2016 9:34	54.5	3.0	63.3	83.0	58.7	3.0	63.4	83.0	61.5	2.2	63.9	82.6	0	303.1
NS	4/13/2016 9:35	44.6	3.0	63.3	83.7	33.4	2.2	63.5	83.8	47.4	1.5	64.0	83.8	0	316.9
NS	4/13/2016 9:36	27.8	1.5	63.8	84.4	27.8	1.5	63.9	84.4	36.2	0.7	64.5	83.9	0	409.4
NS	4/13/2016 9:37	34.8	1.5	64.1	82.4	43.2	2.2	64.2	82.7	53.1	1.5	64.8	82.3	0	418.1
NS	4/13/2016 9:38	61.5	3.7	64.1	82.3	55.9	3.0	64.3	82.9	54.5	2.2	64.8	82.7	0	408.1
NS	4/13/2016 9:39	98.0	3.0	64.2	81.9	110.6	3.0	64.5	82.3	119.0	2.2	65.1	82.3	0	456.9
NS	4/13/2016 9:40	103.6	2.2	64.8	83.4	72.7	2.2	65.0	82.6	99.4	1.5	65.7	82.7	0	439.4
NS	4/13/2016 9:41	58.7	3.0	64.8	82.5	54.5	2.2	65.1	83.1	116.2	1.5	65.7	82.9	0	439.4
NS	4/13/2016 9:42	51.6	1.5	65.3	82.5	51.6	1.5	65.6	82.9	116.2	0.7	66.3	82.4	0	458.1
NS	4/13/2016 9:43	78.3	3.0	65.3	81.0	69.9	2.2	65.6	81.5	95.2	1.5	66.4	80.4	0	451.9
NS	4/13/2016 9:44	57.3	1.5	65.5	80.6	46.0	2.2	65.7	81.0	72.7	1.5	66.4	79.9	0	456.9

[1]Sample periods based on sample location I-0.2 m; all other sample location have start times and collection times that are approximately ±20 min. NS = No Sampling Occuring (Sampling may be occuring on some pumps since this is representative and only acurately depicts sample station I-2.0 m acurately); NI = Instrument Not installed at the time.

Appendix B – Analytical Report

Adpen Laboratories, Inc.

ANALYTICAL PHASE REPORT

STUDY TITLE

Sampling for Possible Gaseous Field Loss after Application of a Commercial Herbicide

Authors

Rolando Perez
Melisa Marshall

Analytical Report Completion Date

18 May 2016

Sponsor

BASF Crop Protection
BASF Agricultural Research Center
26 Davis Drive
Research Triangle Park, NC 27709

Study Director

Scott H. Jackson, Ph.D.
BASF Crop Protection
BASF Agricultural Research Center
26 Davis Drive
Research Triangle Park, NC 27709

Analytical Performing Laboratory

ADPEN Laboratories, Inc.
11757 Central Parkway
Jacksonville, FL 32224

Laboratory Project Identifiers

BASF Study Number: 813945
ADPEN Project ID: 16D0519

Total number of pages

87

GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

The analytical phase of the study was conducted in accordance with 40 CFR Part 160.

Principal Analytical Investigator:

Rolando Perez
Technical Director
ADPEN Laboratories, Inc.

Date 5/18/16

Approved by:

David Perez
Management
ADPEN Laboratories, Inc.

Date 5/18/2016

Analytical Testing Facility:

ADPEN Laboratories, Inc.
11757 Central Parkway
Jacksonville, FL 32224 U.S.A.

ADPEN QUALITY ASSURANCE STATEMENT

Study Number: 813945
Name/Test Substance Code: Dicamba
Study Type: Drift Study

The quality assurance unit of ADPEN Laboratories, Inc. has inspected this study and the report to assure the integrity of the data and reported the results of these inspections to the Study Director and to management.

Dates of Inspection	Audit Type (Inspection #)	Auditor	REPORTED TO		
			Laboratory Management	Study Director	Testing Facility Management
04/19/2016	In-Progress (IN-160409)	Melissa Bachorski	04/22/2016	05/09/2016	05/09/2016
05/09/2016 05/10/2016	Data (IN-160502)	Melissa Bachorski	05/16/2016	05/16/2016	05/16/2016
05/09/2016 05/10/2016 05/11/2016	Analytical Report (IN-160503)	Melissa Bachorski	05/16/2016	05/16/2016	05/16/2016

Melissa M. Bachorski
Quality Assurance Unit
ADPEN Laboratories, Inc.

05/18/2016
Date

CERTIFICATION

We, the undersigned, hereby declare that the analytical portion of this study was performed under our supervision according to the procedure described herein, and that this report provides a true and accurate record of the results obtained.

Principal Analytical Investigator:

Rolando Perez
Technical Director
ADPEN Laboratories, Inc.

Date 5/18/16

Approved by:
(ADPEN Management)

David Perez
Management
ADPEN Laboratories, Inc.

Date 5/18/16

Sampling for Possible Gaseous Field Loss after Application of a Commercial Herbicide

ABSTRACT

The analytical phase of this study was conducted to determine the residue of BAS 183 H (Dicamba) remaining after application to a cultivated field.

OVS tube samples were analyzed for residues of dicamba using Analytical Method ADPEN M1407 "Technical Procedure: Analytical Method for the Determination of Residues of BAS 183 H (Dicamba) and Imazethapyr in OVS tubes with XAD-2 sorbent by LC-MS/MS" as described in the analytical phase protocol (Reference 1). The limit of quantitation (LOQ) was 0.01 µg per sample for dicamba in OVS tube samples. The limit of detection (LOD) for the analytical method was 0.001 µg per sample.

Petri dish samples were analyzed for residues of dicamba using Analytical Method Meth-226 "Determination of 2,4-D Dimethylamine salt, dicamba, glyphosate and imazethapyr in/on petri dishes" as described in the analytical phase protocol (Reference 2). The limit of quantitation (LOQ) was 0.01 µg per sample for dicamba in petri dish samples. The limit of detection (LOD) for the analytical method was 0.005 µg per sample.

Mean procedural recoveries of dicamba on OVS tube samples in each analytical set were within 70–120%. Overall mean procedural recovery at all fortification levels for dicamba was 91% on OVS tubes.

Petri dish samples were analyzed to verify the application of dicamba to the field. Only one set of procedural recoveries of dicamba on petri dish samples was needed for this study. The mean of the procedural recoveries of that analytical set for dicamba was 97%.

No residues of dicamba were found above the LOQ in any control samples.

GENERAL INFORMATION

Study Number:	813945
Study Title:	Sampling for Possible Gaseous Field Loss after Application of a Commercial Herbicide
Authors:	Rolando Perez, ADPEN Laboratories, Inc. Melisa Marshall, ADPEN Laboratories, Inc.
Study Director:	Scott H. Jackson, Ph.D., BASF Crop Protection
Principal Analytical Investigator:	Rolando Perez, ADPEN Laboratories, Inc.
Performing Laboratory Name and Address:	ADPEN Laboratories, Inc. 11757 Central Parkway Jacksonville, Florida 32224
Other Laboratory Personnel:	Rolando Perez, Technical Director Steven Perez, Laboratory Manager Jake Adams, Senior Chemist Adelaida LaRosa, Chemist I Kenley Herbert, Assistant Chemist Santina Bryant, Associate Chemist Winda Negron, Laboratory Coordinator Carlos Correa, Sample Custodian

Study Initiation Date:	29 March 2016
Analytical Experimental Start Date:	19 April 2016
Analytical Experimental Termination Date:	06 May 2016 (last sample analysis)
Analytical Report Completion Date:	18 May 2016

TABLE OF CONTENTS

GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT **2**
ADPEN QUALITY ASSURANCE STATEMENT **3**
CERTIFICATION **4**
ABSTRACT **5**
GENERAL INFORMATION **6**
TABLE OF CONTENTS **7**
1.0 INTRODUCTION **9**
1.1 Purpose of the Study 9
1.2 Study Design 9
2.0 MATERIALS **9**
2.1 Reference Substance 9
2.2 Sample Handling 9
2.3 Standard Solutions 10
2.3.1 Stock Solutions 10
2.3.2 Fortification Solutions 10
2.3.4 Calibration Solutions 11
3.0 ANALYTICAL METHOD **11**
3.1 Method Sensitivity 11
3.2 Procedure 11
3.2.1 OVS Tubes 11
3.2.2 Application Verification 12
3.3 Data Evaluation 12
4.0 RESULTS AND DISCUSSION **14**
4.1 Method Performance 14
4.2 Residue Results 15
5.0 PROTOCOL CHANGES **17**
6.0 CONCLUSIONS **17**
7.0 DATA RETENTION/ARCHIVING **17**
8.0 REFERENCES **18**
TABLES SECTION **19**
Table 1 Procedural Recoveries of Dicamba on OVS Tube Samples 20
Table 2 Procedural Recoveries of Dicamba on Petri Dish Samples 21
Table 3 Dicamba Residues in OVS Tube Samples Collected at 0-3 hour Sampling Interval at Site 1 W 22
Table 4 Dicamba Residues in OVS Tube Samples Collected at 3-6 hour Sampling Interval at Site 1 W 23
Table 5 Dicamba Residues in OVS Tube Samples Collected at 6-12 hour Sampling Interval at Site 1 W 24

Table 6 Dicamba Residues in OVS Tube Samples Collected at 12-24 hour Sampling Interval at Site 1 W 25
Table 7 Dicamba Residues in OVS Tube Samples Collected at 24-36 hour Sampling Interval at Site 1 W 26
Table 8 Dicamba Residues in OVS Tube Samples Collected at 36-48 hour Sampling Interval at Site 1 W 27
Table 9 Dicamba Residues in OVS Tube Samples Collected at 0-3 hour Sampling Interval at Site 2 E 28
Table 10 Dicamba Residues in OVS Tube Samples Collected at 3-6 hour Sampling Interval at Site 2 E 29
Table 11 Dicamba Residues in OVS Tube Samples Collected at 6-12 hour Sampling Interval at Site 2 E 30
Table 12 Dicamba Residues in OVS Tube Samples Collected at 12-24 hour Sampling Interval at Site 2 E 31
Table 13 Dicamba Residues in OVS Tube Samples Collected at 24-36 hour Sampling Interval at Site 2 E 32
Table 14 Dicamba Residues in OVS Tube Samples Collected at 36-48 hour Sampling Interval at Site 2 E 33
Table 15 Dicamba Residue in OVS Tube Samples (Transit Stability) 34
Table 16 Dicamba Residue Results on Composite Petri Dish Samples (Application Verification) . 35
Table 17 LC-MS/MS Instrumentation and Conditions 36
APPENDICES SECTION 37
APPENDIX A: CERTIFICATES OF ANALYSIS 38
APPENDIX B: CRITICAL SAMPLE HANDLING DATES 40
Table B.1 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 1W 41
Table B.2 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 2E 47
Table B.3 Critical Sample Handling Dates in the Analysis of Petri Dish Samples 53
APPENDIX C: FIGURES 54
Figure C.1 Flow Diagram of the Analytical Method ADPEN M1407 (OVS Tubes) 55
Figure C.2 Flow Diagram of the Analytical Method Meth-226 (Petri Dish) 56
Figure C.3 Typical Standard Calibration Curve for Dicamba 57
Figure C.4 Typical Standard Chromatograms of Dicamba 58
Figure C.5 Typical Chromatograms of Untreated OVS Tube Samples 63
Figure C.6 Typical Chromatograms of Untreated OVS Tube Samples Fortified with Dicamba at the LOQ (0.01 µg) 64
Figure C.7 Typical Chromatograms of Untreated OVS Tube Samples Fortified with Dicamba at 10xLOQ (0.1 µg) 65
Figure C.8 Typical Chromatograms of OVS tube Samples Treated with Dicamba 66
Figure C.9 Typical Chromatograms of Untreated Petri Dish Samples 69
Figure C.10 Typical Chromatograms of Untreated Petri Dish Samples Fortified with 2000 µg of Dicamba 70
Figure C.11 Typical Chromatograms of Treated Petri Dish Samples 71
APPENDIX D: DETAILED ANALYTICAL RESIDUE REPORTS 72

1.0 INTRODUCTION

1.1 Purpose of the Study

The analytical phase of this study was conducted to determine the residue of BAS 183 H (Dicamba) remaining after application to a cultivated field.

1.2 Study Design

OVS tube and application verification samples were collected from two test site locations in Sumter County, Georgia.

No data requirements were specified for the analytical phase of this study.

2.0 MATERIALS

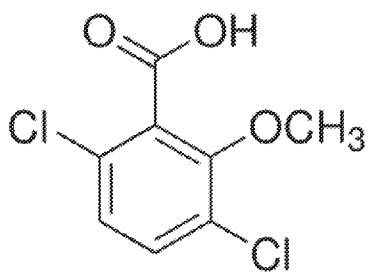
2.1 Reference Substance

Reference substance for dicamba was used for procedural recovery fortification and LC-MS/MS calibration solutions.

Reference substances were received on August 27, 2014 and stored in freezer E–119, which operates at an average temperature of −23 °C during the course of the study. Concentrated (stock), fortification, and calibration standards were prepared according to the analytical method and were stored in refrigerator E–109, which operates at an average temperature of 3 °C. The certificates of analysis for the reference substances used in this study are presented in Appendix A. A brief description of each reference substances is below.

DICAMBA

CHEMICAL NAME (IUPAC):	3,6-DICHLORO-2-METHOXYBENZOIC ACID
CAS REGISTRY NO.:	1918-00-9
BASF CODE NO.:	BAS 183 H
BASF REG. NO.:	196095
MOLECULAR FORMULA:	$C_8H_6Cl_2O_3$
MOLECULAR WEIGHT:	221.0 g/mol
BATCH NO.:	L84-204
PURITY:	99.9%
EXPIRATION DATE:	09/01/2017
STORAGE CONDITIONS:	FREEZER ≤ 0ºC



2.2 Sample Handling

Samples were collected from two test plots in Sumter County, Georgia. Each trial site had one control (untreated) location and one treated plot where dicamba herbicide was applied. Samples were collected from 9 different locations, all having a 1.0 meter sampler height. One location of the nine locations had additional sampler heights at 0.2, 0.4, 0.6, 0.8 meter

above the surface. Samples were collected at intervals of 0-3, 3-6, 6-12, 12-24, 24-36 and 36-48 hours.

Samples were hand delivered by field personnel to ADPEN Laboratories, Inc., Jacksonville, FL on April 13, 2016. The samples were received in insulated coolers packed with ice substitutes and were in good condition.

Upon receipt, samples were logged into the Laboratory Information Management System (LIMS) and provided a unique laboratory code based on an order ID number and a sequential lab code number (e.g., 160413005-001). All laboratory codes are cross-referenced to their corresponding customer sample numbers on the detailed residue reports. Prior to analysis, samples were verified and stored in freezer E-16 which maintained an average temperature of -17 °C. Summaries of critical sample handling dates are presented in Appendix B.

2.3 Standard Solutions

Stock, fortification and calibration standard solutions of dicamba were prepared as described below were stored in refrigerator E–109 which maintained an average temperature of 3 °C during this study. No standard solutions were used beyond their period of determined or referenced stability.

2.3.1 Stock Solutions

An analytical balance was used to accurately weigh 10 mg (corrected for purity) of the dicamba primary analytical standard. The standard was quantitatively transferred into a 10.0 mL volumetric flask and diluted to volume with acetonitrile yielding a final concentration of 1000 ng/µL.

2.3.2 Fortification Solutions

An aliquot of the stock solution (1000 ng/µL) of dicamba was added to a volumetric flask containing methanol yielding a final concentration 10.0 ng/µL when diluted to volume. Fortification solutions were prepared by serial dilution of the 10.0 ng/µL standard solution in methanol. A preparation scheme of the fortification standards used in this study is detailed in the table below.

Standard Number	Parent Number	Conc. of Parent Solution (ng/µL)	Aliquot Volume (mL)	Final Volume (mL)	Final Conc. (ng/µL)
W12777-1	I8794	10	0.100	10	0.10
W12777-2			1.0		1.0

2.3.4 Calibration Solutions

Calibration solutions of dicamba were prepared by serial dilutions of intermediate solutions with methanol/water with 1% formic acid (10:90, v/v) as described below.

Standard Number	Parent Standard Number	Conc. of Parent Solution (ng/mL)	Aliquot Volume (mL)	Final Volume (mL)	Final Conc. (ng/mL)
W12779	I8814	10,000	0.2	20	100.0
	W12779-1	100.0	2.0		10.0
	W12779-1	100.0	1.0		5.0
	W12779-1	100.0	0.5		2.5
	W12779-1	100.0	0.2		1.0
	W12779-1	100.0	0.1		0.5
	W12779-3	5.0	1.0		0.25
	W12779-3	5.0	0.4		0.10
	W12779-3	5.0	0.2		0.05
	W12779-3	5.0	0.1		0.025

3.0 ANALYTICAL METHOD

Two analytical methods were used for the two matrices: OVS tubes and application verification samples.

The analytical method for analysis of the OVS tubes with XAD-2 sorbent is ADPEN M1407 entitled "Analytical Method for the Determination of Residues of BAS 183 H (Dicamba) and Imazethapyr in OVS tubes with XAD-2 sorbent by LC-MS/MS".

The analytical method for analysis of the application verification samples is Meth-226, entitled "Determination of 2,4-D Dimethylamine Salt, Dicamba, Glyphosate and Imazethapyr in/on Petri Dishes".

3.1 Method Sensitivity

The limit of quantitation (LOQ) was 0.01 µg per sample for dicamba in OVS tube samples. The limit of detection (LOD) for the analytical method was 0.001 per sample.

The limit of quantitation (LOQ) was 0.01 µg per sample for dicamba in petri dish samples. The limit of detection (LOD) for the analytical method was 0.005 µg per sample.

3.2 Procedure

3.2.1 OVS Tubes

An OVS tube sample is defined as the front or back section of sorbent material taken from one OVS tube. The front section consists of the Teflon holding ring, glass fiber filter paper, upper sorbent material (270 mg, XAD-2) and the separating polyurethane foam. The back section consists of the lower sorbent material (140mg, XAD-2) and the polyurethane foam below it. During this study, only the front section was analyzed for dicamba residue.

Recovery samples were fortified with dicamba at the predetermined spike levels with dicamba. A 10-mL portion of methanol/water (90:10, v/v) acidified with 1% formic acid was added to the OVS tube. Dicamba was extracted from the sorbent by mechanical shaking for 60 minutes at 200 rpm. The sample was removed from the shaker and allowed to settle for 2-5 minutes. A 1-mL aliquot was transferred to a clean culture tube and diluted with 3-mL of 1% formic acid in HPLC water. The sample was mixed by vortexing for ~10 seconds to dissolve any dicamba residue and then vialed for analysis by LC-MS/MS. LC-MS/MS conditions used for analysis are described in Table 17.

A flow diagram of the procedure is presented in Appendix C, Figure C.1.

3.2.2 Application Verification

Modifications to the extraction procedure were made to ensure extraction of the filter paper included in each petri dish. Recovery samples were fortified with dicamba at the predetermined spike levels. The filter paper portion of the sample was carefully placed into a 1-L wide mouth extraction jar. The extraction solvent, methanol/water (10:90, v/v) was premeasured at 500-mL into a graduated cylinder. The petri dish was carefully rinsed three times with 10-mL portions of the extraction solvent allowing the rinsate to flow into the sample jar containing the filter paper. The remaining portion of the extraction solvent was transferred to the 1-L jar. The jar was secured with a Teflon-lined cap and placed on a mechanical shaker for 30 minutes at low speed for adequate mixing. Samples were removed from the mechanical shaker and allowed to settle. A portion (~10 mL) was then transferred to a 15-mL centrifuge tube and was centrifuged for 5 minutes to clarify the sample solution. A 1-mL aliquot was transferred to a 1-L volumetric flask and brought to volume with the same extraction solvent. The 1-L sample was inverted several times to ensure homogeneity. A 1-mL aliquot was then transferred to a 15-mL graduated centrifuge tube and diluted to 10 mL with the same extraction solvent. An additional dilution was made in the same extraction solvent to accommodate for the expected high residues of dicamba, mixing each dilution by vortexing. The samples were then vialed for analysis by LC-MS/MS. The LC-MS/MS conditions used for analysis are described in Table 17.

A flow diagram of the procedure is presented in Appendix C, Figure C.2.

3.3 Data Evaluation

The quantitation of residues was achieved using an external calibration curve calculated by linear and quadratic regression of instrument responses for the reference substances at multiple concentrations. The performance of the instrument was evaluated during each injection set. The correlation coefficient for each calibration curve was no less than 0.99.

A standard curve was prepared by injecting standard solutions at appropriate concentrations for each analyte. Calibration standard concentrations for dicamba ranged from 0.025 – 10 ng/mL. A calibration standard was typically injected every five to six sample injections. Analyst® 1.6.2 created the standard curve based on linear regression, using 1/x weighting. The regression functions were used to calculate the best-fit line by plotting the amount found (ng) on the x-axis versus the detector's peak response (peak area) on the y-axis.

A typical calibration curve of dicamba is presented in Appendix C, Figure C.3. Representative chromatograms of calibration standards for dicamba are presented in Appendix C, Figure C.4.

Peak integration and quantitation were performed within Analyst® 1.6.2 software; using the calibration curve equation to determine amount of analyte found (ng) during sample analysis. Recovery results and concentration found (µg) were calculated for each set of samples within LIMS and reported in Microsoft® Office Excel spreadsheet data reports, which are presented in Appendix D.

a) Calibration curve $y = mx + b$: Solving for x: $x = \frac{y-b}{m}$

Where,
m = Slope
b = y-intercept
x = Amount found (ng)
y = Peak area

The following equations were used within LIMS for residue and recovery calculations:

b) $\text{Final Sample Volume (FSV)} = \frac{\text{Extract volume}}{\text{Aliquot taken}} \times \text{Final Sample Volume} \times \text{Dilution Factor (DF)}$

c) $\text{Amount Found (µg)} = \frac{\text{ng Found} \times \text{FSV}}{\text{Injection Volume}} \times \frac{1000\ \text{µl/mL}}{1000\ \text{ng/µg}}$

d) $\text{Percent recovery (\%)} = \frac{\text{Amount Found (µg)-Amount found in control (µg)}}{\text{Amount Added (µg)}} \times 100\%$

The following are example calculations for the determination of dicamba in a fortified OVS tube sample. Numbers have been rounded for reporting purposes only.

Lab Code: 16041801-Recovery1-1
Set name: WO-16041801
Fortification level: LOQ (0.01 µg)
Residue in control: ND

Given:
y = 7147
b = -31.275
m = 8.678E+005

a) $\text{Amount Found (ng)} = \frac{7147+31.275}{8.678E+005} = 0.00827\ \text{ng}$

b) $\text{Final Sample Volume (FSV)} = \frac{10\ \text{mL}}{1\ \text{mL}} \times 4 = 40\ \text{mL}$

c) $\text{Amount Found (µg)} = \frac{0.00827\ \text{ng} \times 40\ \text{mL}}{40\ \text{µL}} \times \frac{1000\ \text{µL/mL}}{1000\ \text{ng/µg}} = 0.00827\ \text{µg}$

d) Percent Recovery (%) = $\frac{0.00827\ \mu g - 0.0000\ \mu g}{0.01\ \mu g} \times 100 = 82.7\%$

The following are example calculations for the determination of dicamba in a treated OVS tube sample.

Sample Number: 66
Lab Code: 160413005-066
Set name: WO-16041801

Given:
y = 32434
b = -31.275
m = 8.678E+005

a) Amount Found (ng) = $\frac{32434+31.275}{8.678E+005} = 0.03741$

b) Final Sample Volume = $\frac{10\ mL}{1\ mL} \times 4 = 40\ mL$

c) Amount Found (µg) = $\frac{0.0374\ ng \times 40\ mL}{40\ \mu L} \times 1000\ \mu L/mL \div 1000\ ng/\mu g = 0.037\ \mu g$

4.0 RESULTS AND DISCUSSION

4.1 Method Performance

No residues of dicamba above the LOQ were found in any of the control OVS tube or petri dish samples analyzed.

Each set contained control samples which were fortified with dicamba prior to extraction and analyzed concurrently with the analytical set of field samples. OVS tube control samples were fortified at 0.01, 0.1, 0.3 and 1.0 µg/sample fortification level. Overall mean procedural recoveries were within the acceptance range of 70–120%. Two petri dish control samples were fortified at 2,000 µg/sample fortification level. Both procedural recoveries were also within the acceptance criteria.

A summary of individual procedural recoveries is presented in Tables 1 and 2, respectively for OVS tubes and petri dish control samples. Representative chromatograms of control and fortified samples are presented in Appendix C, Figures 5 – 7.

4.2 Residue Results

Treated OVS tube and petri dish samples were analyzed for residues of dicamba. Summary tables of residues found are presented in Tables 3 through 16. Representative chromatograms of the treated samples are presented in Appendix C, Figures 8. Detailed residue reports are presented in Appendix D.

Residue Results for OVS Tubes Site 1 W

0-3 hour sampling interval:
The maximum residue of dicamba found in an OVS tube was 0.038 µg in the 0-3 hour time interval with sample height of 0.2 meter above the test area at location I. The residue found decreased to less than the LOQ at a sample height of 0.8 meter above the test area at the same location.

3-6 hour sampling interval:
The maximum residue of dicamba found in an OVS tube was 0.040 µg in the 3-6 hour time interval with sample height of 0.4 meter above the test area at location I. The residue found decreased to less than the LOQ at a sample height of 0.6 meter above the test area at the same location.

6-12 hour sampling interval:
The maximum residue of dicamba found in an OVS tube was 0.066 µg in the 6-12 hour time interval with sample height of 0.2 meter above the test area at location I. The residue found decreased to 0.018 µg at a sample height of 0.8 meter above the test area at the same. The result of the sample at location I at 1.0 meter above the test area increased to 0.041 µg, which is out of trend with the results at the lower heights.

12-24 hour sampling interval:
The maximum residue of dicamba found in an OVS tube was 0.053 µg in the 12-24 hour time interval with sample height of 0.2 meter above the test area at location I. The residue found decreased to less than the LOQ at a sample height of 0.8 meter above the test area at the same location. The result of the sample at location I at 1.0 meter above the test area increased to 0.020 µg, which is out of trend with the results at the lower heights.

24-36 hour sampling interval:
No residues of dicamba above the LOQ were found in any of the samples for the 24-36 hour sampling interval.

36-48 hour sampling interval:
No residues of dicamba above the LOQ were found in any of the samples for the 36-48 hour sampling interval.

Residue Results for OVS Tubes Site 2 E

0-3 hour sampling interval:
The maximum residue of dicamba found in an OVS tube was 0.025 µg in the 0-3 hour time interval with sample height of 0.2 meter above the test area at location I. The residue found decreased to less than the LOQ at a sample height of 0.8 meter above the test area at the same location. The result of the sample at location I at 1.0 meter above the test area increased to 0.012 µg, just above the LOQ.

3-6 hour sampling interval:
The maximum residue of dicamba found in an OVS tube was 0.021 µg in the 3-6 hour time interval with sample height of 0.2 meter above the test area at location I. The residue found decreased to less than the LOQ at a sample height of 0.8 meter above the test area at the same location. The result of the sample at location I at 1.0 meter above the test area increased to 0.012 µg, just above the LOQ.

6-12 hour sampling interval:
The maximum residue of dicamba found in an OVS tube was 0.034 µg in the 6-12 hour time interval with sample height of 0.2 meter above the test area at location I. The residue found decreased to 0.015 µg at a sample height of 1.0 meter above the test area at the same location.

12-24 hour sampling interval:
The maximum residue of dicamba found in an OVS tube was 0.059 µg in the 12-24hour time interval with sample height of 0.2 meter above the test area. The residue found decreased to 0.021 µg at a sample height of 1.0 meter above the test area at the same location.

24-36 hour sampling interval:
No residues of dicamba above the LOQ were found in any of the samples for the 24-36 hour sampling interval.

36-48 hour sampling interval:
No residues of dicamba above the LOQ were found in any of the samples for the 36-48 hour sampling interval.

Residue Results for Application Verification Samples

The application of dicamba to the test area was observed by determining the dicamba residue in petri dish sample. A petri dish sample was a composite of 15 petri dishes per field site, one for Site 1 W and one for Site 2 E. The total residue found in the composite sample for Site 1 W was 20013 µg. The total residue found in the composite sample for Site 2 E was 22825 µg.

Residues Results for OVS Tube Transit Stability Samples

Analysis results the transit stability samples are presented in Table 15. The results indicate the residues of dicamba was in OVS tubes were stable during shipment from the field sites to the analytical laboratory.

5.0 PROTOCOL CHANGES

Amendment 1 - Addressed the addition of the petri dish sample matrix to the field phase of the study.

Amendment 2 - Added the analytical phase details to the study.

Amendment 3 – Updated the sample list.

6.0 CONCLUSIONS

The overall recovery ranges, means, and relative standard deviations for the procedural recoveries analyzed and described in this report were within the specifications described in the analytical phase protocol amendment. All samples were successfully analyzed for dicamba.

7.0 DATA RETENTION/ARCHIVING

Following finalization of the analytical report the raw data and certified copies of facility data will be transferred to BASF Corporation Research Triangle Park facility located at Research Triangle Park, NC 27709.

8.0 REFERENCES

1. Perez, Rolando; Marshall, Melisa; Adams, Jake. "Technical Procedure: Analytical Method for the Determination of Residues of BAS 183 H (Dicamba) and Imazethapyr in OVS tubes with XAD-2 sorbent by LC-MS/MS", Draft Analytical Method Number ADPEN M1407, Draft date: October 31, 2014.

2. "Determination of 2,4-D Dimethylamine Salt, Dicamba, Glyphosate and Imazethapyr in/on Petri Dishes", Analytical Method Number Meth-226, Date: September 03, 2013.

TABLES SECTION

Table 1 Procedural Recoveries of Dicamba on OVS Tube Samples

Summary of Procedural Recoveries						
Analyte	**Spike Level (µg/sample)**	**n**	**Recoveries (%)**			**RSD[1,2]**
			Individual *	**Range**	**Mean**	
Dicamba (218→175)	0.01	13	83, 83, 99, 81, 100, 88, 94, 84, 92, 104, 94, 84, 111*	81 – 111	92	10.3
	0.1	10	77, 85, 90, 91, 98, 95, 96, 96, 86, 97	77 – 98	91	7.6
	0.3	1	89*	NA	NA	NA
	1.0	2	88, 91	NA	89	NA
	Overall	**26**		**77 – 111**	**91**	**8.6**

*Transit stability recovery sample.

[1] RSD = relative standard deviation (standard deviation/mean x 100).
[2] Statistical calculations in this table are based on unrounded values; therefore, slight differences may be noted in calculations performed using rounded numbers.

Table 2 Procedural Recoveries of Dicamba on Petri Dish Samples

Summary of Procedural Recoveries						
Analyte	**Spike Level (µg/sample)**	**n**	**Recoveries (%)**			**RSD[1,2]**
			Individual	**Range**	**Mean**	
Dicamba (218→175)	2000	2	106, 87	87 – 106	97	NA
	Overall	**2**		**NA**	**97**	**NA**

[1] RSD = relative standard deviation (standard deviation/mean x 100).
[2] Statistical calculations in this table are based on unrounded values; therefore, slight differences may be noted in calculations performed using rounded numbers.

Table 3 Dicamba Residues in OVS Tube Samples Collected at 0-3 hour Sampling Interval at Site 1 W

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
1	001	A	1.0	2651	<LOQ
9	009	B	1.0	8580	0.011
17	017	C	1.0	6326	<LOQ
25	025	D	1.0	0	ND
33	033	E	1.0	0	ND
41	041	F	1.0	0	ND
49	049	G	1.0	0	ND
57	057	H	1.0	1985	<LOQ
65	065	I	0.2	33130	0.038
73	073	I	0.4	31089	0.036
81	081	I	0.6	25266	0.029
89	089	I	0.8	8577	<LOQ
97	097	I	1.0	19474	0.022
105	105	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 4 Dicamba Residues in OVS Tube Samples Collected at 3-6 hour Sampling Interval at Site 1 W

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
2	002	A	1.0	4061	<LOQ
10	010	B	1.0	12241	0.014
18	018	C	1.0	4689	<LOQ
26	026	D	1.0	3091	<LOQ
34	034	E	1.0	0	ND
42	042	F	1.0	0	ND
50	050	G	1.0	0	ND
58	058	H	1.0	4350	<LOQ
66	066	I	0.2	32434	0.037
74	074	I	0.4	34261	0.040
82	082	I	0.6	8629	<LOQ
90	090	I	0.8	13527	0.016
98	098	I	1.0	24734	0.029
106	106	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 5 Dicamba Residues in OVS Tube Samples Collected at 6-12 hour Sampling Interval at Site 1 W

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
3	003	A	1.0	8395	0.011
11	011	B	1.0	22681	0.032
19	019	C	1.0	0	ND
27	027	D	1.0	0	ND
35	035	E	1.0	0	ND
43	043	F	1.0	0	ND
51	051	G	1.0	0	ND
59	059	H	1.0	7246	<LOQ
67	067	I	0.2	46010	0.066
75	075	I	0.4	40357	0.058
83	083	I	0.6	37263	0.053
91	091	I	0.8	12964	0.018
99	099	I	1.0	28672	0.041
107	107	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 6 Dicamba Residues in OVS Tube Samples Collected at 12-24 hour Sampling Interval at Site 1 W

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
4	004	A	1.0	6456	<LOQ
12	012	B	1.0	10056	0.013
28	028	D	1.0	1931	<LOQ
36	036	E	1.0	2392	<LOQ
44	044	F	1.0	2993	<LOQ
52	052	G	1.0	1728	<LOQ
60	060	H	1.0	3763	<LOQ
68	067	I	0.2	38910	0.053
76	076	I	0.4	23072	0.031
84	084	I	0.6	21958	0.030
92	092	I	0.8	7283	<LOQ
100	100	I	1.0	14881	0.020
108	108	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 7 Dicamba Residues in OVS Tube Samples Collected at 24-36 hour Sampling Interval at Site 1 W

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
5	005	A	1.0	0	ND
13	013	B	1.0	0	ND
29	029	D	1.0	0	ND
45	045	F	1.0	0	ND
53	053	G	1.0	0	ND
61	061	H	1.0	0	ND
69	069	I	0.2	2090	<LOQ
77	077	I	0.4	1818	<LOQ
85	085	I	0.6	0	ND
93	093	I	0.8	687	ND
101	101	I	1.0	0	ND
109	109	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 8 Dicamba Residues in OVS Tube Samples Collected at 36-48 hour Sampling Interval at Site 1 W

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
6	006	A	1.0	0	ND
14	014	B	1.0	0	ND
22	022	C	1.0	0	ND
30	030	D	1.0	0	ND
38	038	E	1.0	0	ND
46	046	F	1.0	0	ND
54	054	G	1.0	0	ND
62	062	H	1.0	0	ND
70	070	I	0.2	0	ND
78	078	I	0.4	0	ND
86	086	I	0.6	0	ND
94	094	I	0.8	0	ND
102	102	I	1.0	0	ND
110	110	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 9 Dicamba Residues in OVS Tube Samples Collected at 0-3 hour Sampling Interval at Site 2 E

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
118	118	A	1.0	1220	<LOQ
126	126	B	1.0	4548	<LOQ
134	134	C	1.0	0	ND
142	142	D	1.0	0	ND
150	150	E	1.0	0	ND
158	158	F	1.0	0	ND
166	166	G	1.0	0	ND
174	174	H	1.0	0	ND
182	182	I	0.2	15473	0.025
190	190	I	0.4	1438	<LOQ
198	198	I	0.6	2767	<LOQ
206	206	I	0.8	5821	<LOQ
214	214	I	1.0	7740	0.012
222	222	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 10 Dicamba Residues in OVS Tube Samples Collected at 3-6 hour Sampling Interval at Site 2 E

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
119	119	A	1.0	4480	< LOQ
127	127	B	1.0	0	ND
135	135	C	1.0	0	ND
143	143	D	1.0	0	ND
151	151	E	1.0	0	ND
159	159	F	1.0	0	ND
167	167	G	1.0	0	ND
175	175	H	1.0	3065	< LOQ
183	183	I	0.2	14654	0.021
191	191	I	0.4	1634	< LOQ
199	199	I	0.6	8961	0.013
207	207	I	0.8	4740	< LOQ
215	215	I	1.0	8374	0.012
223	223	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 11 Dicamba Residues in OVS Tube Samples Collected at 6-12 hour Sampling Interval at Site 2 E

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
120	120	A	1.0	10554	0.015
128	128	B	1.0	7208	< LOQ
136	136	C	1.0	0	ND
144	144	D	1.0	0	ND
152	152	E	1.0	0	ND
160	160	F	1.0	0	ND
168	168	G	1.0	0	ND
176	176	H	1.0	3613	< LOQ
184	184	I	0.2	24227	0.034
192	192	I	0.4	2959	< LOQ
200	200	I	0.6	18780	0.027
208	208	I	0.8	17598	0.025
216	216	I	1.0	10687	0.015
224	224	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 12 Dicamba Residues in OVS Tube Samples Collected at 12-24 hour Sampling Interval at Site 2 E

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
121	121	A	1.0	7123	< LOQ
129	129	B	1.0	0	ND
137	137	C	1.0	2828	< LOQ
145	145	D	1.0	3016	< LOQ
153	153	E	1.0	1956	< LOQ
161	161	F	1.0	1297	< LOQ
169	169	G	1.0	0	ND
177	177	H	1.0	4143	< LOQ
185	185	I	0.2	41098	0.059
193	193	I	0.4	3911	< LOQ
201	201	I	0.6	16543	0.023
209	209	I	0.8	19740	0.028
217	217	I	1.0	14958	0.021
225	225	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 13 Dicamba Residues in OVS Tube Samples Collected at 24-36 hour Sampling Interval at Site 2 E

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
122	122	A	1.0	0	ND
130	130	B	1.0	0	ND
138	138	C	1.0	0	ND
146	146	D	1.0	0	ND
162	162	F	1.0	0	ND
170	170	G	1.0	0	ND
178	178	H	1.0	0	ND
186	186	I	1.0	2492	< LOQ
194	194	I	0.8	1140	< LOQ
202	202	I	0.6	2201	< LOQ
210	210	I	0.4	0	ND
218	218	I	0.2	1253	< LOQ
226	226	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 14 Dicamba Residues in OVS Tube Samples Collected at 36-48 hour Sampling Interval at Site 2 E

Sample Number	ADPEN Lab Code (160413005-)	Sample Description		Peak Area	Reported µg/sample [1]
		Location	Height (m)		
123	123	A	1.0	0	ND
131	131	B	1.0	0	ND
139	139	C	1.0	0	ND
147	147	D	1.0	0	ND
155	155	E	1.0	0	ND
163	163	F	1.0	0	ND
171	171	G	1.0	0	ND
179	179	H	1.0	0	ND
187	187	I	0.2	0	ND
195	195	I	0.4	0	ND
203	203	I	0.6	0	ND
211	211	I	0.8	0	ND
219	219	I	1.0	0	ND
227	227	UTC	1.0	0	ND

[1] LOQ = 0.01 µg/sample; LOD = 0.001 µg/sample

Table 15 Dicamba Residue in OVS Tube Samples (Transit Stability)

Sample Number	ADPEN Lab Code [1] (160413005-)	Site	Peak Area	Reported µg/sample	Amount Added (µg)	Recovery (%)
113	113	1 W	122455	0.278	0.30	92
114	114	1 W	114823	0.260		87
115	115	1 W	113873	0.258		86
116	116	1 W	115053	0.261		87
117	117	1 W	118238	0.268		89
230	230	2 E	114277	0.259	0.30	86
231	231	2 E	109765	0.249		83
232	232	2 E	115264	0.261		87
233	233	2 E	107568	0.244		81
234	234	2 E	115010	0.261		87

[1] ADPEN Lab Code with the letter “A” indicates sample was reinjected.

Table 16 Dicamba Residue Results on Composite Petri Dish Samples (Application Verification)

Sample Number	ADPEN Lab Code (160413005-)	Site	Peak Area	Reported µg/sample [1]
235	235	Site 1 W	15288	20013
236	236	Site 2 E	17391	22825

Total µg expected per AV sample = Theoretical residue (µg/cm^2) × Surface Area of petri dish (cm^2)

where,

Application rate = 1.0 lb a.i./ac or 453592 mg a.i /ac
The radius of the petri dish = 75.050 mm

Conversion factors:
1 lb = 453592 mg
1 mm = 0.0393 inches
12 inches = 1 foot
1 acre = 43560 ft^2
1 pound = 453592 mg

Area of one petri dish (mm) = π × radius^2 = 3.14 × (0.246 ft)^2 = 0.19012 ft^2

Fraction petri dish per acre = 0.19012 ft^2 ÷ 453560 ft^2 = 4.37E-06 ac

Theoretical amount of a.i. per fraction of petri dish:

4.37E-06 ac x 453592 mg a.i /ac =
1.9833 mg a.i./sample or 1983.3 µg a.i./petri sample

[1] LOQ = 0.01 µg/sample; LOD = 0.005 µg/sample

Table 17 LC-MS/MS Instrumentation and Conditions

HPLC Conditions

LC (inlet):	Agilent 1290			
Column:	Kinetix Byphenyl 1.7µm, 2.1 x 150 mm, cat. No. 00F-4628-AN			
Column Temperature:	50 °C			
Injection Volume:	40 µL			
Mobile Phase A:	1% formic acid in HPLC water			
Mobile Phase B:	1% formic acid in acetonitrile			
Gradient:	Time (min)	Flow (µL/min)	A (%)	B (%)
	0.00	600	98	2
	1.50	600	98	2
	2.00	600	95	5
	2.65	600	95	5
	3.50	600	94	6
	5.65	600	90	10
	10.0	600	55	45
	10.1	600	0	100
	11.1	600	0	100
	11.2	600	980	2
	12.2	600	98	2

MS/MS Conditions

MS/MS:	ABSciex 6500 Triple Quad MS/MS
Polarity:	Negative
Curtain gas (CUR):	10.00
Temperature (TEM):	320 °C
Collision gas setting (CAD):	7.00
GS1:	50.00
GS2:	35.00
Entrance potential (EP):	−10.00
Scan type:	MRM
IonSpray Voltage (IS):	-4500.00
MRM Conditions	**Dicamba**
Q1 m/z:	218.9
Q3 m/z:	175.0
Expected Retention (min.):	9.29
Declustering potential (DP):	−25.00
Collision energy (CE):	−10.00
Collision cell exit potential (CXP):	−12.00

APPENDICES SECTION

APPENDIX A:
CERTIFICATES OF ANALYSIS

P5529 6-18-15

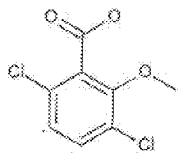
BASF
The Chemical Company

BASF SE
APD/ES - Global Structure Analytics
BASF SE - Crop Protection - Speyerer Strasse 2, D-67117 Limburgerhof, Germany

Certificate of Analysis

BAS Code :	BAS 183 H	Common Name :	Dicamba
Reg.No. :	196093	Batch No. :	L84-204
Substance Type :	PAI	Date of Production :	July 10, 2012
Date of Initial Analysis :	August 21, 2012	Study Code :	ASAP12_186

Purity : 99,9 % (tolerance ± 1.0%)



CL-No.	58693
CAS No.	1918-00-9
Core Project	183H
Internal (Metabolite) Code	
Molecular Formula	$C_8H_6Cl_2O_3$
Molecular Weight	221,0

IUPAC-Name :	3,6-dichloro-2-methoxy-benzoic acid
Determination by :	HPLC, Quant. 1H-NMR
Homogeneity :	given

Additional Information

Storage Advice :	keep at room temperature (typically +25°C) or cooler
Expiration Date :	September 01, 2017

Recipients should ensure that the label information on the corresponding substance container(s) correspond(s) with that on this Certificate of Analysis

Study Director : Baumann, Ernst, Dr. Study Completion Date : August 27, 2012

Issued on : August 28, 2012 Issued by : E. Sippel

This document has been computer generated and is based on the GLP-studies cited above
Released August 27, 2012 by Baumann, Ernst, Dr.

APPENDIX B:
CRITICAL SAMPLE HANDLING DATES

Table B.1 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 1W

Sampling Interval: 0 – 3 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
1	001	A, 1.0 m	16041501	04/11/16	04/20/16	04/22/16	9
9	009	B, 1.0 m	16041501	04/11/16	04/20/16	04/22/16	9
17	017	C, 1.0 m	16041501	04/11/16	04/20/16	04/22/16	9
25	025	D, 1.0 m	16041501	04/11/16	04/20/16	04/22/16	9
33	033	E, 1.0 m	16041501	04/11/16	04/20/16	04/22/16	9
41	041	F, 1.0 m	16041501	04/11/16	04/20/16	04/22/16	9
49	049	G, 1.0 m	16041501	04/11/16	04/20/16	04/22/16	9
57	057	H, 1.0 m	16041501	04/11/16	04/20/16	04/26/16	9
65	065	I, 0.2 m	16041501	04/11/16	04/20/16	04/26/16	9
73	073	I, 0.4 m	16041501	04/11/16	04/20/16	04/26/16	9
81	081	I, 0.6 m	16041501	04/11/16	04/20/16	04/26/16	9
89	089	I, 0.8 m	16041501	04/11/16	04/20/16	04/26/16	9
97	097	I, 1.0 m	16041501	04/11/16	04/20/16	04/26/16	9
105	105	UTC, 1.0 m	16041501	04/11/16	04/20/16	04/26/16	9

[1] Storage interval is the number of days from collection to extraction.

Table B.1 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 1W (continued)

Sampling Interval: 3 – 6 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
2	002	A, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
10	010	B, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
18	018	C, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
26	026	D, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
34	034	E, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
42	042	F, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
50	050	G, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
58	058	H, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
66	066	I, 0.2 m	16041801	04/11/16	04/22/16	04/26/16	11
74	074	I, 0.4 m	16041801	04/11/16	04/22/16	04/26/16	11
82	082	I, 0.6 m	16041801	04/11/16	04/22/16	04/26/16	11
90	090	I, 0.8 m	16041801	04/11/16	04/22/16	04/26/16	11
98	098	I, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11
106	106	UTC, 1.0 m	16041801	04/11/16	04/22/16	04/26/16	11

[1] Storage interval is the number of days from collection to extraction.

Table B.1 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 1W (continued)

Sampling Interval: 6 – 12 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
3	003	A, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
11	011	B, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
19	019	C, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
27	027	D, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
35	035	E, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
43	043	F, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
51	051	G, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
59	059	H, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
67	067	I, 0.2 m	16041802	04/11/16	04/25/16	04/28/16	14
75	075	I, 0.4 m	16041802	04/11/16	04/25/16	04/28/16	14
83	083	I, 0.6 m	16041802	04/11/16	04/25/16	04/28/16	14
91	091	I, 0.8 m	16041802	04/11/16	04/25/16	04/28/16	14
99	099	I, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14
107	107	UTC, 1.0 m	16041802	04/11/16	04/25/16	04/28/16	14

[1] Storage interval is the number of days from collection to extraction.

Table B.1 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 1W (continued)

Sampling Interval: 12 – 24 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
4	004	A, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14
12	012	B, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14
28	028	D, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14
36	036	E, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14
44	044	F, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14
52	052	G, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14
60	060	H, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14
68	068	I, 0.2 m	16041803	04/12/16	04/26/16	04/29/16	14
76	076	I, 0.4 m	16041803	04/12/16	04/26/16	04/29/16	14
84	084	I, 0.6 m	16041803	04/12/16	04/26/16	04/29/16	14
92	092	I, 0.8 m	16041803	04/12/16	04/26/16	04/29/16	14
100	100	I, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14
108	108	UTC, 1.0 m	16041803	04/12/16	04/26/16	04/29/16	14

[1] Storage interval is the number of days from collection to extraction.

Table B.1 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 1W (continued)

Sampling Interval: 24 – 36 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
5	005	A, 1.0 m	16041804	04/12/16	04/26/16	04/30/16	14
13	013	B, 1.0 m	16041804	04/12/16	04/26/16	04/30/16	14
29	029	D, 1.0 m	16041804	04/12/16	04/26/16	04/30/16	14
45	045	F, 1.0 m	16041804	04/12/16	04/26/16	04/30/16	14
53	053	G, 1.0 m	16041804	04/12/16	04/26/16	04/30/16	14
61	061	H, 1.0 m	16041804	04/12/16	04/26/16	04/30/16	14
69	069	I, 0.2 m	16041804	04/12/16	04/26/16	04/30/16	14
77	077	I, 0.4 m	16041804	04/12/16	04/26/16	04/30/16	14
85	085	I, 0.6 m	16041804	04/12/16	04/26/16	04/30/16	14
93	093	I, 0.8 m	16041804	04/12/16	04/26/16	04/30/16	14
101	101	I, 1.0 m	16041804	04/12/16	04/26/16	04/30/16	14
109	109	UTC, 1.0 m	16041804	04/12/16	04/26/16	04/30/16	14

[1] Storage interval is the number of days from collection to extraction.

Table B.1 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 1W (continued)

Sampling Interval: 36 – 48 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
6	006	A, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
14	014	B, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
22	022	C, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
30	030	D, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
38	038	E, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
46	046	F, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
54	054	G, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
62	062	H, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
70	070	I, 0.2 m	16041805	04/13/16	04/28/16	04/30/16	15
78	078	I, 0.4 m	16041805	04/13/16	04/28/16	04/30/16	15
86	086	I, 0.6 m	16041805	04/13/16	04/28/16	04/30/16	15
94	094	I, 0.8 m	16041805	04/13/16	04/28/16	04/30/16	15
102	102	I, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15
110	110	UTC, 1.0 m	16041805	04/13/16	04/28/16	04/30/16	15

[1] Storage interval is the number of days from collection to extraction.

Table B.2 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 2E

Sampling Interval: 0 – 3 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
118	118	A, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
126	126	B, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
134	134	C, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
142	142	D, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
150	150	E, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
158	158	F, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
166	166	G, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
174	174	H, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
182	182	I, 0.2 m	16041806	04/11/16	04/27/16	05/01/16	16
190	190	I, 0.4 m	16041806	04/11/16	04/27/16	05/01/16	16
198	198	I, 0.6 m	16041806	04/11/16	04/27/16	05/01/16	16
206	206	I, 0.8 m	16041806	04/11/16	04/27/16	05/01/16	16
214	214	I, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16
222	222	UTC, 1.0 m	16041806	04/11/16	04/27/16	05/01/16	16

[1] Storage interval is the number of days from collection to extraction.

Table B.2 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 2E (continued)

Sampling Interval: 3 – 6 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
119	119	A, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
127	127	B, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
135	135	C, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
143	143	D, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
151	151	E, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
159	159	F, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
167	167	G, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
175	175	H, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
183	183	I, 0.2 m	16041807	04/11/16	04/28/16	05/02/16	17
191	191	I, 0.4 m	16041807	04/11/16	04/28/16	05/02/16	17
199	199	I, 0.6 m	16041807	04/11/16	04/28/16	05/02/16	17
207	207	I, 0.8 m	16041807	04/11/16	04/28/16	05/02/16	17
215	215	I, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17
223	223	UTC, 1.0 m	16041807	04/11/16	04/28/16	05/02/16	17

[1] Storage interval is the number of days from collection to extraction.

Table B.2 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 2E (continued)

Sampling Interval: 6 – 12 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
120	120	A, 1 m	16041808	04/11/16	04/28/16	05/02/16	17
128	128	B, 1 m	16041808	04/11/16	04/28/16	05/02/16	17
136	136	C, 1 m	16041808	04/11/16	04/28/16	05/02/16	17
144	144	D, 1 m	16041808	04/11/16	04/28/16	05/02/16	17
152	152	E, 1 m	16041808	04/11/16	04/28/16	05/02/16	17
160	160	F, 1 m	16041808	04/11/16	04/28/16	05/02/16	17
168	168	G, 1 m	16041808	04/11/16	04/28/16	05/02/16	17
176	176	H, 1 m	16041808	04/11/16	04/28/16	05/02/16	17
184	184	I, 0.2 m	16041808	04/11/16	04/28/16	05/02/16	17
192	192	I, 0.4 m	16041808	04/11/16	04/28/16	05/02/16	17
200	200	I, 0.6 m	16041808	04/11/16	04/28/16	05/02/16	17
208	208	I, 0.8 m	16041808	04/11/16	04/28/16	05/02/16	17
216	216	I, 1.0 m	16041808	04/11/16	04/28/16	05/02/16	17
224	224	UTC, 1.0 m	16041808	04/11/16	04/28/16	05/02/16	17

[1] Storage interval is the number of days from collection to extraction.

Table B.2 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 2E (continued)

Sampling Interval: 12 – 24 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
121	121	A, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
129	129	B, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
137	137	C, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
145	145	D, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
153	153	E, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
161	161	F, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
169	169	G, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
177	177	H, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
185	185	I, 0.2 m	16041809	04/12/16	04/28/16	05/03/16	16
193	193	I, 0.4 m	16041809	04/12/16	04/28/16	05/03/16	16
201	201	I, 0.6 m	16041809	04/12/16	04/28/16	05/03/16	16
209	209	I, 0.8 m	16041809	04/12/16	04/28/16	05/03/16	16
217	217	I, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16
225	225	UTC, 1.0 m	16041809	04/12/16	04/28/16	05/03/16	16

[1] Storage interval is the number of days from collection to extraction.

Table B.2 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 2E (continued)

Sampling Interval: 24 – 36 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
122	122	A, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17
130	130	B, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17
138	138	C, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17
146	146	D, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17
162	162	F, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17
170	170	G, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17
178	178	H, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17
186	186	I, 0.2 m	16041810	04/12/16	04/29/16	05/03/16	17
194	194	I, 0.4 m	16041810	04/12/16	04/29/16	05/03/16	17
202	202	I, 0.6 m	16041810	04/12/16	04/29/16	05/03/16	17
210	210	I, 0.8 m	16041810	04/12/16	04/29/16	05/03/16	17
218	218	I, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17
226	226	UTC, 1.0 m	16041810	04/12/16	04/29/16	05/03/16	17

[1] Storage interval is the number of days from collection to extraction.

Table B.2 Critical Sample Handling Dates in the Analysis of OVS Tube Samples from Site 2E (continued)

Sampling Interval: 36 – 48 hours

Sample ID	ADPEN Lab Code (160413005-)	Sample Description (location and height)	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
123	123	A, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
131	131	B, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
139	139	C, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
147	147	D, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
155	155	E, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
163	163	F, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
171	171	G, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
179	179	H, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
187	187	I, 0.2 m	16041811	04/13/16	04/29/16	05/03/16	16
195	195	I, 0.4 m	16041811	04/13/16	04/29/16	05/03/16	16
203	203	I, 0.6 m	16041811	04/13/16	04/29/16	05/03/16	16
211	211	I, 0.8 m	16041811	04/13/16	04/29/16	05/03/16	16
219	219	I, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16
227	227	UTC, 1.0 m	16041811	04/13/16	04/29/16	05/03/16	16

[1] Storage interval is the number of days from collection to extraction.

Table B.3 Critical Sample Handling Dates in the Analysis of Petri Dish Samples

Sample ID	ADPEN Lab Code (160413005-)	Site	Work Order Number (WO-)	Collection Date	Extraction Date	Analysis Date	Longest Storage Interval[1]
235	235	1W	16050401	04/11/16	05/05/16	05/06/16	34
236	236	2E	16050401	04/11/16	05/05/16	05/06/16	34

[1] Storage interval is the number of days from collection to extraction.

APPENDIX C:
FIGURES

Figure C.1 Flow Diagram of the Analytical Method ADPEN M1407 (OVS Tubes)

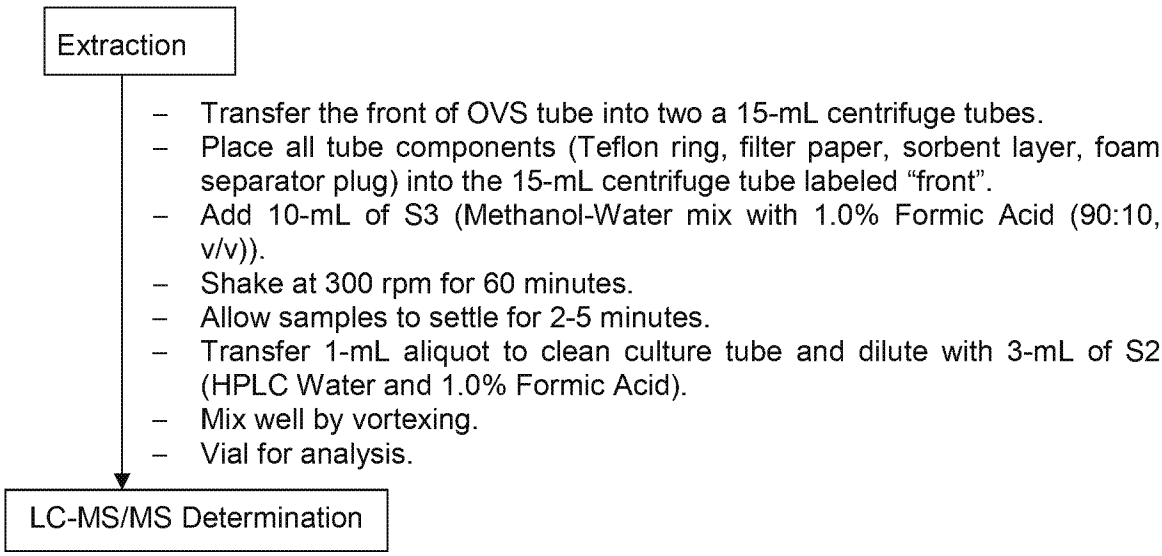


Figure C.2 Flow Diagram of the Analytical Method Meth-226 (Petri Dish)

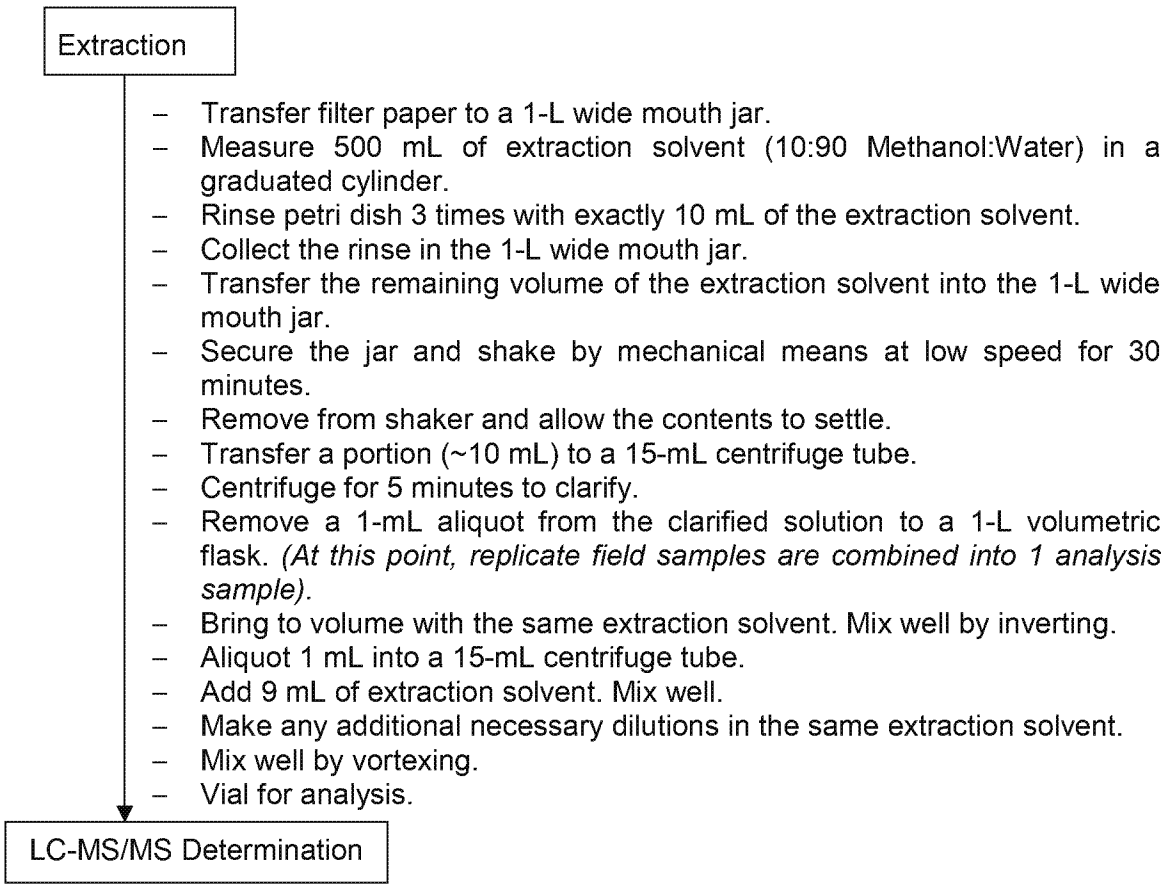
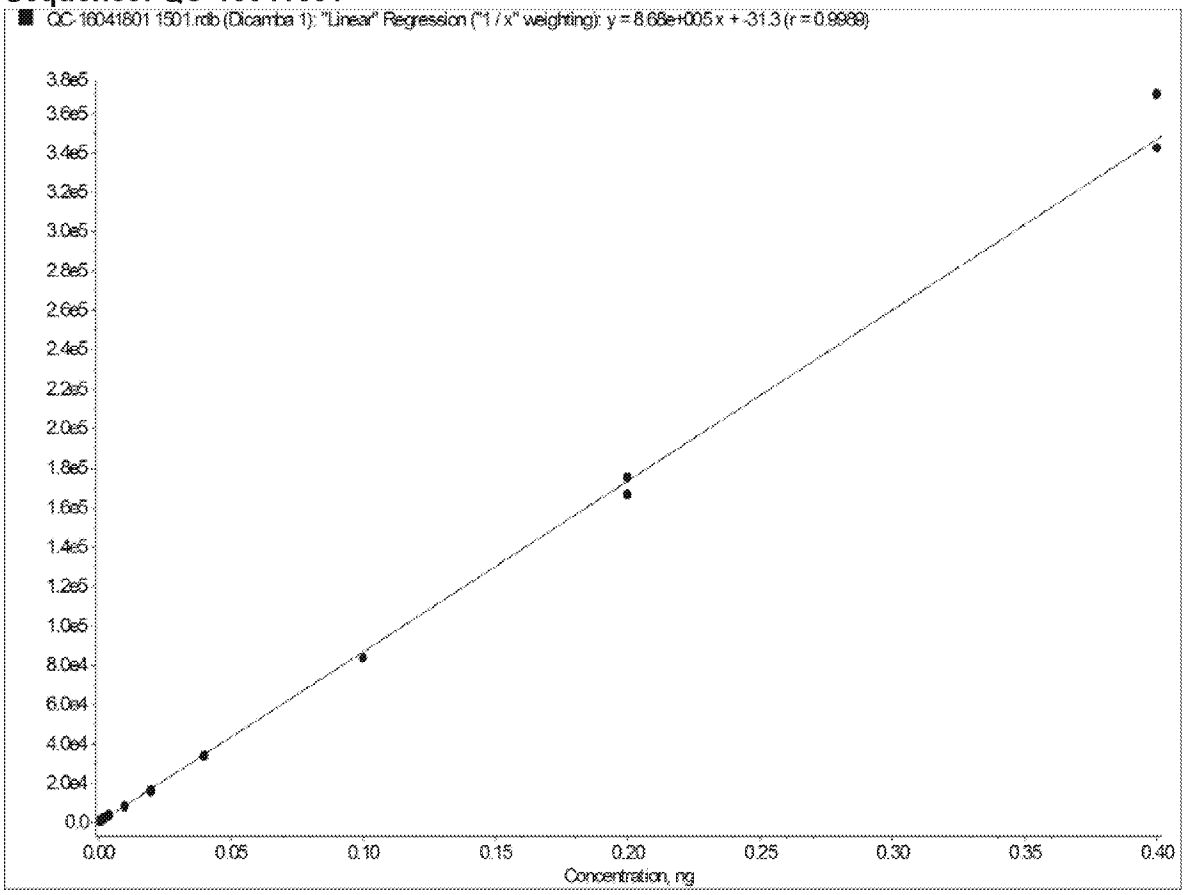


Figure C.3 Typical Standard Calibration Curve for Dicamba

Sequence: QC-16041801



Concentration (ng)	Peak Area
0.40000	342460
0.40000	369446
0.20000	166353
0.20000	175051
0.10000	83327
0.10000	83336
0.04000	33623
0.04000	33517
0.02000	15868

Concentration (ng)	Peak Area
0.02000	16331
0.01000	8424
0.01000	8014
0.00400	2984
0.00400	3485
0.00200	1729
0.00200	2232
0.00100	1083
0.00100	732

Figure C.4 Typical Standard Chromatograms of Dicamba

Sequence: QC-16041801

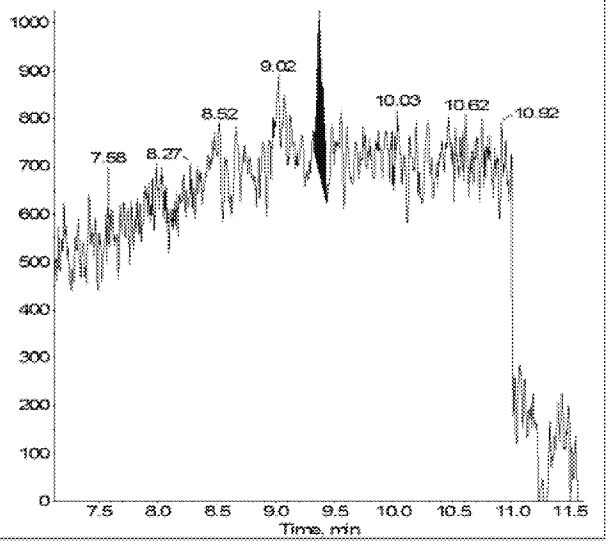
Concentration (ng): 0.0010

Sample Name: "Cal9 - 0.025 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-10" Annotation: ""

```
Sample Index:          2
Sample Type:       Standard
Concentration:     0.00100        ng
Calculated Conc:   0.00128        ng
Acq. Date:         4/26/2016
Acq. Time:         10:25:51 AM

Modified:              Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:        80
Base. Sub. Window:     1.00    min
Peak-Split. Factor:     2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:         3        points
RT Window:           10.0     sec
Expected RT:          9.37    min
Use Relative RT:      No

Int. Type:         Base To Base
Retention Time:       9.37    min
Area:              1083    counts
Height:          3.41e+002  cps
Start Time:           9.33    min
End Time:             9.43    min
```



Concentration (ng): 0.0020

Sample Name: "Cal8 - 0.05 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-9" Annotation: ""

```
Sample Index:          3
Sample Type:       Standard
Concentration:     0.00200        ng
Calculated Conc:   0.00203        ng
Acq. Date:         4/26/2016
Acq. Time:         10:39:31 AM

Modified:              Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:        80
Base. Sub. Window:     1.00    min
Peak-Split. Factor:     2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:         3        points
RT Window:           10.0     sec
Expected RT:          9.37    min
Use Relative RT:      No

Int. Type:          Manual
Retention Time:       9.37    min
Area:              1729    counts
Height:          6.09e+002  cps
Start Time:           9.34    min
End Time:             9.43    min
```

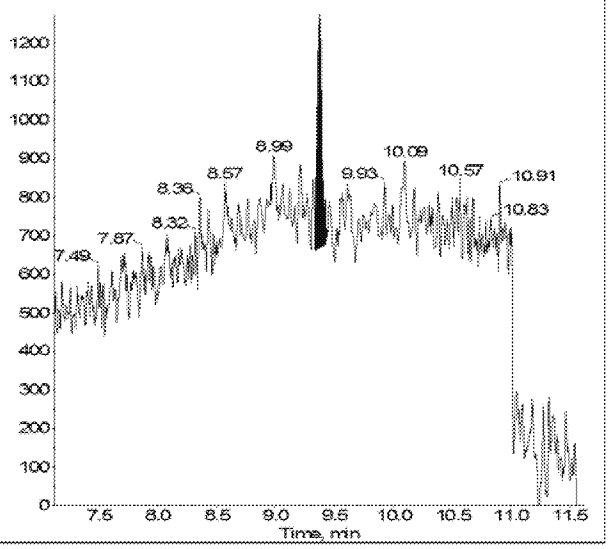


Figure C.4 Typical Standard Chromatograms of Dicamba (continued)

Sequence: QC-16041801

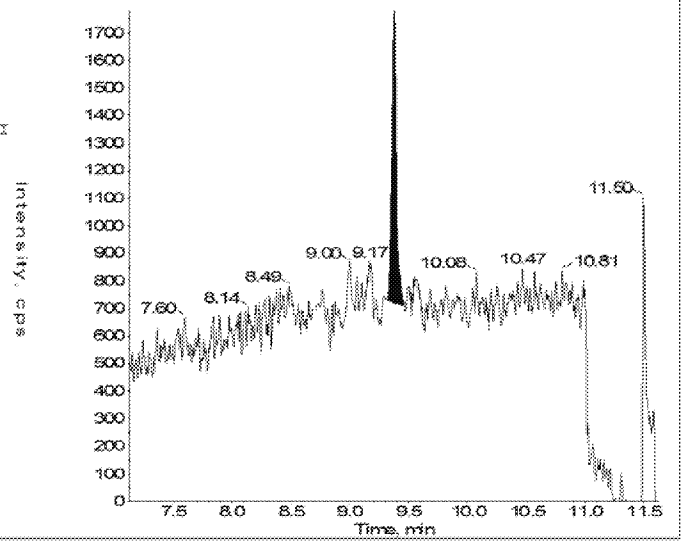
Concentration (ng): 0.0040

Sample Name: "Cal7 - 0.1 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-8" Annotation: ""

```
Sample Index:          4
Sample Type:       Standard
Concentration:     0.00400        ng
Calculated Conc:   0.00347        ng
Acq. Date:         4/26/2016
Acq. Time:         10:53:10 AM

Modified:              Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:        80
Base. Sub. Window:     1.00    min
Peak-Split. Factor:     2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:         3        points
RT Window:           10.0     sec
Expected RT:          9.38    min
Use Relative RT:      No

Int. Type:         Base To Base
Retention Time:       9.38    min
Area:              2984    counts
Height:          1.07e+003  cps
Start Time:           9.32    min
End Time:             9.46    min
```



Concentration (ng): 0.0100

Sample Name: "Cal6 - 0.25 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-7" Annotation: ""

```
Sample Index:          5
Sample Type:       Standard
Concentration:     0.01000        ng
Calculated Conc:   0.00974        ng
Acq. Date:         4/26/2016
Acq. Time:         11:06:50 AM

Modified:              Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:        80
Base. Sub. Window:     1.00    min
Peak-Split. Factor:     2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:         3        points
RT Window:           10.0     sec
Expected RT:          9.37    min
Use Relative RT:      No

Int. Type:          Valley
Retention Time:       9.37    min
Area:              8424    counts
Height:          2.96e+003  cps
Start Time:           9.30    min
End Time:             9.45    min
```

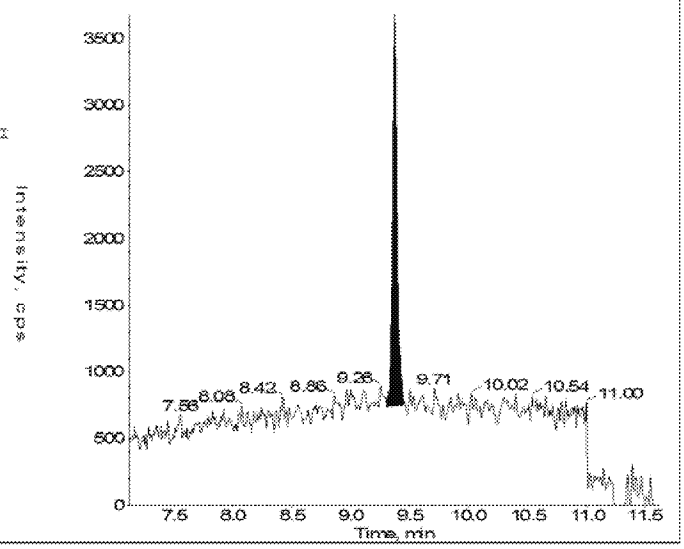


Figure C.4 Typical Standard Chromatograms of Dicamba (continued)

Sequence: QC-16041801

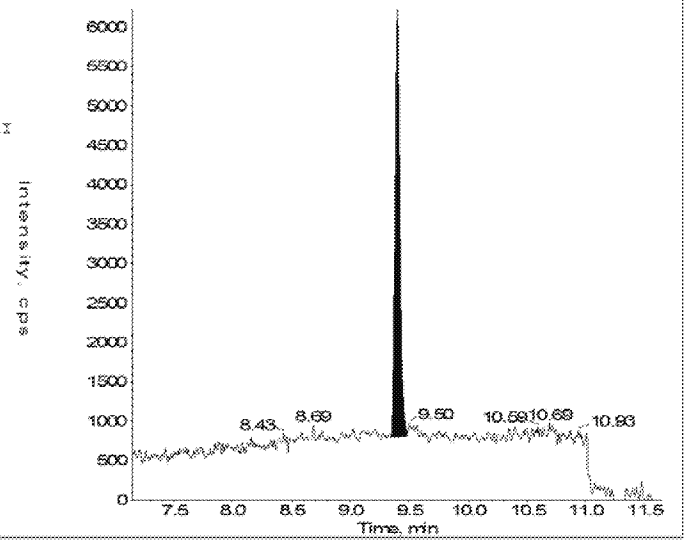
Concentration (ng): 0.0200

Sample Name: "Cal5 - 0.5 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-6" Annotation: ""

```
Sample Index:        14
Sample Type:      Standard
Concentration:    0.02000        ng
Calculated Conc:  0.01832        ng
Acq. Date:        4/26/2016
Acq. Time:        1:09:42 PM

Modified:            Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      80
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.40    min
Use Relative RT:      No

Int. Type:        Base To Base
Retention Time:       9.40    min
Area:            15868    counts
Height:          5.43e+003  cps
Start Time:           9.34    min
End Time:             9.48    min
```



Concentration (ng): 0.0400

Sample Name: "Cal4 - 1 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-5" Annotation: ""

```
Sample Index:        15
Sample Type:      Standard
Concentration:    0.04000        ng
Calculated Conc:  0.03878        ng
Acq. Date:        4/26/2016
Acq. Time:        1:23:22 PM

Modified:            Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      88
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.40    min
Use Relative RT:      No

Int. Type:        Base To Base
Retention Time:       9.40    min
Area:            33623    counts
Height:          1.16e+004  cps
Start Time:           9.34    min
End Time:             9.54    min
```

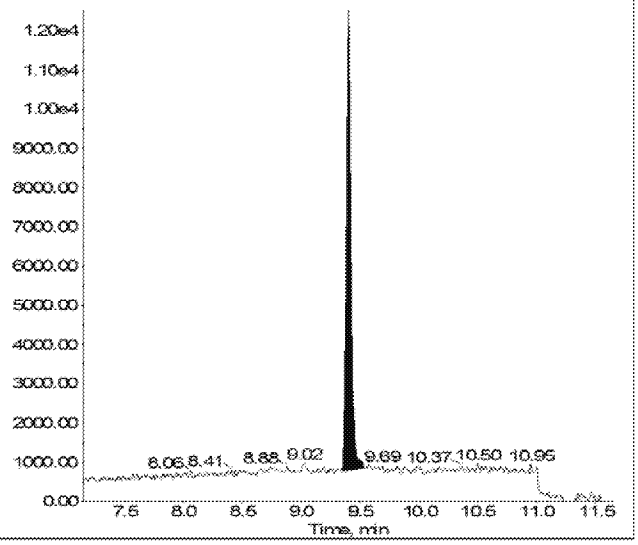


Figure C.4 Typical Standard Chromatograms of Dicamba (continued)

Sequence: QC-16041801

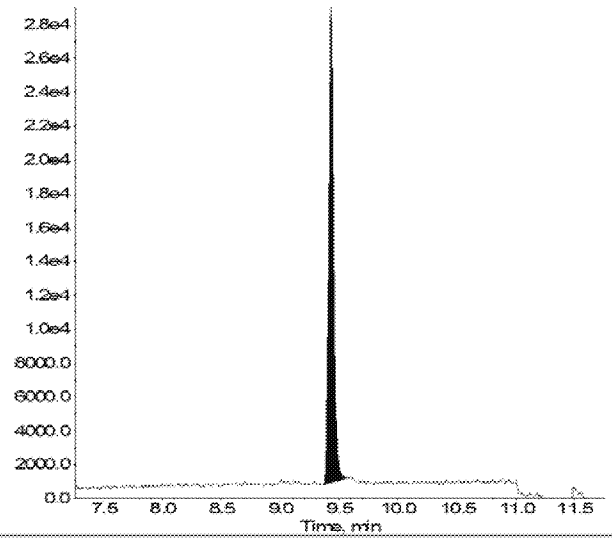
Concentration (ng): 0.1000

Sample Name: "Cal3 - 2.5 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-4" Annotation: ""

```
Sample Index:        25
Sample Type:      Standard
Concentration:    0.10000        ng
Calculated Conc:  0.09606        ng
Acq. Date:        4/26/2016
Acq. Time:        3:39:58 PM

Modified:            Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      98
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.51    min
Use Relative RT:      No

Int. Type:        Base To Base
Retention Time:       9.43    min
Area:            83327    counts
Height:          2.82e+004   cps
Start Time:           9.37    min
End Time:             9.57    min
```



Concentration (ng): 0.2000

Sample Name: "Cal2 - 5 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-3" Annotation: ""

```
Sample Index:        35
Sample Type:      Standard
Concentration:    0.20000        ng
Calculated Conc:  0.19173        ng
Acq. Date:        4/26/2016
Acq. Time:        6:05:03 PM

Modified:            Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      90
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.51    min
Use Relative RT:      No

Int. Type:        Base To Base
Retention Time:       9.42    min
Area:           166353    counts
Height:          5.59e+004   cps
Start Time:           9.35    min
End Time:             9.62    min
```

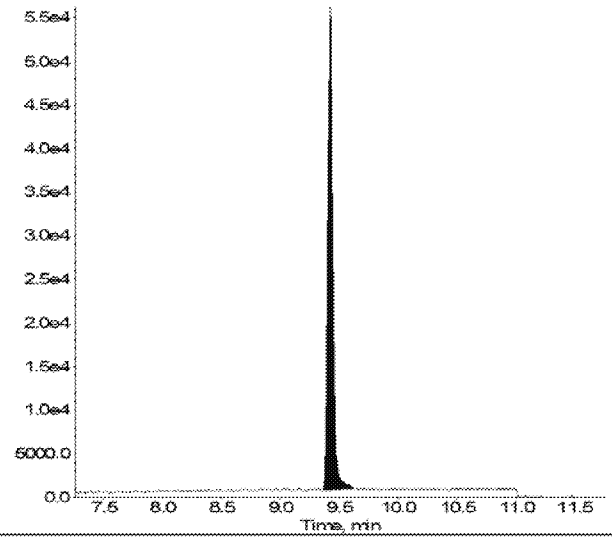


Figure C.4 Typical Standard Chromatograms of Dicamba (continued)

Sequence: QC-16041801

Concentration (ng): 0.4000

Sample Name: "Cal1 - 10 ng/mL" Sample ID: "Standard" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; W12779-2" Annotation: ""

```
Sample Index:        44
Sample Type:       Standard
Concentration:    0.40000        ng
Calculated Conc:  0.39467        ng
Acq. Date:        4/26/2016
Acq. Time:        8:08:00 PM

Modified:             Yes
Proc. Algorithm: Specify Parameters - MQ III
Noise Percentage:       90
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.51    min
Use Relative RT:      No

Int. Type:        Base To Base
Retention Time:       9.45    min
Area:            342460    counts
Height:          1.10e+005  cps
Start Time:           9.39    min
End Time:             9.77    min
```

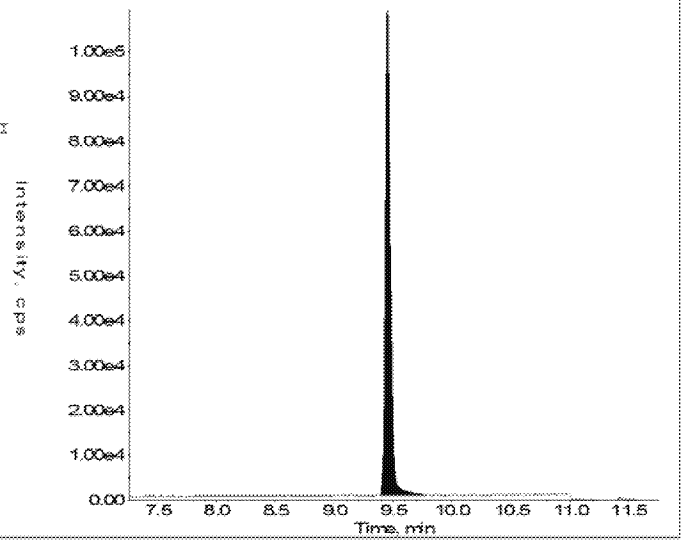
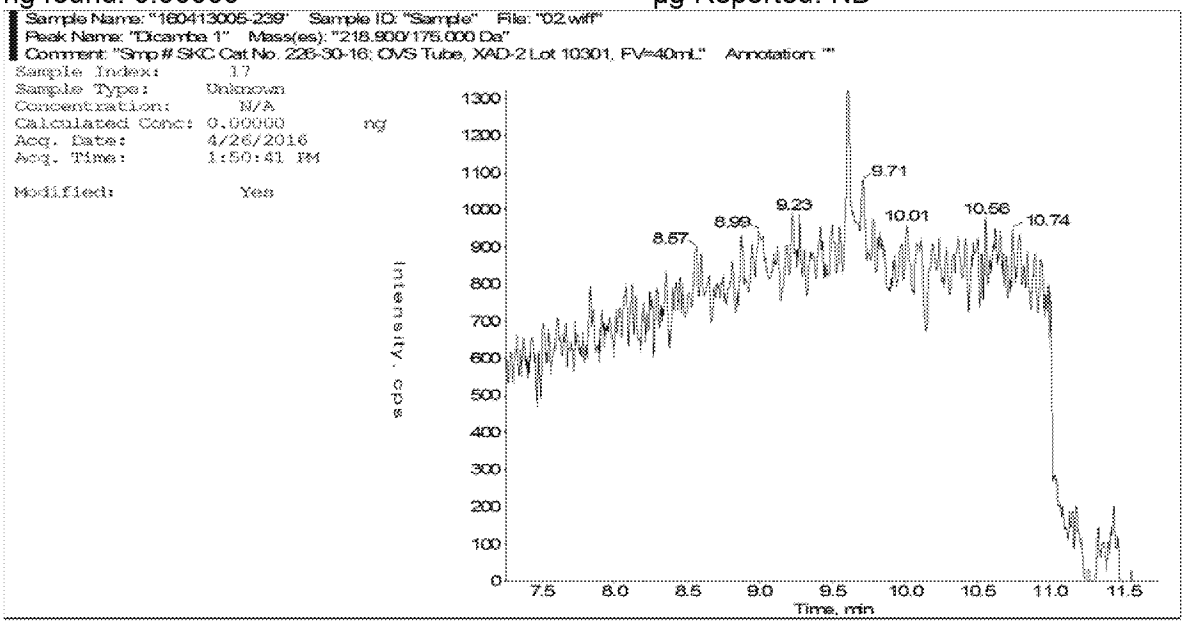


Figure C.5 Typical Chromatograms of Untreated OVS Tube Samples

Sequence: QC-16041801

Sample Lab Code: 160413005-239
ng found: 0.00000 µg Reported: ND



Sequence: QC-16041501

Sample Lab Code: 160413005-238
ng found: 0.00000 µg Reported: ND

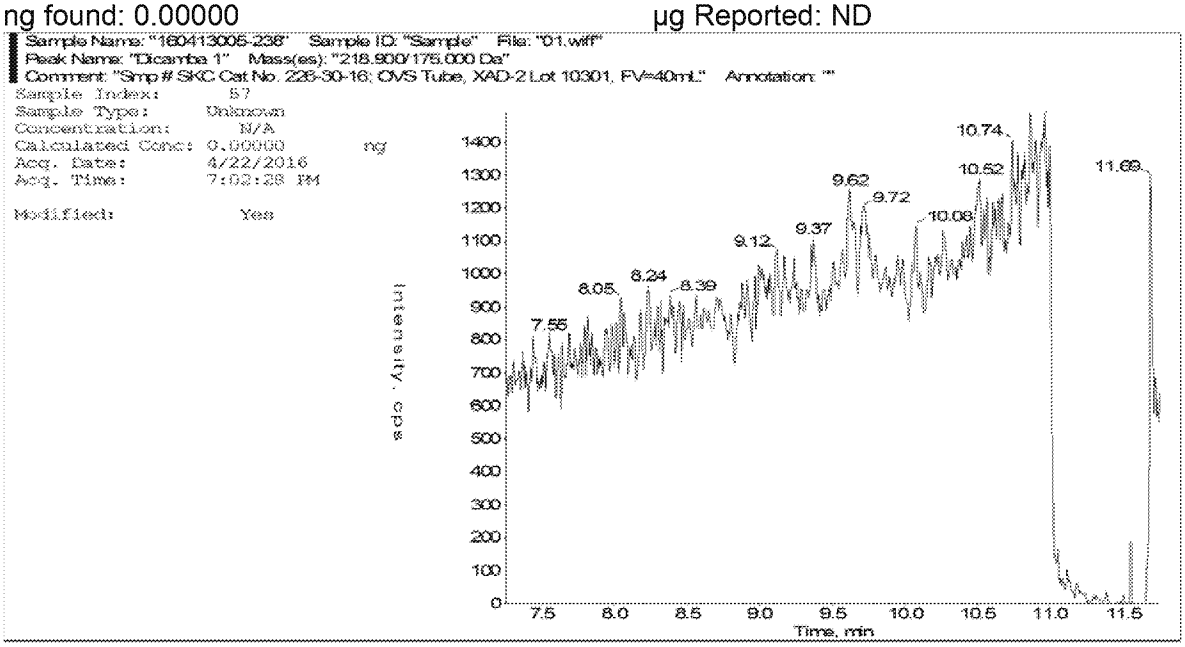
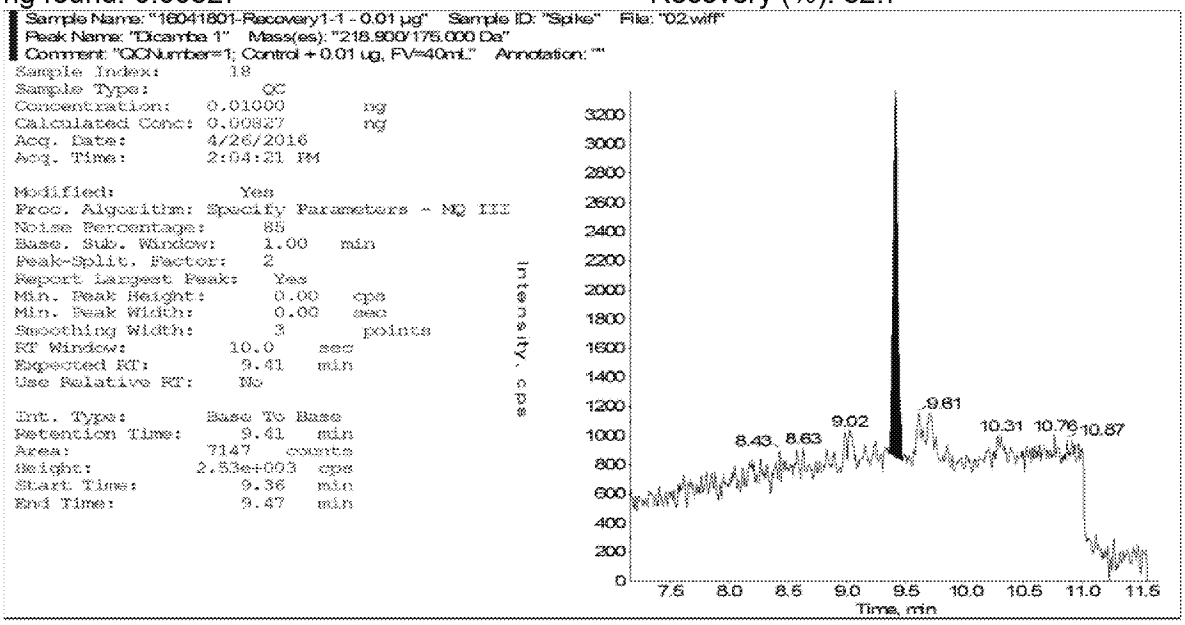


Figure C.6 Typical Chromatograms of Untreated OVS Tube Samples Fortified with Dicamba at the LOQ (0.01 µg)

Sequence: QC-16041801

Sample Lab Code: 16041801-Recovery1-1
ng found: 0.00827 Recovery (%): 82.7



Sequence: QC-16041501

Sample Lab Code: 16041501-Recovery1-1
ng found: 0.00831 Recovery (%): 83.1

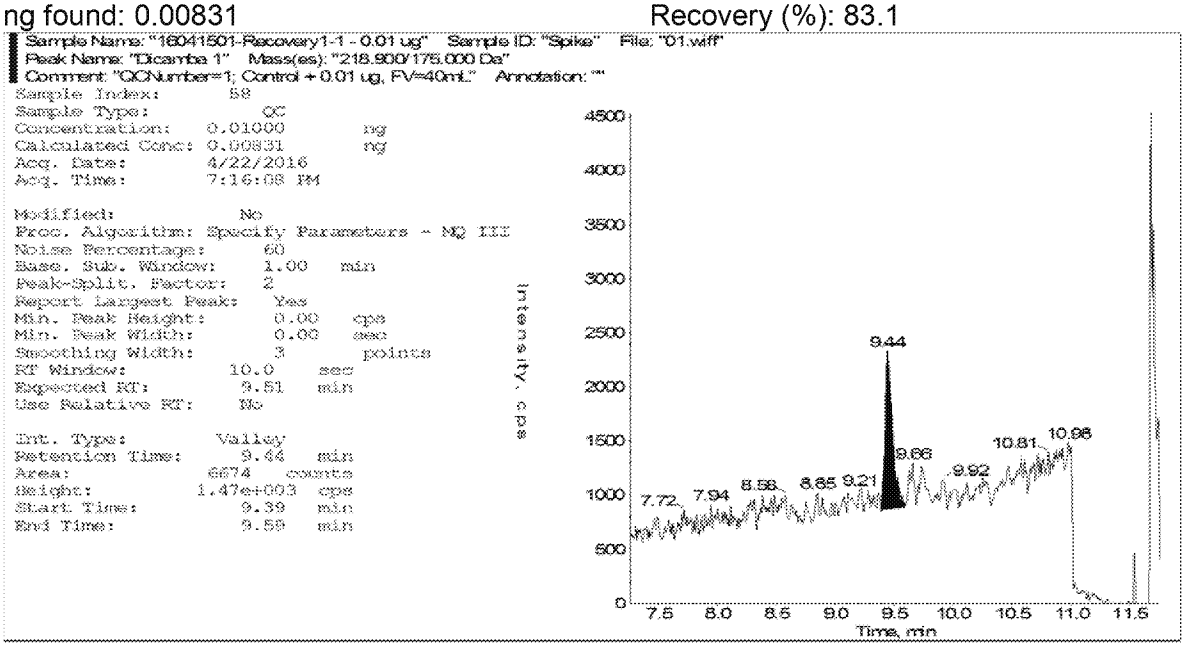


Figure C.7 Typical Chromatograms of Untreated OVS Tube Samples Fortified with Dicamba at 10xLOQ (0.1 µg)

Sequence: QC-16041801

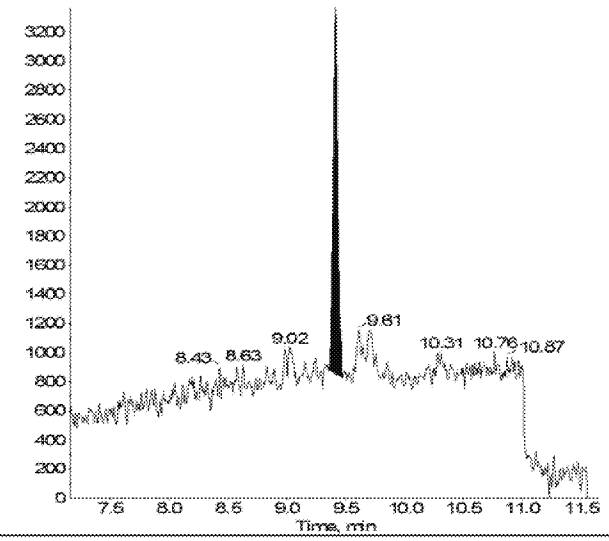
Sample Lab Code: 16041801-Recovery2-1
ng found: 0.08457 Recovery (%): 84.6

Sample Name: "16041801-Recovery1-1 - 0.01 µg" Sample ID: "Spike" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; Control + 0.01 ug, FV=40mL" Annotation: ""

```
Sample Index:        18
Sample Type:         QC
Concentration:    0.01000      ng
Calculated Conc:  0.00847      ng
Acq. Date:        4/26/2016
Acq. Time:        2:04:31 PM

Modified:            Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:     65
Base. Sub. Window:    1.00   min
Peak-Split. Factor:   2
Report Largest Peak:   Yes
Min. Peak Height:      0.00   cps
Min. Peak Width:       0.00   sec
Smoothing Width:       3      points
RT Window:         10.0    sec
Expected RT:        9.41   min
Use Relative RT:    No

Int. Type:        Base To Base
Retention Time:     9.41   min
Area:             7147   counts
Height:         2.53e+003  cps
Start Time:         9.36   min
End Time:           9.47   min
```



Sequence: QC-16041501

Sample Lab Code: 16041501-Recovery2-1
ng found: 0.07667 Recovery (%): 76.7

Sample Name: "16041501-Recovery2-1 - 0.1 µg" Sample ID: "Spike" File: "01.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; Control + 0.1 ug, FV=40mL" Annotation: ""

```
Sample Index:        59
Sample Type:         QC
Concentration:    0.10000      ng
Calculated Conc:  0.07667      ng
Acq. Date:        4/22/2016
Acq. Time:        7:29:47 PM

Modified:            Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:     65
Base. Sub. Window:    1.00   min
Peak-Split. Factor:   3
Report Largest Peak:   Yes
Min. Peak Height:      0.00   cps
Min. Peak Width:       0.00   sec
Smoothing Width:       3      points
RT Window:         10.0    sec
Expected RT:        9.51   min
Use Relative RT:    No

Int. Type:        Base To Base
Retention Time:     9.43   min
Area:            58939   counts
Height:         1.37e+004  cps
Start Time:         9.38   min
End Time:           9.70   min
```

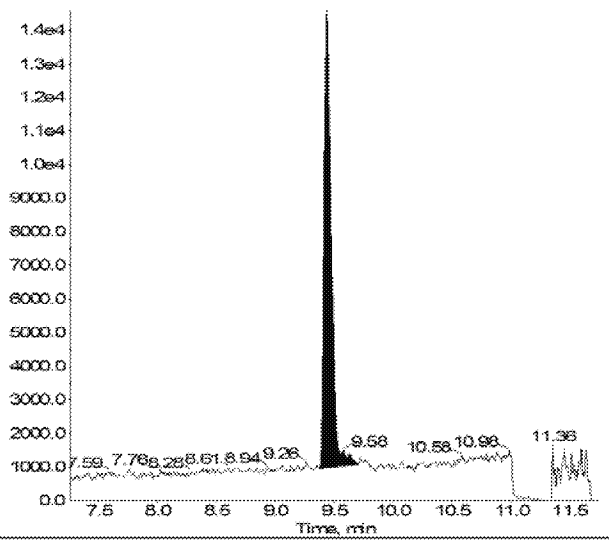


Figure C.8 Typical Chromatograms of OVS tube Samples Treated with Dicamba

Sequence: QC-16041801

Sample Lab Code: 160413005-066
Sample Description: I, 0.2m, 3-6 hr
ng found: 0.03741

Sample Number: 66

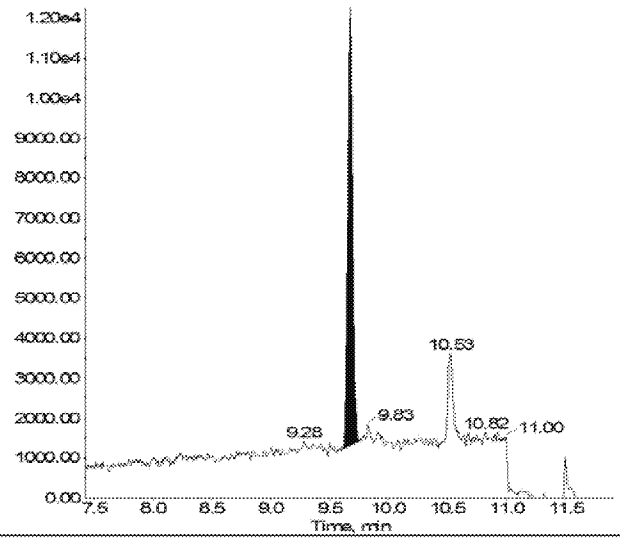
Reported µg: 0.037

Sample Name: "160413005-066" Sample ID: "Sample" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "Smp # 66; Site W/ I, 0.2m 3-6 hr, FV=40mL" Annotation: ""

```
Sample Index:        58
Sample Type:       Unknown
Concentration:       N/A
Calculated Conc:  0.03741        ng
Acq. Date:         4/26/2016
Acq. Time:         11:18:15 PM

Modified:             Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:       90
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.68    min
Use Relative RT:      No

Int. Type:         Base To Base
Retention Time:       9.60    min
Area:             32434    counts
Height:          1.10e+004   cps
Start Time:           9.61    min
End Time:             9.75    min
```



Sample Lab Code: 160413005-074
Sample Description: I, 0.4m, 3-6 hr
ng found: 0.03952

Sample Number: 74

Reported µg: 0.040

Sample Name: "160413005-074" Sample ID: "Sample" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "Smp # 74; Site W/ I, 0.4m 3-6 hr, FV=40mL" Annotation: ""

```
Sample Index:        67
Sample Type:       Unknown
Concentration:       N/A
Calculated Conc:  0.03952        ng
Acq. Date:         4/26/2016
Acq. Time:         11:05:36 PM

Modified:             Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:       80
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.51    min
Use Relative RT:      No

Int. Type:         Base To Base
Retention Time:       9.54    min
Area:             34261    counts
Height:          1.16e+004   cps
Start Time:           9.49    min
End Time:             9.66    min
```

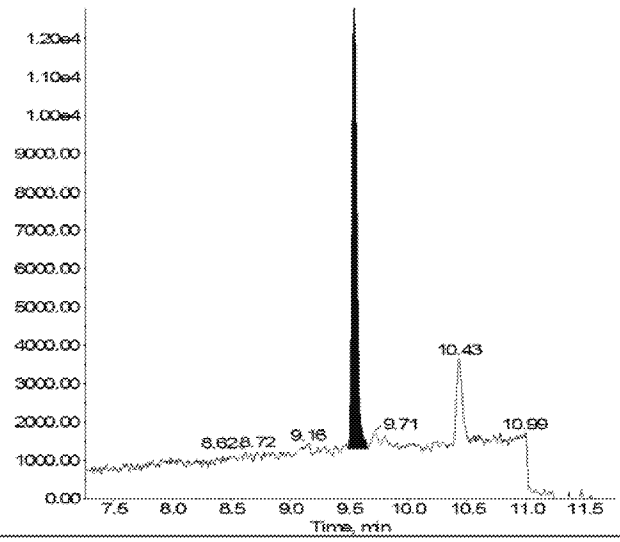


Figure C.8 Typical Chromatograms of OVS tube Samples Treated with Dicamba (continued)

Sequence: QC-16041801

Sample Lab Code: 160413005-082
Sample Description: I, 0.6m, 3-6 hr
ng found: 0.00998

Sample Number: 82

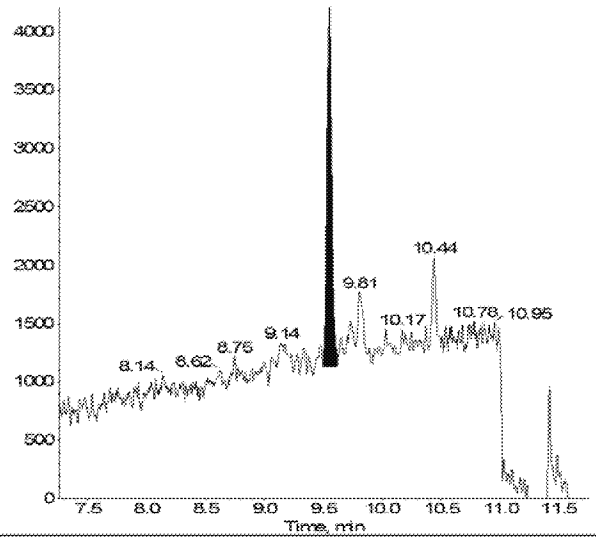
Reported µg: <LOQ

Sample Name: "160413005-082" Sample ID: "Sample" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "Smp # 82; Site W/ I, 0.6m 3-6 hr, FV=40mL" Annotation: ""

Sample Index: 66
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.00998 ng
Acq. Date: 4/26/2016
Acq. Time: 10:51:56 PM

Modified: No
Proc. Algorithm: Specify Parameters - MQ III
Noise Percentage: 60
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 10.0 sec
Expected RT: 9.51 min
Use Relative RT: No

Int. Type: Valley
Retention Time: 9.55 min
Area: 8629 counts
Height: 3.09e+003 cps
Start Time: 9.50 min
End Time: 9.62 min



Sample Lab Code: 160413005-090
Sample Description: I, 0.8 m, 3-6 hr
ng found: 0.01562

Sample Number: 90

Reported µg: 0.016

Sample Name: "160413005-090" Sample ID: "Sample" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "Smp # 90; Site W/ I, 0.6m 3-6 hr, FV=40mL" Annotation: ""

Sample Index: 86
Sample Type: Unknown
Concentration: N/A
Calculated Conc: 0.01562 ng
Acq. Date: 4/26/2016
Acq. Time: 10:38:17 PM

Modified: Yes
Proc. Algorithm: Specify Parameters - MQ III
Noise Percentage: 80
Base. Sub. Window: 1.00 min
Peak-Split. Factor: 2
Report Largest Peak: Yes
Min. Peak Height: 0.00 cps
Min. Peak Width: 0.00 sec
Smoothing Width: 3 points
RT Window: 10.0 sec
Expected RT: 9.51 min
Use Relative RT: No

Int. Type: Base To Base
Retention Time: 9.53 min
Area: 13527 counts
Height: 4.73e+003 cps
Start Time: 9.47 min
End Time: 9.61 min

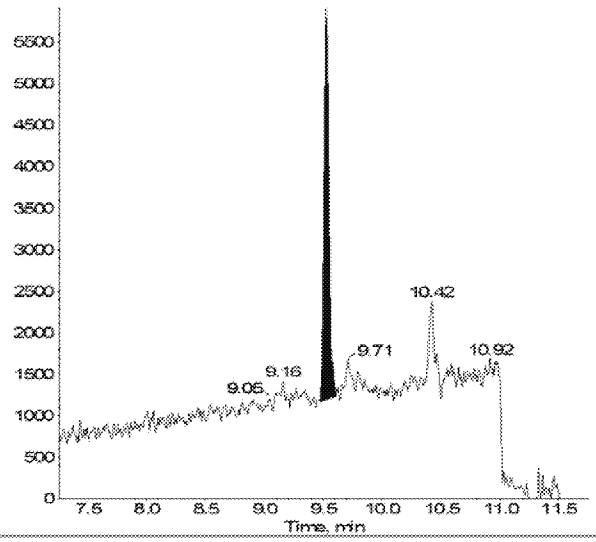


Figure C.8 Typical Chromatograms of OVS tube Samples Treated with Dicamba (continued)

Sequence: QC-16041801

Sample Lab Code: 160413005-098 Sample Number: 98
Sample Description: I, 1.0 m, 3-6 hr
ng found: 0.02854 Reported µg: 0.029

Sample Name: "160413005-098" Sample ID: "Sample" File: "02.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.500/175.000 Da"
Comment: "Smp # 98; Site W/ I, 1.0m 3-6 hr, FV=40mL" Annotation: ""

```
Sample Index:        49
Sample Type:      Unknown
Concentration:       N/A
Calculated Conc:  0.02854        ng
Acq. Date:        4/26/2016
Acq. Time:        9:16:17 PM

Modified:            Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      85
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:       0.00    cps
Min. Peak Width:        0.00    sec
Smoothing Width:        3       points
RT Window:           10.0     sec
Expected RT:          9.51    min
Use Relative RT:     No

Int. Type:        Base To Base
Retention Time:       9.48    min
Area:            24734    counts
Height:          8.55e+003  cps
Start Time:           9.42    min
End Time:             9.58    min
```

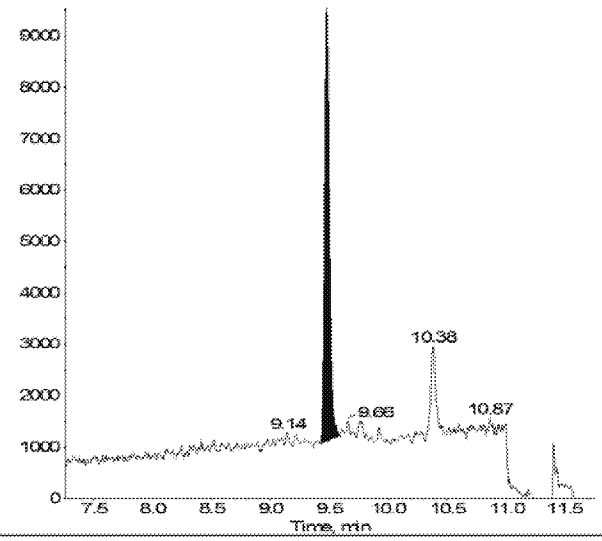


Figure C.9 Typical Chromatograms of Untreated Petri Dish Samples

Sequence: QC-16050401

Sample Lab Code: 160413005-253

ng found: 0.00000 µg Reported: ND

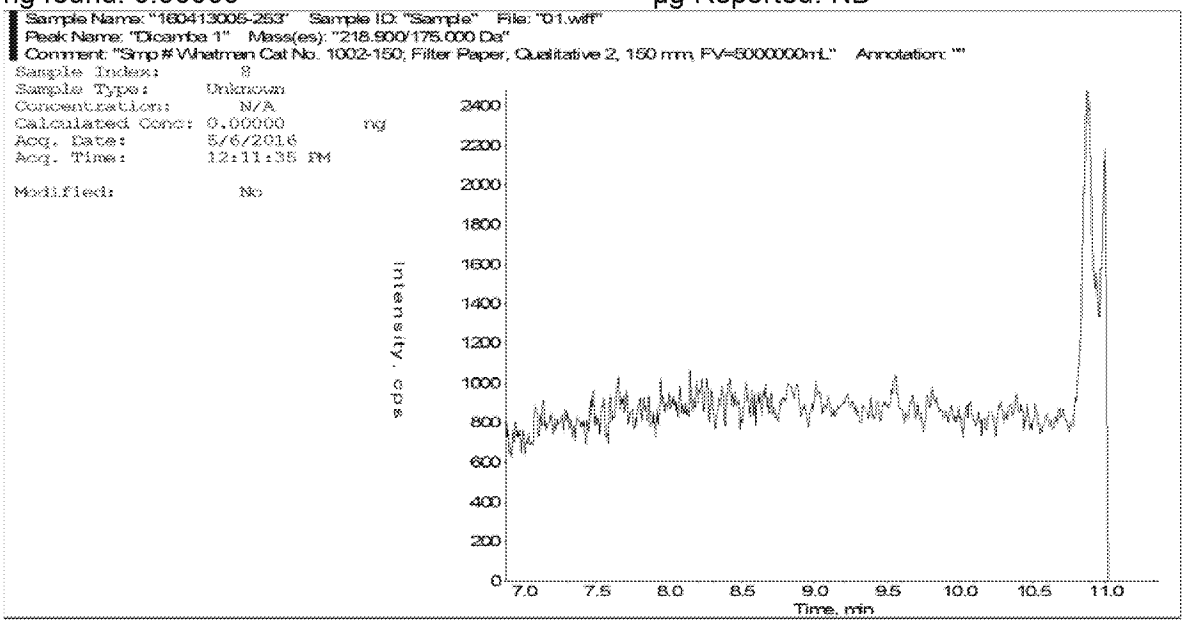


Figure C.10 Typical Chromatograms of Untreated Petri Dish Samples Fortified with 2000 µg of Dicamba

Sequence: QC-16050401

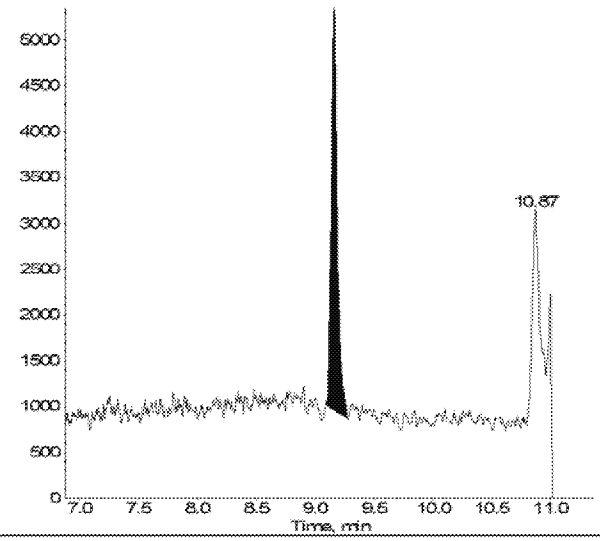
Sample Lab Code: 16050401-Recovery4-1
ng found: 0.01695 Recovery (%): 105.9

Sample Name: "16050401-Recovery4-1 - 2000 µg" Sample ID: "Spike" File: "01.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=1; Control + 2000 µg, FV=5000000mL" Annotation: ""

```
Sample Index:          9
Sample Type:          QC
Concentration:    0.01600       ng
Calculated Conc:  0.01695       ng
Acq. Date:        5/6/2016
Acq. Time:        12:25:13 PM

Modified:             No
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      80
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:     200.00    cps
Min. Peak Width:        4.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.13    min
Use Relative RT:      No

Int. Type:        Base To Base
Retention Time:       9.16    min
Area:            16168    counts
Height:          4.41e+003  cps
Start Time:           9.10    min
End Time:             9.28    min
```



Sample Lab Code: 16050401-Recovery4-2
ng found: 0.01395 Recovery (%): 87.2

Sample Name: "16050401-Recovery4-2 - 2000 µg" Sample ID: "Spike" File: "01.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "QCNumber=2; Control + 2000 µg, FV=5000000mL" Annotation: ""

```
Sample Index:         10
Sample Type:          QC
Concentration:    0.01600       ng
Calculated Conc:  0.01395       ng
Acq. Date:        5/6/2016
Acq. Time:        12:38:53 PM

Modified:             No
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      80
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:     200.00    cps
Min. Peak Width:        4.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.13    min
Use Relative RT:      No

Int. Type:        Base To Base
Retention Time:       9.14    min
Area:            13366    counts
Height:          3.63e+003  cps
Start Time:           9.09    min
End Time:             9.24    min
```

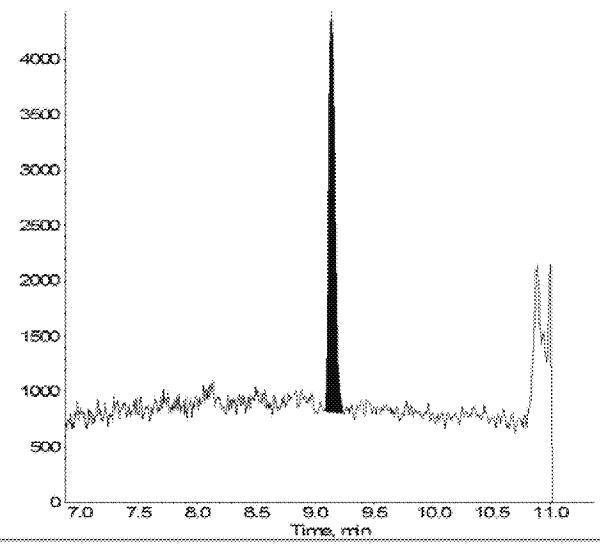


Figure C.11 Typical Chromatograms of Treated Petri Dish Samples

Sequence: QC-16050401

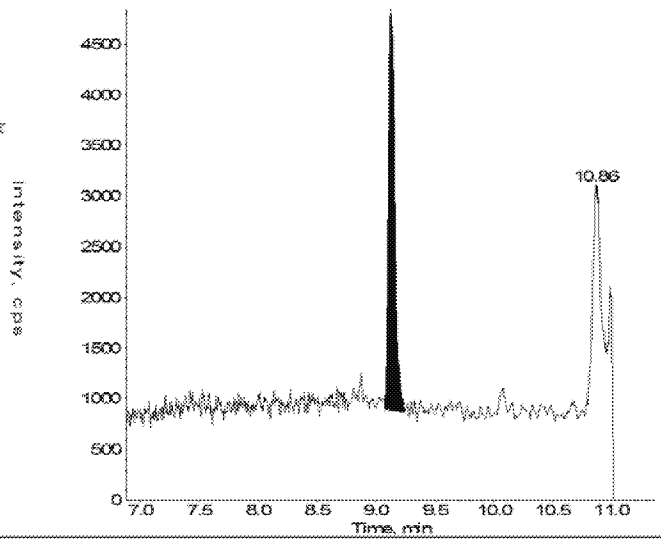
Sample Lab Code: 160413005-235
ng found: 0.01601 µg Reported: 20013

Sample Name: "160413005-235" Sample ID: "Sample" File: "01.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "Smp # 235; Site W/ Application Verification, FV=50000000mL" Annotation: ""

```
Sample Index:        11
Sample Type:       Unknown
Concentration:       N/A
Calculated Conc:  0.01601        ng
Acq. Date:        5/6/2016
Acq. Time:        12:52:32 PM

Modified:             Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      70
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:     200.00    cps
Min. Peak Width:        4.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.13    min
Use Relative RT:      No

Int. Type:          Valley
Retention Time:       9.13    min
Area:            15288    counts
Height:          3.96e+003  cps
Start Time:           9.07    min
End Time:             9.25    min
```



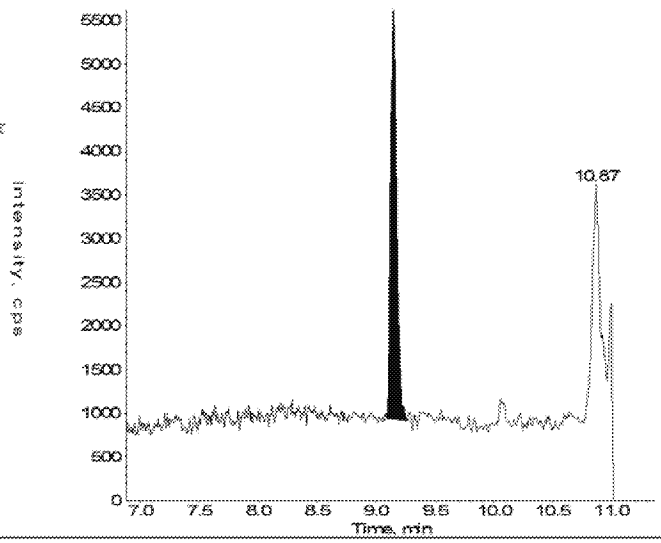
Sample Lab Code: 160413005-236
ng found: 0.01826 µg Reported: 22825

Sample Name: "160413005-236" Sample ID: "Sample" File: "01.wiff"
Peak Name: "Dicamba 1" Mass(es): "218.900/175.000 Da"
Comment: "Smp # 236; Site E / Application Verification, FV=50000000mL" Annotation: ""

```
Sample Index:        12
Sample Type:       Unknown
Concentration:       N/A
Calculated Conc:  0.01826        ng
Acq. Date:        5/6/2016
Acq. Time:        1:06:10 PM

Modified:             Yes
Proc. Algorithm:  Specify Parameters - MQ III
Noise Percentage:      60
Base. Sub. Window:     1.00    min
Peak-Split. Factor:    2
Report Largest Peak:    Yes
Min. Peak Height:     200.00    cps
Min. Peak Width:        4.00    sec
Smoothing Width:        3        points
RT Window:           10.0     sec
Expected RT:          9.13    min
Use Relative RT:      No

Int. Type:        Base To Base
Retention Time:       9.14    min
Area:            17391    counts
Height:          4.76e+003  cps
Start Time:           9.09    min
End Time:             9.37    min
```



APPENDIX D:
DETAILED ANALYTICAL RESIDUE REPORTS

ADPEN Laboratories, Inc.

Print Date: 5/5/2016

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041501
Sequence Number: QC-16041501, QC-16041801 (f)
Extraction Date: 4/20/2016
Injection Date(s): 4/22/2016, 4/26/2016 (f)
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: John Adams 5/5/16
QA Review: M. Bukowski 5/5/2016
Approved by: [illegible] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da)							Sample Number	Sample Description
				Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)		
160413005-238	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 8842
16041501-Recovery1-1	10	1	40.0	6674	0.00831	0.0083	0.0083	0.01	83.1		SKC Cat No. 226-30-16	Control + 0.01 µg
16041501-Recovery2-1	10	1	40.0	58939	0.07667	0.0767	0.0767	0.10	76.7		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		79.9			
160413005-001	10	1	40.0	2651	0.00305	0.0031				<LOQ	1	A, 1 m, 0-3 hr
160413005-009	10	1	40.0	8580	0.01080	0.0108				0.011	9	B, 1 m, 0-3 hr
160413005-017	10	1	40.0	6326	0.00785	0.0079				<LOQ	17	C, 1 m, 0-3 hr
160413005-025	10	1	40.0	0	0.00000	0.0000				ND	25	D, 1 m, 0-3 hr
160413005-033	10	1	40.0	0	0.00000	0.0000				ND	33	E, 1 m, 0-3 hr
160413005-041	10	1	40.0	0	0.00000	0.0000				ND	41	F, 1 m, 0-3 hr
160413005-049	10	1	40.0	0	0.00000	0.0000				ND	49	G, 1 m, 0-3 hr
160413005-105	10	1	40.0	0	0.00000	0.0000				ND	105	UTC, 1.0 m, 0-3 hr
160413005-057 (f)	10	1	40.0	1985	0.00232	0.0023				<LOQ	57	H, 1 m, 0-3 hr
160413005-065 (f)	10	1	40.0	33130	0.03821	0.0382				0.038	65	I, 0.2 m, 0-3 hr
160413005-073 (f)	10	1	40.0	31089	0.03586	0.0359				0.036	73	I, 0.4 m, 0-3 hr
160413005-081 (f)	10	1	40.0	25266	0.02915	0.0292				0.029	81	I, 0.6 m, 0-3 hr
160413005-089 (f)	10	1	40.0	8577	0.00992	0.0099				<LOQ	89	I, 0.8 m, 0-3 hr
160413005-097 (f)	10	1	40.0	19474	0.02248	0.0225				0.022	97	I, 1.0 m, 0-3 hr

Print Date: 5/5/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041501
Sequence Number: QC-16041501, QC-16041801 (f)
Extraction Date: 4/20/2016
Injection Date(s): 4/22/2016, 4/26/2016 (f)
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: Jake Adams 5/5/16
QA Review: M. Bachecki 5/5/16
Approved by: [signature] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041501
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (7.645e+005)x + 323.13
Corr. (r): 0.99872

ng	Area	ng	Area
0.40000	303419	0.00400	2880
0.20000	157612	0.00200	1886
0.10000	79095	0.00200	1525
0.04000	29203	0.00100	1274
0.02000	12596	0.00100	1040
0.01000	8321		
0.00400	4390		

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041801 (g)
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (8.678e+005)x - 31.275
Corr. (r): 0.998949

ng	Area	ng	Area
0.40000	342460	0.02000	16331
0.40000	369446	0.01000	8424
0.20000	166353	0.01000	8014
0.20000	175051	0.00400	2984
0.10000	83327	0.00400	3485
0.10000	83336	0.00200	1729
0.04000	33623	0.00200	2232
0.04000	33517	0.00100	1083
0.02000	15868	0.00100	732

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported
f. Samples not analyzed on QC-16041501 due to instrument leak. Samples added to QC-16041801.

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041801
Sequence Number: QC-16041801
Extraction Date: 4/22/2016
Injection Date(s): 4/26/2016
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: [illegible] 5/4/16
QA Review: M. Sadoski 5/5/2016
Approved by: [illegible] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description
160413005-239	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 8842
16041801-Recovery1-1	10	1	40.0	7147	0.00827	0.0083	0.0083	0.01	82.7		SKC Cat No. 226-30-16	Control + 0.01 µg
16041801-Recovery2-1	10	1	40.0	73357	0.08457	0.0846	0.0846	0.10	84.6		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		83.6			
160413005-002	10	1	40.0	4061	0.00472	0.0047				<LOQ	2	A, 1 m, 3-6 hr
160413005-010	10	1	40.0	12241	0.01414	0.0141				0.014	10	B, 1 m, 3-6 hr
160413005-018	10	1	40.0	4689	0.00544	0.0054				<LOQ	18	C, 1 m, 3-6 hr
160413005-026	10	1	40.0	3091	0.00360	0.0036				<LOQ	26	D, 1 m, 3-6 hr
160413005-034	10	1	40.0	0	0.00000	0.0000				ND	34	E, 1 m, 3-6 hr
160413005-042	10	1	40.0	0	0.00000	0.0000				ND	42	F, 1 m, 3-6 hr
160413005-050	10	1	40.0	0	0.00000	0.0000				ND	50	G, 1 m, 3-6 hr
160413005-058	10	1	40.0	4350	0.00505	0.0051				<LOQ	58	H, 1 m, 3-6 hr
160413005-066	10	1	40.0	32434	0.03741	0.0374				0.037	66	I, 0.2 m, 3-6 hr
160413005-074	10	1	40.0	34261	0.03952	0.0395				0.040	74	I, 0.4 m, 3-6 hr
160413005-082	10	1	40.0	8629	0.00998	0.0100				<LOQ	82	I, 0.6 m, 3-6 hr
160413005-090	10	1	40.0	13527	0.01562	0.0156				0.016	90	I, 0.8 m, 3-6 hr
160413005-098	10	1	40.0	24734	0.02854	0.0285				0.029	98	I, 1.0 m, 3-6 hr
160413005-106	10	1	40.0	0	0.00000	0.0000				ND	106	UTC, 1.0 m, 3-6 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041801
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (8.678e+005)x - 31.275
Corr. (r): 0.998949

ng	Area	ng	Area
0.40000	342460	0.02000	16331
0.40000	369446	0.01000	8424
0.20000	166353	0.01000	8014
0.20000	175051	0.00400	2984
0.10000	83327	0.00400	3485
0.10000	83336	0.00200	1729
0.04000	33623	0.00200	2232
0.04000	33517	0.00100	1083
0.02000	15868	0.00100	732

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041802
Sequence Number: QC-16041802
Extraction Date: 4/25/2016
Injection Date(s): 4/28/2016
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: Jake Adams 5/4/16
QA Review: M. Bachanski 05/05/2016
Approved by: 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description
160413005-240	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 8842
16041802-Recovery1-1	10	1	40.0	7397	0.00992	0.0099	0.0099	0.01	99.2		SKC Cat No. 226-30-16	Control + 0.01 µg
16041802-Recovery2-1	10	1	40.0	62535	0.08957	0.0896	0.0896	0.10	89.6		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		94.4			
160413005-003	10	1	40.0	8395	0.01136	0.0114				0.011	3	A, 1 m, 6-12 hr
160413005-011	10	1	40.0	22681	0.03200	0.0320				0.032	11	B, 1 m, 6-12 hr
160413005-019	10	1	40.0	0	0.00000	0.0000				ND	19	C, 1 m, 6-12 hr
160413005-027	10	1	40.0	0	0.00000	0.0000				ND	27	D, 1 m, 6-12 hr
160413005-035	10	1	40.0	0	0.00000	0.0000				ND	35	E, 1 m, 6-12 hr
160413005-043	10	1	40.0	0	0.00000	0.0000				ND	43	F, 1 m, 6-12 hr
160413005-051	10	1	40.0	0	0.00000	0.0000				ND	51	G, 1 m, 6-12 hr
160413005-059	10	1	40.0	7246	0.00970	0.0097				<LOQ	59	H, 1 m, 6-12 hr
160413005-067	10	1	40.0	46010	0.06570	0.0657				0.066	67	I, 0.2 m, 6-12 hr
160413005-075	10	1	40.0	40357	0.05753	0.0575				0.058	75	I, 0.4 m, 6-12 hr
160413005-083	10	1	40.0	37263	0.05306	0.0531				0.053	83	I, 0.6 m, 6-12 hr
160413005-091	10	1	40.0	12964	0.01796	0.0180				0.018	91	I, 0.8 m, 6-12 hr
160413005-099	10	1	40.0	28672	0.04065	0.0407				0.041	99	I, 1.0 m, 6-12 hr
160413005-107	10	1	40.0	0	0.00000	0.0000				ND	107	UTC, 1.0 m, 6-12 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041802
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (6.9224e+005)x + 529.61
Corr. (r): 0.999312

ng	Area	ng	Area
0.40000	282307	0.02000	13801
0.40000	269412	0.01000	6705
0.20000	138243	0.01000	7084
0.20000	144299	0.00400	3060
0.10000	71509	0.00400	3635
0.10000	70877	0.00200	2139
0.04000	28943	0.00200	1810
0.04000	27018	0.00100	(f)
0.02000	11845	0.00100	1372

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported
f. Standard not used in calibration curve

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041803
Sequence Number: QC-16041803
Extraction Date: 4/26/2016
Injection Date(s): 4/29/2016
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: Jake Adams 5/4/16
QA Review: M. Sciacotti 05/05/2016
Approved by: Stephen Dorey 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description
160413005-241	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 8842
16041803-Recovery1-1	10	1	40.0	6265	0.00810	0.0081	0.0081	0.01	81.0		SKC Cat No. 226-30-16	Control + 0.01 µg
16041803-Recovery2-1	10	1	40.0	66247	0.09140	0.0914	0.0914	0.10	91.4		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		86.2			
160413005-004	10	1	40.0	6456	0.00837	0.0084				<LOQ	4	A, 1 m, 12-24 hr
160413005-012	10	1	40.0	10056	0.01337	0.0134				0.013	12	B, 1 m, 12-24 hr
160413005-028	10	1	40.0	1931	0.00208	0.0021				<LOQ	28	D, 1 m, 12-24 hr
160413005-036	10	1	40.0	2392	0.00272	0.0027				<LOQ	36	E, 1 m, 12-24 hr
160413005-044	10	1	40.0	2993	0.00356	0.0036				<LOQ	44	F, 1 m, 12-24 hr
160413005-052	10	1	40.0	1728	0.00180	0.0018				<LOQ	52	G, 1 m, 12-24 hr
160413005-060	10	1	40.0	3763	0.00463	0.0046				<LOQ	60	H, 1 m, 12-24 hr
160413005-068	10	1	40.0	38910	0.05344	0.0534				0.053	68	I, 0.2 m, 12-24 hr
160413005-076	10	1	40.0	23072	0.03144	0.0314				0.031	76	I, 0.4 m, 12-24 hr
160413005-084	10	1	40.0	21958	0.02990	0.0299				0.030	84	I, 0.6 m, 12-24 hr
160413005-092	10	1	40.0	7283	0.00952	0.0095				<LOQ	92	I, 0.8 m, 12-24 hr
160413005-100	10	1	40.0	14881	0.02007	0.0201				0.020	100	I, 1.0 m, 12-24 hr
160413005-108	10	1	40.0	0	0.00000	0.0000				ND	108	UTC, 1.0 m, 12-24 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041803
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (7.2009e+005)x + 430.41
Corr. (r): 0.999523

ng	Area	ng	Area
0.40000	289678	0.02000	14827
0.40000	291859	0.01000	7794
0.20000	136315	0.01000	6899
0.20000	147356	0.00400	3848
0.10000	72064	0.00400	3048
0.10000	75248	0.00200	1954
0.04000	28667	0.00200	1952
0.04000	28758	0.00100	957
0.02000	14244	0.00100	1296

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported

Print Date: 5/9/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041804
Sequence Number: QC-16041804
Extraction Date: 4/26/2016
Injection Date(s): 4/30/2016
Instrument: LC/MS/MS I-27

Analyst(s): alarosa, jadams
QC Review: [illegible] 5/9/16
QA Review: M. Bardaski 05/09/2016
Approved by: [illegible] 5/9/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description
160413005-242	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 8842
16041804-Recovery1-1	10	1	40.0	7097	0.01004	0.0100	0.0100	0.01	100.4		SKC Cat No. 226-30-16	Control + 0.01 µg
16041804-Recovery2-1	10	1	40.0	65702	0.09823	0.0982	0.0982	0.10	98.2		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		99.3			
160413005-005	10	1	40.0	0	0.00000	0.0000				ND	5	A, 1 m, 24-36 hr
160413005-013	10	1	40.0	0	0.00000	0.0000				ND	13	B, 1 m, 24-36 hr
160413005-029	10	1	40.0	0	0.00000	0.0000				ND	29	D, 1 m, 24-36 hr
160413005-045	10	1	40.0	0	0.00000	0.0000				ND	45	F, 1 m, 24-36 hr
160413005-053	10	1	40.0	0	0.00000	0.0000				ND	53	G, 1 m, 24-36 hr
160413005-061	10	1	40.0	0	0.00000	0.0000				ND	61	H, 1 m, 24-36 hr
160413005-069	10	1	40.0	2090	0.00250	0.0025				<LOQ	69	I, 0.2 m, 24-36 hr
160413005-077	10	1	40.0	1818	0.00209	0.0021				<LOQ	77	I, 0.4 m, 24-36 hr
160413005-085	10	1	40.0	0	0.00000	0.0000				ND	85	I, 0.6 m, 24-36 hr
160413005-093	10	1	40.0	687	0.00039	0.0004				ND	93	I, 0.8 m, 24-36 hr
160413005-101	10	1	40.0	0	0.00000	0.0000				ND	101	I, 1.0 m, 24-36 hr
160413005-109	10	1	40.0	0	0.00000	0.0000				ND	109	UTC, 1.0 m, 24-36 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041804
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (6.6453e+005)x + 427.74
Corr. (r): 0.997699

ng	Area	ng	Area
0.40000	265810	0.02000	13327
0.40000	247044	0.01000	7375
0.20000	147082	0.01000	7308
0.20000	129674	0.00400	2270
0.10000	71646	0.00400	(f)
0.10000	65510	0.00200	1919
0.04000	30025	0.00200	1839
0.04000	26295	0.00100	1052
0.02000	16211	0.00100	912

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported
f. Standard not used in calibration curve

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041805
Sequence Number: QC-16041805
Extraction Date: 4/28/2016
Injection Date(s): 4/30/2016
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: Jake Adams 5/4/16
QA Review: M Bachaski 05/05/2016
Approved by: [signature] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description
160413005-243	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 10301
16041805-Recovery1-1	10	1	40.0	5696	0.00879	0.0088	0.0088	0.01	87.9		SKC Cat No. 226-30-16	Control + 0.01 µg
16041805-Recovery3-1	10	10	400.0	54850	0.08756	0.8756	0.8756	1.00	87.6		SKC Cat No. 226-30-16	Control + 1 µg
							Average % Recovery:		87.7			
160413005-006	10	1	40.0	0	0.00000	0.0000				ND	6	A, 1 m, 36-48 hr
160413005-014	10	1	40.0	0	0.00000	0.0000				ND	14	B, 1 m, 36-48 hr
160413005-022	10	1	40.0	0	0.00000	0.0000				ND	22	C, 1 m, 36-48 hr
160413005-030	10	1	40.0	0	0.00000	0.0000				ND	30	D, 1 m, 36-48 hr
160413005-038	10	1	40.0	0	0.00000	0.0000				ND	38	E, 1 m, 36-48 hr
160413005-046	10	1	40.0	0	0.00000	0.0000				ND	46	F, 1 m, 36-48 hr
160413005-054	10	1	40.0	0	0.00000	0.0000				ND	54	G, 1 m, 36-48 hr
160413005-062	10	1	40.0	0	0.00000	0.0000				ND	62	H, 1 m, 36-48 hr
160413005-070	10	1	40.0	0	0.00000	0.0000				ND	70	I, 0.2 m, 36-48 hr
160413005-078	10	1	40.0	0	0.00000	0.0000				ND	78	I, 0.4 m, 36-48 hr
160413005-086	10	1	40.0	0	0.00000	0.0000				ND	86	I, 0.6 m, 36-48 hr
160413005-094	10	1	40.0	0	0.00000	0.0000				ND	94	I, 0.8 m, 36-48 hr
160413005-102	10	1	40.0	0	0.00000	0.0000				ND	102	I, 1.0 m, 36-48 hr
160413005-110	10	1	40.0	0	0.00000	0.0000				ND	110	UTC, 1.0 m, 36-48 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041805
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (6.2396e+005)x + 214.08
Corr. (r): 0.99974

ng	Area	ng	Area
0.40000	249315	0.02000	12437
0.40000	250400	0.01000	6427
0.20000	126640	0.01000	6787
0.20000	122982	0.00400	2522
0.10000	63441	0.00400	3292
0.10000	61222	0.00200	1793
0.04000	25241	0.00200	1357
0.04000	26068	0.00100	669
0.02000	12105	0.00100	790

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041806
Sequence Number: QC-16041806
Extraction Date: 4/27/2016
Injection Date(s): 4/30/2016
Instrument: LC/MS/MS I-27

Analyst(s): alarosa, jadams
QC Review: Jake Adams 5/4/16
QA Review: M. Bucharski 05/05/2016
Approved by: [illegible] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description
160413005-244	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 10301
16041806-Recovery1-1	10	1	40.0	6159	0.00941	0.0094	0.0094	0.01	94.1		SKC Cat No. 226-30-16	Control + 0.01 µg
16041806-Recovery2-1	10	1	40.0	58666	0.09513	0.0951	0.0951	0.10	95.1		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		94.6			
160413005-118	10	1	40.0	1220	0.00134	0.0013				<LOQ	118	A, 1 m, 0-3 hr
160413005-126	10	1	40.0	4548	0.00678	0.0068				<LOQ	126	B, 1 m, 0-3 hr
160413005-134	10	1	40.0	0	0.00000	0.0000				ND	134	C, 1 m, 0-3 hr
160413005-142	10	1	40.0	0	0.00000	0.0000				ND	142	D, 1 m, 0-3 hr
160413005-150	10	1	40.0	0	0.00000	0.0000				ND	150	E, 1 m, 0-3 hr
160413005-158	10	1	40.0	0	0.00000	0.0000				ND	158	F, 1 m, 0-3 hr
160413005-166	10	1	40.0	0	0.00000	0.0000				ND	166	G, 1 m, 0-3 hr
160413005-174	10	1	40.0	0	0.00000	0.0000				ND	174	H, 1 m, 0-3 hr
160413005-182	10	1	40.0	15473	0.02461	0.0246				0.025	182	I, 0.2 m, 0-3 hr
160413005-190	10	1	40.0	1438	0.00170	0.0017				<LOQ	190	I, 0.4 m, 0-3 hr
160413005-198	10	1	40.0	2767	0.00387	0.0039				<LOQ	198	I, 0.6 m, 0-3 hr
160413005-206	10	1	40.0	5821	0.00885	0.0089				<LOQ	206	I, 0.8 m, 0-3 hr
160413005-214	10	1	40.0	7740	0.01199	0.0120				0.012	214	I, 1.0 m, 0-3 hr
160413005-222	10	1	40.0	0	0.00000	0.0000				ND	222	UTC, 1.0 m, 0-3 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041806
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (6.1255e+005)x + 396.63
Corr. (r): 0.999541

ng	Area	ng	Area
0.40000	250809	0.02000	11774
0.40000	241493	0.01000	5601
0.20000	117513	0.01000	6099
0.20000	125034	0.00400	2773
0.10000	62515	0.00400	2669
0.10000	61707	0.00200	1787
0.04000	24848	0.00200	1871
0.04000	26750	0.00100	889
0.02000	12904	0.00100	(f)

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported
f. Standard not used in calibration curve

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041807
Sequence Number: QC-16041807
Extraction Date: 4/28/2016
Injection Date(s): 5/2/2016
Instrument: LC/MS/MS I-27

Analyst(s): alarosa, jadams
QC Review: Jabe Adams 5/4/16
QA Review: M. Backowski 5/5/2016
Approved by: [illegible] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da)							Sample Number	Sample Description
				Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)		
160413005-245	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 10301
16041807-Recovery1-1	10	1	40.0	5972	0.00837	0.0084	0.0084	0.01	83.7		SKC Cat No. 226-30-16	Control + 0.01 µg
16041807-Recovery2-1	10	1	40.0	67826	0.09590	0.0959	0.0959	0.10	95.9		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		89.8			
160413005-119	10	1	40.0	4480	0.00628	0.0063				< LOQ	119	A, 1 m, 3-6 hr
160413005-127	10	1	40.0	0	0.00000	0.0000				ND	127	B, 1 m, 3-6 hr
160413005-135	10	1	40.0	0	0.00000	0.0000				ND	135	C, 1 m, 3-6 hr
160413005-143	10	1	40.0	0	0.00000	0.0000				ND	143	D, 1 m, 3-6 hr
160413005-151	10	1	40.0	0	0.00000	0.0000				ND	151	E, 1 m, 3-6 hr
160413005-159	10	1	40.0	0	0.00000	0.0000				ND	159	F, 1 m, 3-6 hr
160413005-167	10	1	40.0	0	0.00000	0.0000				ND	167	G, 1 m, 3-6 hr
160413005-175	10	1	40.0	3065	0.00425	0.0043				< LOQ	175	H, 1 m, 3-6 hr
160413005-183	10	1	40.0	14654	0.02065	0.0207				0.021	183	I, 0.2 m, 3-6 hr
160413005-191	10	1	40.0	1634	0.00223	0.0022				< LOQ	191	I, 0.4 m, 3-6 hr
160413005-199	10	1	40.0	8961	0.01260	0.0126				0.013	199	I, 0.6 m, 3-6 hr
160413005-207	10	1	40.0	4740	0.00662	0.0066				< LOQ	207	I, 0.8 m, 3-6 hr
160413005-215	10	1	40.0	8374	0.01177	0.0118				0.012	215	I, 1.0 m, 3-6 hr
160413005-223	10	1	40.0	0	0.00000	0.0000				ND	223	UTC, 1.0 m, 3-6 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041807
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (7.0666e+005)x + 58.708
Corr. (r): 0.998847

ng	Area	ng	Area
0.40000	295330	0.02000	12848
0.40000	270919	0.01000	8016
0.20000	148691	0.01000	7949
0.20000	135632	0.00400	2905
0.10000	69825	0.00400	2913
0.10000	67295	0.00200	1272
0.04000	29120	0.00200	1754
0.04000	28491	0.00100	(f)
0.02000	14900	0.00100	583

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported
f. Standard not used in calibration curve

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041808
Sequence Number: QC-16041808
Extraction Date: 4/28/2016
Injection Date(s): 5/2/2016
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: Jake adams 5/4/16
QA Review: M. Bachowski 05/05/2016
Approved by: [illegible] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (f)	Sample Number	Sample Description
160413005-246	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 10301
16041808-Recovery1-1	10	1	40.0	6694	0.00923	0.0092	0.0092	0.01	92.3		SKC Cat No. 226-30-16	Control + 0.01 µg
16041808-Recovery2-1	10	1	40.0	66881	0.09578	0.0958	0.0958	0.10	95.8		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		94.0			
160413005-120	10	1	40.0	10554	0.01478	0.0148				0.015	120	A, 1 m, 6-12 hr
160413005-128	10	1	40.0	7208	0.00997	0.0100				< LOQ	128	B, 1 m, 6-12 hr
160413005-136	10	1	40.0	0	0.00000	0.0000				ND	136	C, 1 m, 6-12 hr
160413005-144	10	1	40.0	0	0.00000	0.0000				ND	144	D, 1 m, 6-12 hr
160413005-152	10	1	40.0	0	0.00000	0.0000				ND	152	E, 1 m, 6-12 hr
160413005-160	10	1	40.0	0	0.00000	0.0000				ND	160	F, 1 m, 6-12 hr
160413005-168	10	1	40.0	0	0.00000	0.0000				ND	168	G, 1 m, 6-12 hr
160413005-176	10	1	40.0	3613	0.00480	0.0048				< LOQ	176	H, 1 m, 6-12 hr
160413005-184	10	1	40.0	24227	0.03444	0.0344				0.034	184	I, 0.2 m, 6-12 hr
160413005-192	10	1	40.0	2959	0.00386	0.0039				< LOQ	192	I, 0.4 m, 6-12 hr
160413005-200	10	1	40.0	18780	0.02661	0.0266				0.027	200	I, 0.6 m, 6-12 hr
160413005-208	10	1	40.0	17598	0.02491	0.0249				0.025	208	I, 0.8 m, 6-12 hr
160413005-216	10	1	40.0	10687	0.01497	0.0150				0.015	216	I, 1.0 m, 6-12 hr
160413005-224	10	1	40.0	0	0.00000	0.0000				ND	224	UTC, 1.0 m, 6-12 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041808
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (6.9542e+005)x + 275.36
Corr. (r): 0.999642

ng	Area	ng	Area
0.40000	277786	0.02000	12754
0.40000	281823	0.02000	14581
0.20000	134675	0.01000	7393
0.20000	143050	0.01000	6796
0.10000	67018	0.00400	2938
0.10000	69430	0.00400	3210
0.10000	71779	0.00200	1465
0.04000	27364	0.00200	1835
0.04000	28812	0.00100	949
0.04000	28817	0.00100	1072

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041809
Sequence Number: QC-16041808
Extraction Date: 4/28/2016
Injection Date(s): 5/2/2016
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: Jake Adams 5/4/16
QA Review: M. Bedaoki 05/05/16
Approved by: [illegible] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (f)	Sample Number	Sample Description
160413005-247	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 10301
16041808-Recovery1-2	10	1	40.0	7519	0.01042	0.0104	0.0104	0.01	104.2		SKC Cat No. 226-30-16	Control + 0.01 µg
16041808-Recovery2-2	10	1	40.0	60292	0.08630	0.0863	0.0863	0.10	86.3		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		95.3			
160413005-121	10	1	40.0	7123	0.00985	0.0099				< LOQ	121	A, 1 m, 12-24 hr
160413005-129	10	1	40.0	0	0.00000	0.0000				ND	129	B, 1 m, 12-24 hr
160413005-137	10	1	40.0	2628	0.00367	0.0037				< LOQ	137	C, 1 m, 12-24 hr
160413005-145	10	1	40.0	3016	0.00394	0.0039				< LOQ	145	D, 1 m, 12-24 hr
160413005-153	10	1	40.0	1956	0.00242	0.0024				< LOQ	153	E, 1 m, 12-24 hr
160413005-161	10	1	40.0	1297	0.00147	0.0015				< LOQ	161	F, 1 m, 12-24 hr
160413005-169	10	1	40.0	0	0.00000	0.0000				ND	169	G, 1 m, 12-24 hr
160413005-177	10	1	40.0	4143	0.00556	0.0056				< LOQ	177	H, 1 m, 12-24 hr
160413005-185	10	1	40.0	41098	0.05870	0.0587				0.059	185	I, 0.2 m, 12-24 hr
160413005-193	10	1	40.0	3911	0.00523	0.0052				< LOQ	193	I, 0.4 m, 12-24 hr
160413005-201	10	1	40.0	16543	0.02339	0.0234				0.023	201	I, 0.6 m, 12-24 hr
160413005-209	10	1	40.0	19740	0.02799	0.0280				0.028	209	I, 0.8 m, 12-24 hr
160413005-217	10	1	40.0	14958	0.02111	0.0211				0.021	217	I, 1.0 m, 12-24 hr
160413005-225	10	1	40.0	0	0.00000	0.0000				ND	225	UTC, 1.0 m, 12-24 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041808
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (6.9542e+005)x + 275.36
Corr. (r): 0.999642

ng	Area	ng	Area
0.40000	277786	0.02000	12754
0.40000	281823	0.02000	14581
0.20000	134675	0.01000	7393
0.20000	143050	0.01000	6796
0.10000	67018	0.00400	2938
0.10000	69430	0.00400	3210
0.10000	71779	0.00200	1465
0.04000	27364	0.00200	1635
0.04000	28812	0.00100	949
0.04000	28817	0.00100	1072

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported

Print Date: 5/9/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041810
Sequence Number: QC-16041810
Extraction Date: 4/29/2016
Injection Date(s): 5/3/2016
Instrument: LC/MS/MS I-27

Analyst(s): kherbert, jadams
QC Review: [illegible] 5/9/16
QA Review: M. Backarski 5/9/2016
Approved by: [illegible] 5/9/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description
160413005-248	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 10301
16041810-Recovery1-1	10	1	40.0	6720	0.00940	0.0094	0.0094	0.01	94.0		SKC Cat No. 226-30-16	Control + 0.01 µg
16041810-Recovery2-1	10	1	40.0	64923	0.09749	0.0975	0.0975	0.10	97.5		SKC Cat No. 226-30-16	Control + 0.1 µg
							Average % Recovery:		95.7			
160413005-122	10	1	40.0	0	0.00000	0.0000				ND	122	A, 1 m, 24-36 hr
160413005-130	10	1	40.0	0	0.00000	0.0000				ND	130	B, 1 m, 24-36 hr
160413005-138	10	1	40.0	0	0.00000	0.0000				ND	138	C, 1 m, 24-36 hr
160413005-146	10	1	40.0	0	0.00000	0.0000				ND	146	D, 1 m, 24-36 hr
160413005-162	10	1	40.0	0	0.00000	0.0000				ND	162	F, 1 m, 24-36 hr
160413005-170	10	1	40.0	0	0.00000	0.0000				ND	170	G, 1 m, 24-36 hr
160413005-178	10	1	40.0	0	0.00000	0.0000				ND	178	H, 1 m, 24-36 hr
160413005-186	10	1	40.0	2492	0.00300	0.0030				< LOQ	186	I, 0.2 m, 24-36 hr
160413005-194	10	1	40.0	1140	0.00095	0.0010				< LOQ	194	I, 0.4 m, 24-36 hr
160413005-202	10	1	40.0	2201	0.00256	0.0026				< LOQ	202	I, 0.6 m, 24-36 hr
160413005-210	10	1	40.0	0	0.00000	0.0000				ND	210	I, 0.8 m, 24-36 hr
160413005-218	10	1	40.0	1253	0.00112	0.0011				< LOQ	218	I, 1.0 m, 24-36 hr
160413005-226	10	1	40.0	0	0.00000	0.0000				ND	226	UTC, 1.0 m, 24-36 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041810
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (6.607e+005)x + 511.11
Corr. (r): 0.999623

ng	Area	ng	Area
0.40000	263633	0.02000	15082
0.40000	264297	0.02000	13699
0.20000	136701	0.01000	7946
0.20000	131380	0.01000	6372
0.10000	65763	0.00400	3556
0.10000	67519	0.00400	3386
0.10000	64183	0.00200	1504
0.04000	27079	0.00200	1865
0.04000	26051	0.00100	(f)
0.04000	27154	0.00100	1113

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported
f. Standard not used in calibration curve

Print Date: 5/4/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041811
Sequence Number: QC-16041810
Extraction Date: 4/29/2016
Injection Date(s): 5/3/2016
Instrument: LC/MS/MS I-27

Analyst(s): kherbert, jadams
QC Review: Jake Adams 5/4/16
QA Review: M. Badovic 05/05/16
Approved by: [signature] 5/6/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da) Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)	Sample Number	Sample Description
160413005-249	10	1	40.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 10301
16041810-Recovery1-2	10	1	40.0	6034	0.00836	0.0084	0.0084	0.01	83.6		SKC Cat No. 226-30-16	Control + 0.01 µg
16041810-Recovery3-1	10	10	400.0	60539	0.09086	0.9086	0.9086	1.00	90.9		SKC Cat No. 226-30-16	Control + 1 µg
							Average % Recovery:		87.2			
160413005-123	10	1	40.0	0	0.00000	0.0000				ND	123	A, 1 m, 36-48 hr
160413005-131	10	1	40.0	0	0.00000	0.0000				ND	131	B, 1 m, 36-48 hr
160413005-139	10	1	40.0	0	0.00000	0.0000				ND	139	C, 1 m, 36-48 hr
160413005-147	10	1	40.0	0	0.00000	0.0000				ND	147	D, 1 m, 36-48 hr
160413005-155	10	1	40.0	0	0.00000	0.0000				ND	155	E, 1 m, 36-48 hr
160413005-163	10	1	40.0	0	0.00000	0.0000				ND	163	F, 1 m, 36-48 hr
160413005-171	10	1	40.0	0	0.00000	0.0000				ND	171	G, 1 m, 36-48 hr
160413005-179	10	1	40.0	0	0.00000	0.0000				ND	179	H, 1 m, 36-48 hr
160413005-187	10	1	40.0	0	0.00000	0.0000				ND	187	I, 0.2 m, 36-48 hr
160413005-195	10	1	40.0	0	0.00000	0.0000				ND	195	I, 0.4 m, 36-48 hr
160413005-203	10	1	40.0	0	0.00000	0.0000				ND	203	I, 0.6 m, 36-48 hr
160413005-211	10	1	40.0	0	0.00000	0.0000				ND	211	I, 0.8 m, 36-48 hr
160413005-219	10	1	40.0	0	0.00000	0.0000				ND	219	I, 1.0 m, 36-48 hr
160413005-227	10	1	40.0	0	0.00000	0.0000				ND	227	UTC, 1.0 m, 36-48 hr

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041810
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (6.607e+005)x + 511.11
Corr. (r): 0.999623

ng	Area	ng	Area
0.40000	263633	0.02000	15082
0.40000	264297	0.02000	13699
0.20000	136701	0.01000	7946
0.20000	131380	0.01000	6372
0.10000	65763	0.00400	3556
0.10000	67519	0.00400	3386
0.10000	64183	0.00200	1504
0.04000	27079	0.00200	1865
0.04000	26051	0.00100	(f)
0.04000	27154	0.00100	1113

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.001 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported
f. Standard not used in calibration curve

Print Date: 4/27/2016

ADPEN Laboratories, Inc.

Study Number: 813945
Client Code: 903
Method: Dicamba by LC-MS/MS (ADPEN M1407)
Compound: Dicamba (218.90/175.00 Da)
Substrate: OVS Tubes
Inj. Size (µL): 40

Work Order Number: WO-16041812
Sequence Number: QC-16041812
Extraction Date: 4/19/2016
Injection Date(s): 4/21/2016
Instrument: LC/MS/MS I-27

Analyst(s): sbryant, jadams
QC Review: Jeb Adams 4/27/16
QA Review: M. Buchanan 05/02/16
Approved by: [illegible] 5/4/16

ANALYTE RESIDUE REPORT — SHIPPING VERIFICATION

Lab Code	Dilution Factor (DF) (a)	Sample Amount (each)	Final Sample Volume (mL) (b)	Amount of Sample Injected (each) (c)	Dicamba (218.90/175.00 Da)								Sample Number	Sample Description
					Peak Area	ng Found	µg Found (d)	Corrected µg Found (e)	µg Added (g)	Percent Recovery (%)	Corrected % Recovery (h)	Final Reported µg (f,i)		
160413005-250	1	1.0	40.0	1.00	0	0.00000	0.0000					<0.01	SKC Cat No. 226-30-16	OVS Tube, XAD-2 Lot 10301
16041812-Recovery1-1	1	1.0	40.0	1.00	4936	0.01111	0.0111	**0.0111**	0.01	111			SKC Cat No. 226-30-16	Control + 0.01 µg
16041812-Recovery4-1	1	1.0	40.0	1.00	118021	0.26760	0.2676	**0.2676**	0.30	89			SKC Cat No. 226-30-16	Control + 0.3 µg
								Average % Recovery:		100				
160413005-113	1	1.0	40.0	1.00	122455	0.27766	0.2777		0.30	93	92	0.278	113	Site W , Transit Stability
160413005-114	1	1.0	40.0	1.00	114823	0.26035	0.2604		0.30	87	87	0.260	114	Site W , Transit Stability
160413005-115	1	1.0	40.0	1.00	113873	0.25819	0.2582		0.30	86	86	0.258	115	Site W , Transit Stability
160413005-116	1	1.0	40.0	1.00	115053	0.26087	0.2609		0.30	87	87	0.261	116	Site W , Transit Stability
160413005-117	1	1.0	40.0	1.00	118238	0.26809	0.2681		0.30	89	89	0.268	117	Site W , Transit Stability
160413005-230	1	1.0	40.0	1.00	114277	0.25911	0.2591		0.30	86	86	0.259	230	Site E , Transit Stability
160413005-231	1	1.0	40.0	1.00	109765	0.24887	0.2489		0.30	83	83	0.249	231	Site E , Transit Stability
160413005-232	1	1.0	40.0	1.00	115264	0.26135	0.2614		0.30	87	87	0.261	232	Site E , Transit Stability
160413005-233	1	1.0	40.0	1.00	107568	0.24389	0.2439		0.30	81	81	0.244	233	Site E , Transit Stability
160413005-234	1	1.0	40.0	1.00	115010	0.26077	0.2608		0.30	87	87	0.261	234	Site E , Transit Stability

CALIBRATION CURVE INFORMATION:

Sequence: QC-16041812
Curve type: Linear ("1 / x" weighting)
Cal. Curve: (4.4088E+05)x + 40.424
Corr. (r): 0.9990

ng	Area	ng	Area
0.40000	182667	0.02000	8682
0.40000	175407	0.01000	4631
0.20000	93803	0.01000	3905
0.20000	84124	0.00400	1833
0.10000	42343	0.00400	1887
0.10000	41895	0.00200	1103
0.04000	16675	0.00200	941
0.04000	16127	0.00100	(j)
0.02000	8874	0.00100	(j)

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [(initial extract volume / aliquot taken) × final extract volume × DF]
c. Amount of sample injected = (sample weight × injection size) / final sample volume
d. µg Found = [(ng found / each of sample inj.)
e. Corrected µg found = µg found – µg found in the control sample
f. Values between LOD and LOQ are shown in italic
g. µg added (shipping verification fortification) = (concentration of SV spiking solution) × (fortification volume)
h. Sample percent recovery corrected for average concurrent recovery
i. LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported
j. Standard not used in calibration curve

ADPEN Laboratories, Inc.

Print Date: 5/6/2016

Study Number: 813945
Client Code: 903
Method: Dicamba/Imazethpyr by LC-MS/MS (Meth-226)
Compound: Dicamba (218.90/175.00 Da)
Substrate: Petri Dish
Inj. Size (µL): 40

Work Order Number: WO-16050401
Sequence Number: QC-16050401
Extraction Date: 5/5/2016
Injection Date(s): 5/6/2016
Instrument: LC/MS/MS I-27

Analyst(s): alarosa, jadams
QC Review: Jake Adams 5/6/16
QA Review: M. Sadowski 05/06/2016
Approved by: [illegible] 5/9/16

AMOUNT TOTAL RESIDUE REPORT

Lab Code	Extract Volume (mL)	Dilution Factor (DF) (each)	Final Sample Volume (mL) (b)	Dicamba (218.90/175.00 Da)							Sample Number	Sample Description
				Peak Area	ng Found	Total µg Found (c)	Corrected µg Found (d)	Fortification Level (µg)	Percent Recovery (%)	Final Reported µg (e)		
160413005-253	5000000	1	5000000.0	0	0.00000	0.0000	N/A	N/A	N/A	ND	Whatman Cat No. 1002-150	Filter Paper, Qualitative 2, 150 mm
16050401-Recovery4-1	5000000	1	5000000.0	16168	0.01695	2118.7500	**2118.7500**	**2000.00**	**105.9**		Whatman Cat No. 1002-150	Control + 2000 µg
16050401-Recovery4-2	5000000	1	5000000.0	13366	0.01395	1743.7500	**1743.7500**	**2000.00**	**87.2**		Whatman Cat No. 1002-150	Control + 2000 µg
							Average % Recovery:		**96.6**			
160413005-235	5000000	10	50000000.0	15268	0.01601	20012.5000				20013	235	Application Verification
160413005-236	5000000	10	50000000.0	17391	0.01826	22825.0000				22825	236	Application Verification

CALIBRATION CURVE INFORMATION:

Sequence: QC-16050401
Curve type: Linear ("1 / X" weighting)
Cal. Curve: (9.3345e+005)x + 344.13
Corr. (r): 0.997243

ng	Area	ng	Area
0.20000	186392	0.01000	8672
0.20000	182192	0.00400	4024
0.10000	105560	0.00400	3787
0.10000	86074		
0.02000	21496		
0.02000	18256		
0.01000	10532		

COMMENTS:

a. Dilution factor (DF) = (dilution volume / aliquot taken from final volume)
b. Final sample volume = [extract volume x DF]
c. Total µg Found = (ng Found x Final Sample Volume) ÷ Injection Volume x (1000 µL/mL) ÷ (1000 ng/µg)
d. Corrected µg found = µg found – µg found in the control sample
e. LOD = 0.005 µg; LOQ = 0.01 µg; if residue is <LOD, then ND (non-detect) is reported

Appendix C – Flux Modeling Report

Exponent Alexandria, Va.

Exponent

Exponent
1150 Connecticut Ave, NW
Suite 1100
Washington, DC 20036

telephone 202-772-4900
facsimile 202-772-4979
www.exponent.com

TITLE:
Estimation of Dicamba Fluxes from Engenia® Herbicide Application in Preston, Georgia

DATA REQUIREMENTS:
Not Applicable

AUTHORS:
Rick Reiss
Exponent
1800 Diagonal Road, Suite 500
Alexandria, VA 22314

SPONSOR:
BASF Crop Protection
26 Davis Drive
Research Triangle Park, NC 27709-3528

DATE:
May 25, 2016

PROJECT IDENTIFICATION:
QMS ID No. 1602768.000 4368

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality, on any basis whatsoever, is made for any information contained in this document. I acknowledge that information not designated as within the scope of FIFRA §10(d)(1)(A), (B), or (C) and which pertains to a registered or previously registered pesticide is not entitled to confidential treatment and may be released to the public, subject to the provisions regarding disclosure to multinational entities under FIFRA 10(g).

COMPANY:

See page 2 of the final report

SUBMITTER: _____

Date

STATEMENT OF COMPLIANCE WITH GOOD LABORATORY PRACTICE STANDARDS

This report is a review of existing data. Good Laboratory Practice Standards, 40 CFR Part 160, are not applicable to this submission.

AUTHOR:

May 25, 2016

Date

SPONSOR & SUBMITTER:

See page 3 of the final report

Date

Table of Contents

	Page
Table of Contents	**4**
List of Tables	**5**
List of Figures	**6**
Executive Summary	**7**
Introduction	**8**
Materials and Methods	**9**
Aerodynamic Method	9
Indirect Method	10
Flux Estimates Using the Aerodynamic Method	**12**
Flux Estimates Using the Indirect Method	**19**
Estimated Offsite Deposition Values	**23**
Conclusions	**25**
References	**26**
Appendix A – AERSCREEN Output	**27**

List of Tables

	Page
Table 1. Concentration data at central mast for site 1W	12
Table 2. Concentration data at central mast for site 2E	13
Table 3. Regression of concentrations and height (logarithm) for site 1W	14
Table 4. Regression of wind speeds and height (logarithm) for site 1W	14
Table 5. Regression of temperatures and height (logarithm) for site 1W	15
Table 6. Regression of concentrations and height (logarithm) for site 2E	15
Table 7. Regression of wind speeds and height (logarithm) for site 2E	15
Table 8. Regression of temperature and height (logarithm) for site 2E	16
Table 9. Aerodynamic method calculations for site 1W	17
Table 10. Aerodynamic method calculations for site 2E	18
Table 11. Measured offsite concentrations and estimated fluxes	20

List of Figures

Page

Figure 1. Field and monitor layout for site 1W (from Braydon et al., 2016) 21

Figure 2. Field and monitor layout for site 1W (from Braydon et al., 2016) 22

Figure 3. Estimated deposition of dicamba (lb/A) by distance from the edge of a 40 acre field 23

Executive Summary

This report provides estimated dicamba fluxes based on measurements in a recent dicamba field study in Preston, Georgia that included applications to two hay fields with Bermuda grass. The study included dicamba air concentration measurements at six periods over the first two days after an application of 48.33% dicamba herbicide at 5 lbs a.e./gal. The fields were approximately 120x120 meters and labeled 1W and 2E.

Air samples were collected at different heights at a mast in the center of field and at nine offsite monitors 15 meters from the field edge at a 1 meter height. At the center mast, temperature and wind speed were also measured at different heights, as well as wind direction, relative humidity and solar radiation. The center mast measurements allow the estimation of fluxes using the aerodynamic method (Majewski et al., 1990). The offsite monitoring measurements allow the estimation of the flux using the indirect method (Ross et al., 1996) in conjunction with the EPA dispersion model AERMOD.

There was a strong correlation of air concentration, wind speed and temperature with sampling height, allowing a successful application of the aerodynamic method. For field 1W, the estimated fluxes ranged from 0.000054 to 0.0022 $\mu g/m^2/sec$. For field 2E, the estimated fluxes ranged from 0.000017 to 0.0014 $\mu g/m^2/sec$.

The application of the indirect method was limited by few detects (defined as a residue above the limit of quantitation) at the offsite monitors. There were only six detects at site 1W and all but one of the detects was at a single monitoring location. There was only one detect at site 2E. The flux estimates were within an order of magnitude of the aerodynamic estimates. Given the limited offsite detections, the aerodynamic method estimates are considered more reliable.

Calculations were made with AERSCREEN to estimate downwind 1-hour dry deposition levels. Estimates were made using the peak flux estimate of 0.0022 $\mu g/m^2/sec$ (3-6 hours at Site 1W). The deposition peaked at 1.11×10^{-7} lb/A at about 1000 feet from the field edge. The deposition fell below 10^{-8} lb/A by about 1200 feet.

Introduction

BASF Crop Protection (BASF) recently conducted a field dissipation study that measured air concentrations following an application of Engenia® Herbicide. The active ingredient for Engenia® Herbicide is dicamba. The purpose of the study was to quantify downwind air concentrations and to estimate fluxes following application.

The study was conducted in Preston, Georgia in April of 2016. The study location was representative of a warm, humid area in a region that the product is intended for use. Two applications were made to plots that were approximately 120 x 120 meters in mixed species hay fields. The study included dicamba air concentration measurements at six periods over the first two days after an application of 48.33% dicamba herbicide at 5 lbs a.e./gal.

Air concentration measurements were made on the field in a central mast and at masts at off-field locations surrounding the field. Active air sampling pumps fitted with low-volume PUF/XAD sample collections tubes were utilized. For the central mast inside the plots, samplers were placed at 0.2, 0.4, 0.6, 0.8, and 1.0 m above the hay. The off-site masts were placed in different directions around the field at 1 m above the hay.

Weather data was also collected at 0.5, 1.0, and 1.5 m above the top of the vegetation. The stations were placed near one of the off-site monitors and then moved inside of the field after the application. The weather data include wind speed, wind direction, temperature, rainfall, relative humidity, and solar radiation. Data were collected with a 1-minute resolution.

Brayden et al. (2016) prepared a field phase report that includes more details regarding the application and measurements.

Fluxes were estimated using two methods. First, using the air sampling data on the center mast, the fluxes were estimated using the aerodynamic method (Majewski et al., 1990). Second, using the off-site air samplers, the indirect method was used to estimate the fluxes with the AERMOD air dispersion model (Ross et al., 1996).

Materials and Methods

Aerodynamic Method

Using measurements of the wind speed, temperature, and concentration at various heights at a mast within the field, the flux can be estimated using the Thornthwaite-Holzman aerodynamic flux equation (Majewski et al., 1990; Pruitt et al., 1973):

$$Flux = \frac{k^2(\Delta\bar{c})(\Delta\bar{u})}{\Phi_m \Phi_p \left[\ln(z_2 / z_1)\right]^2} \quad (1)$$

where:

k = von Karman's constant = 0.42

$\Delta\bar{c}$ = difference between concentrations at heights z_1 and z_2.

$\Delta\bar{u}$ = difference between wind speeds at heights z_1 and z_2.

Φ_m and Φ_p are stability correction values and defined as

$\Phi_m = (1+16Ri)^{0.333}$ (Ri>0) and $(1-16Ri)^{-0.333}$ (Ri<0)

$\Phi_p = 0.885(1+34Ri)^{0.40}$ (Ri>0) and $0.885(1-22Ri)^{-0.40}$ (Ri<0)

where Ri a gradient Richardson number defined as,

$$Ri = \frac{g(\partial T / \partial z)}{T(\partial u / \partial z)^2}$$

g = gravitational acceleration

T = ambient temperature (K)

$(\partial T / \partial z)$ = temperature gradient

$(\partial u / \partial z)$ = wind speed gradient

For this study, measurements of dicamba were made at 20, 40, 60, 80 and 100 cm in height above the hay. The typical procedure using the aerodynamic flux method is to regress the concentrations versus the logarithm of the height above the ground and use the predicted values at the reference heights to estimate the fluxes. The use of the predicted values instead of the actual values at the reference heights dampens some of the variability associated with the measurements. In this study, reference heights of 50 and 100 cm were used.

Indirect Method

The California Department of Pesticide Regulation (CDPR) has developed a modeling methodology to estimate the flux of a fumigant from a field following application based on measurements of the concentration of the fumigant around the field (Ross et al., 1996).

The CDPR methodology employs a standard air dispersion model developed by the U.S. Environmental Protection Agency (EPA) called the Industrial Source Complex (ISC) model. For this study, EPA's upgraded AERMOD dispersion model was used. AERMOD provides predictions of the concentration of an airborne compound downwind following a release, and requires the following input data:

- The flux of the compound (i.e., the amount of mass of the compound that is being emitted from the field per unit time for a given area);
- The geographical dimensions of the field, and;
- The meteorological conditions during the modeling period, including wind speed, wind direction, and atmospheric stability.

In this application, the downwind concentrations have been measured, and the objective is to determine the flux of the compound. Therefore, AERMOD is used to "back-calculate" the flux.

The goal of the back-calculation is to determine the flux that best explains (statistically) the observed measurements. AERMOD is run using a nominal flux, and programmed to estimate the concentration at each of the measurement locations. Even if the nominal flux does not end up being the correct flux, it is not necessary to run the model again because the flux and the predicted concentrations are exactly proportional (e.g., a doubling of the flux results in a doubling of the downwind concentration). Therefore, given the results of a single model run, the concentrations at the receptors can be determined for any flux by multiplying the nominal concentration by the ratio of the flux and the nominal flux. The predicted concentrations at the measurement locations are statistically compared with the measured values to estimate the actual flux.

CDPR uses a linear regression (including both a slope and intercept) to compare the predicted concentrations (using the nominal flux) and measured concentrations at the receptors. The measured concentrations are used as the dependent variable (i.e., the y-value) and the AERMOD-predicted concentrations are used as the independent variable (i.e., the x-value). To estimate the flux that best explains the measurement data, the nominal flux is multiplied by the slope of the linear regression. There were only a limited number of detections at the off-site samplers. This limited the application of this methodology, particularly the use of the

regression analysis. For some periods, there are no detections at all; therefore, fluxes cannot be estimated.

AERMOD also requires specially formatted meteorological data files for surface data and a characterization of the vertical profile in the atmosphere.

Flux Estimates Using the Aerodynamic Method

This section presents flux estimates using the aerodynamic method. The residue estimates at the center mast first need to be converted to concentrations. This was done by multiplying the residue level by the flow rate of the monitors, which was 3 L/min. The concentrations measurements are shown in Tables 1 (site 1W) and 2 (site 2E).

Table 1. Concentration data at central mast for site 1W

Period	Height (meters)	Residue (µg)	Total Flow (L)	Concentration (µg/m^3)
Nominal: 0-3 hr Actual: 4/11, 9:32am-12:51pm	0.2	0.038	597	0.0640
	0.4	0.036		0.0601
	0.6	0.029		0.0488
	0.8	<LOQ		n/a
	1	0.022		0.0377
Nominal: 3-6 hr Actual: 4/11, 12:51pm-3:50 pm	0.2	0.037	537	0.0697
	0.4	0.040		0.0736
	0.6	<LOQ		n/a
	0.8	0.016		0.0291
	1	0.029		0.0531
Nominal: 6-12 hr Actual: 4/11, 3:50pm-8:59pm	0.2	0.0657	927	0.0709
	0.4	0.058		0.0621
	0.6	0.053		0.0572
	0.8	0.018		0.0194
	1	0.041		0.0439
Nominal: 12-24 hr Actual: 4/11, 8:59pm-4/12 8:59am	0.2	0.053	2160	0.0247
	0.4	0.031		0.0146
	0.6	0.030		0.0138
	0.8	<LOQ		n/a
	1	0.020		0.0093
Nominal: 24-36 hr Actual: 4/12, 8:59am-8:44pm	0.2	<LOQ	2115	n/a
	0.4	<LOQ		n/a
	0.6	ND		n/a
	0.8	ND		n/a
	1	ND		n/a
Nominal: 36-48 hr Actual: 4/12, 8:44pm-4/13, 8:32am	0.2	ND	2124	n/a
	0.4	ND		n/a
	0.6	ND		n/a
	0.8	ND		n/a
	1	ND		n/a

LOQ = limit of quantification; ND = non-detect

Table 2. Concentration data at central mast for site 2E

Period	Height (meters)	Residue (µg)	Total Flow (L)	Concentration (µg/m^3)
Nominal: 0-3 hr Actual: 4/11, 10:35am-1:46pm	0.2	0.025	573	0.0429
	0.4	<LOQ		n/a
	0.6	<LOQ		n/a
	0.8	<LOQ		n/a
	1	0.012		0.0209
Nominal: 3-6 hr Actual: 4/11, 1:46pm-4:40 pm	0.2	0.021	522	0.0396
	0.4	< LOQ		n/a
	0.6	0.013		0.0241
	0.8	< LOQ		n/a
	1	0.012		0.0225
Nominal: 6-12 hr Actual: 4/11, 4:40pm-9:24pm	0.2	0.034	852	0.0404
	0.4	< LOQ		n/a
	0.6	0.027		0.0312
	0.8	0.025		0.0292
	1	0.015		0.0176
Nominal: 12-24 hr Actual: 4/11, 9:24 pm-4/12, 10:33am	0.2	0.059	2367	0.0248
	0.4	< LOQ		n/a
	0.6	0.023		0.0099
	0.8	0.028		0.0118
	1	0.021		0.0089
Nominal: 24-36 hr Actual: 4/12, 10:33am-9:43am	0.2	< LOQ	2010	n/a
	0.4	< LOQ		n/a
	0.6	< LOQ		n/a
	0.8	ND		n/a
	1	< LOQ		n/a

LOQ = limit of quantification; ND = non-detect

At site 1W, the concentrations ranged from 0.0093 to 0.074 µg/m^3. A site 2E, the concentrations ranged from 0.0089 µg/m^3 to 0.0429 µg/m^3. The concentrations generally declined with time, showing that the fluxes decreased as expected. Also, the concentrations generally decline with sampling height, as expected from turbulence theory. There are a number of samples with levels below the limit of quantitation (LOQ) or below the limit of detection (LOD), particularly for the last two periods. The LOQ and LOD were 0.001 µg and 0.01 µg of residue, respectively. For a 3-hour sampling period, this corresponds to an LOQ and LOD of 0.002 µg/m^3 and 0.02 µg/m^3, respectively. For a 12-hour sampling period, it corresponds to an LOQ and LOD of 0.0005 µg/m^3 and 0.005 µg/m^3. There were insufficient detects to estimate fluxes for the fifth and sixth periods.

The next step in the analysis is to conduct regressions with concentration, wind speed, and temperature and the logarithm of sampling height. The regressions for site 1W are shown in Tables 3 through 5, and the regressions for site 2E are shown in Tables 6 through 8. Values below the LOQ or LOD were omitted from the analysis. While it is common in many environmental analyses to use half the LOD or LOQ for non-detects or measurements <LOQ, such a procedure would not be appropriate here because it could potentially yield biased regression coefficients.

The regression coefficients relating concentration, wind speed, or temperature with height were statistically significant for all of the regressions, though the correlation coefficients varied. For site 1W, the r^2 for concentration and height was greater than >0.9 for the first and fourth periods, whereas the r^2 values were 0.49 and 0.59 for the second and third period, respectively. For wind speed, the regressions for site 1W were 0.96 and >0.99 for first and second periods, respectively, but only 0.37 and 0.41 for the third and fourth periods, respectively. The lower values for third and fourth periods were not unexpected given the lower wind speeds near the anemometer detection limits. For temperatures, the r^2 values of the regressions were 0.87 or greater.

Table 3. Regression of concentrations and height (logarithm) for site 1W

Period	Concentrations (µg/m^3) at Different Heights at Center Mast					Slope	Intercept	r^2
	20 cm	40 cm	60 cm	80 cm	100 cm			
0-3 hr	0.064	0.060	0.049	n/a	0.038	-0.017	0.117	0.91
3-6 hr	0.070	0.074	n/a	0.029	0.053	-0.020	0.133	0.49
6-12 hr	0.071	0.062	0.057	0.019	0.044	-0.024	0.147	0.59
12-24 hr	0.025	0.015	0.014	n/a	0.009	-0.009	0.051	0.93

n/a = not available due to either <LOQ or <LOD

Table 4. Regression of wind speeds and height (logarithm) for site 1W

Period	Wind Speed (m/sec) at Different Heights at Center Mast			Slope	Intercept	r^2
	33 cm	55 cm	90 cm			
0-3 hr	1.77	2.20	2.72	0.84	-1.57	0.96
3-6 hr	2.02	2.80	3.18	1.06	-2.13	>0.99
6-12 hr	1.18	2.40	1.77	0.67	-1.24	0.37
12-24 hr	0.49	0.80	0.65	0.18	-0.15	0.41

Table 5. Regression of temperatures and height (logarithm) for site 1W

Period	Temperature (°C) at Different Heights at Center Mast			Slope	Intercept	r^2
	33 cm	55 cm	90 cm			
0-3 hr	21.38	21.16	20.81	-0.49	23.35	0.93
3-6 hr	24.81	24.67	24.46	-0.31	26.05	0.92
6-12 hr	23.39	23.64	23.68	0.27	22.35	0.93
12-24 hr	16.82	17.00	17.00	0.17	16.15	0.87

For site 2E, the r^2 values for concentration and height were 0.81 or higher, showing excellent correlation for all periods. However, it should be noted that there were more values below the LOQ or LOD for site 2E than 1W. For wind speed, the regressions for site 2E were 0.98 or greater. For temperatures, the r^2 values of the regressions were 0.91 or greater.

Table 6. Regression of concentrations and height (logarithm) for site 2E

Period	Concentrations (µg/m³) at Different Heights at Center Mast					Slope	Intercept	r^2
	20 cm	40 cm	60 cm	80 cm	100 cm			
0-3 hr	0.0429	n/a	n/a	n/a	0.0209	-0.014	0.084	>0.99
3-6 hr	0.0396	n/a	0.0241	n/a	0.0225	-0.011	0.072	0.95
6-12 hr	0.0404	n/a	0.0312	0.0292	0.0176	-0.012	0.077	0.81
12-24 hr	0.0248	n/a	0.0099	0.0118	0.0089	-0.010	0.054	0.91

n/a = not available due to either <LOQ or <LOD

Table 7. Regression of wind speeds and height (logarithm) for site 2E

Period	Wind Speed (m/sec) at Different Heights at Center Mast			Slope	Intercept	r^2
	33 cm	55 cm	90 cm			
0-3 hr	2.00	2.60	2.88	0.80	-1.13	>0.99
3-6 hr	1.89	2.49	2.75	0.79	-1.18	0.99
6-12 hr	0.91	1.29	1.40	0.46	-0.86	0.98
12-24 hr	0.45	0.67	0.76	0.29	-0.69	0.99

Table 8. Regression of temperature and height (logarithm) for site 2E

Period	Temperature (°C) at Different Heights at Center Mast			Slope	Intercept	r^2
	33 cm	55 cm	90 cm			
Day 1, 0-3 h	23.7	23.05	22.87	-0.76	26.62	0.98
Day 1, 3-6 h	25.4	24.96	24.86	-0.53	27.45	0.96
Day 1, 6-12 h	22.8	22.89	22.99	0.18	22.07	0.98
Day 1, 12-24 h	16.6	16.68	16.77	0.13	16.11	0.91

Tables 9 and 10 show the results of the aerodynamic method calculation. The aerodynamic method requires an estimate of the difference in concentration, wind speed, and temperature at two heights. Values of 50 and 100 cm were chosen for the heights and the concentration, wind speed, and temperature values were estimated from the regressions shown above. Tables 9 and 10 show the predicted values at 50 and 100 cm for concentration, wind speed, and temperature, as well as the Richardson number and the stability correction values.

For site 1W, the estimated fluxes ranged from 0.000054 to 0.0022 $\mu g/m^2/sec$. The values for the first three periods were similar, ranging from 0.0012 to 0.0022 $\mu g/m^2/sec$, whereas the flux was significantly lower for the last period.

For site 1E, the estimated fluxes ranged from 0.00017 to 0.0014 $\mu g/m^2/sec$. The fluxes for the first two periods were significantly higher than the last two periods.

Table 9. Aerodynamic method calculations for site 1W

Period	Estimated Values from Regression						*Ri*	Φ_m	Φ_p	Flux (µg/m²/sec)
	Concentration (µg/m³)		Wind Speed (m/sec)		Temperature (K)					
	50 cm	100 cm	50 cm	100 cm	50 cm	100 cm				
Day 1, 0-3 h	0.0515	0.0400	1.726	2.310	294.6	294.2	-0.017	0.92	0.78	0.0016
Day 1, 3-6 h	0.0565	0.0429	2.029	2.766	298.0	297.8	-0.007	0.97	0.84	0.0022
Day 1, 6-12 h	0.0517	0.0348	1.384	1.849	296.6	296.8	0.014	1.07	1.04	0.0012
Day 1, 12-24 h	0.0150	0.0086	0.541	0.665	290.0	290.1	0.135	1.47	1.76	0.000054

Table 10. Aerodynamic method calculations for site 2E

Period	Estimated Values from Regression						*Ri*	Φ_m	Φ_p	Flux (µg/m²/sec)
	Concentration (µg/m³)		Wind Speed (m/sec)		Temperature (K)					
	50 cm	100 cm	50 cm	100 cm	50 cm	100 cm				
Day 1, 0-3 h	0.0304	0.0209	2.015	2.573	296.8	296.3	-0.028	0.88	0.73	0.0014
Day 1, 3-6 h	0.0286	0.0209	1.908	2.455	298.6	298.2	-0.020	0.91	0.76	0.0011
Day 1, 6-12 h	0.0309	0.0227	0.929	1.246	295.9	296.1	0.021	1.10	1.10	0.00038
Day 1, 12-24 h	0.0149	0.0081	0.453	0.656	289.8	289.9	0.037	1.17	1.23	0.00017

Flux Estimates Using the Indirect Method

To apply the indirect method, AERMOD was run to estimate concentrations at each of the offsite receptors. The first step was to run AERMET to generate meteorological input files for AERMET. The following assumptions were made in running AERMET:

- Hourly averaged meteorological parameters were calculated from the onsite meteorological stations at 1.5 meters.
- AERMET also requires cloud cover ceiling height and other variables needed to calculate the micrometeorological parameters. The following data were used:
    - ISHD data from Lawson AAF Airport at 32.35N 85.0W
    - FSL data from FFC Peachtree, GA at 33.35N 84.56W
- For surface characteristics, AERSURFACE was used with land use data within 1 km from the site to obtain the values of albedo, Bowen ratio, and roughness length.
    - The lowest roughness length of z_0=0.18m was chosen to allow AERMET to select the onsite wind data for the final output (see page 3-25 of AERMET User guide: "This level is defined as the lowest level with a non-missing wind speed and direction between $7 \cdot z_0$ and 100 meters (inclusive), where z_0 is the surface roughness length.")

With the meteorological data prepared above as an input, AERMOD was run using the following assumptions:

- Area source with nominal flux (10^{-6} g/m^2/s). The size of the area was 120 m by 120 m. An initial dispersion coefficient of 0 m was assumed
- Receptors were placed 15 m from the edge of the field to correspond to the location of the receptors in the monitoring study. Receptors A-H were modeled with the flag pole height of 1 m.
- Concentrations for each of the periods from the start of the flux release were derived in the post-processing step for each receptor, starting from 9am on 4/11/2016 for Field 1W and 10am on 4/11/2016 for Field 2E.

As noted above, there are only limited quantified residues at the offsite monitors, which significantly limit the analysis. There were six detects (assumed to sample above LOQ) at site 1W and only one detect at site 2E. The standard regression approach could not be used to estimate the fluxes because multiple detections are needed at monitors for a given period. There was only one period with more than one detect (6-12 hr for site 1W, with two detections). Also, all but one of the detects were at location B to the north of the plot; the other detection was at location A to the northwest. Therefore, a simplified approach was used where the flux was

estimated as the ratio of the measured air concentration and predicted air concentration multiplied by the nominal flux of 10^{-6} g/m^2/s. This approach should not be considered as reliable as the aerodynamic method. Having only a single (or at most two) offsite monitors with detections significantly limits the indirect method. The concentrations at the offsite monitors are significantly influenced by the wind direction and subtle changes in the wind direction can meaningfully affect concentrations.

Figures 1 and 2 show the locations of the offsite receptors (figures from field report). Table 11 shows measurements with detections and the estimated fluxes. The estimated fluxes ranged from 0.00051 µg/m^2/sec (12-24 hr period for site 1W) to 0.0056 µg/m^2/sec (0-3 hr period for site 1W). The estimated fluxes are on the same order of magnitude as the aerodynamic method, but were always higher ranging from a 1.2 to 9.5-fold difference.

Table 11. Measured offsite concentrations and estimated fluxes

Site	Period	Station	Residue (µg)	Length of Period	Flow Rate (L)	Measured Concentration (µg/m^3)	AERMOD Estimated Concentration (µg/m^3)	Estimated Flux (µg/m^2/sec)
1W	0-3 hr	B	0.011	3.32	597	0.0184	3.310	0.0056
1W	3-6 hr	B	0.014	2.98	537	0.0261	2.397	0.011
1W	6-12 hr	A	0.011	5.15	927	0.0119	7.931	0.0015
1W	6-12 hr	B	0.032	5.15	927	0.0345	16.581	0.0021
1W	12-24 hr	B	0.013	12.00	2160	0.0060	11.770	0.00051
2E	6-12 hr	B	0.015	4.73	852	0.0176	17.811	0.00099

Figure 1. Field and monitor layout for site 1W (from Braydon et al., 2016)

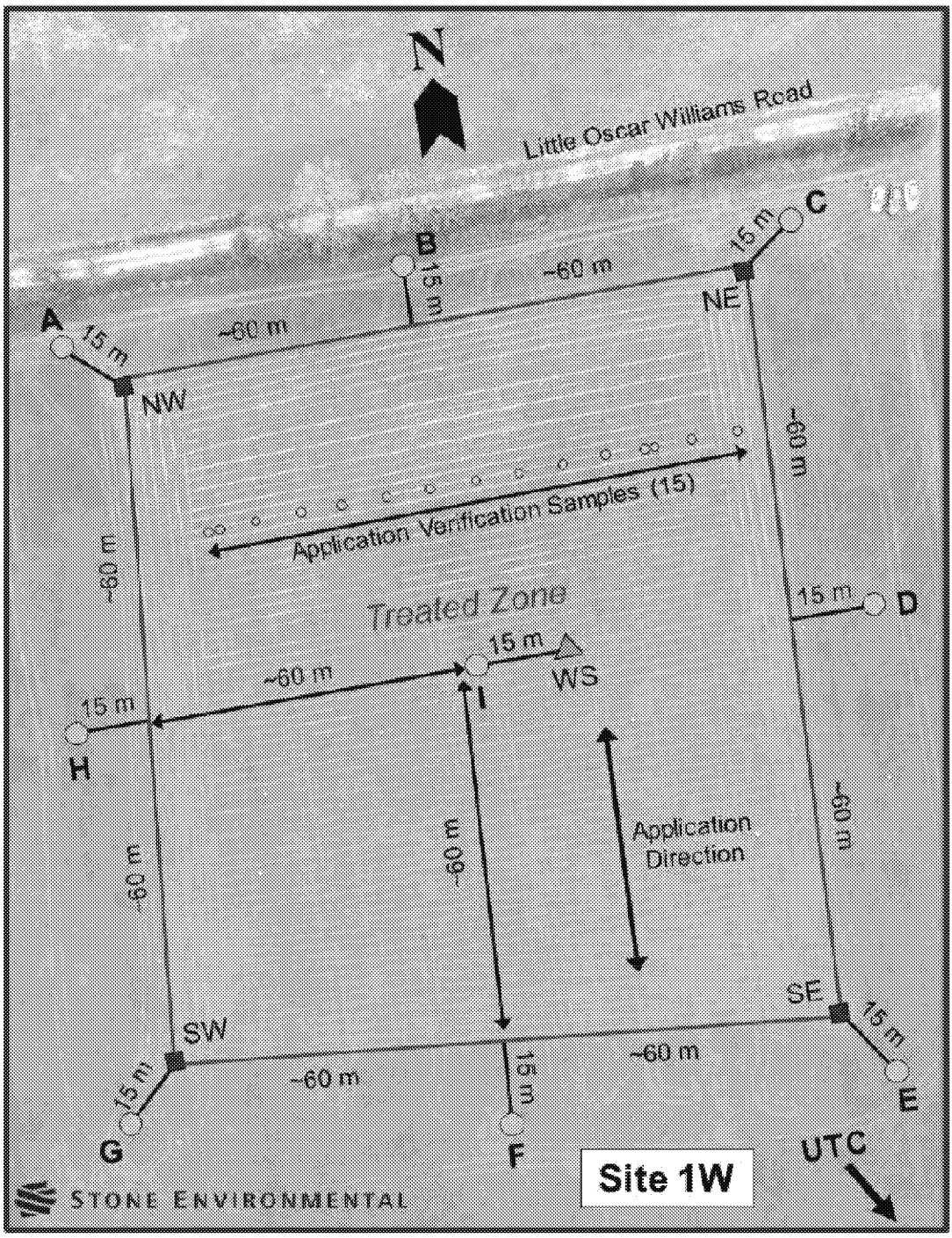
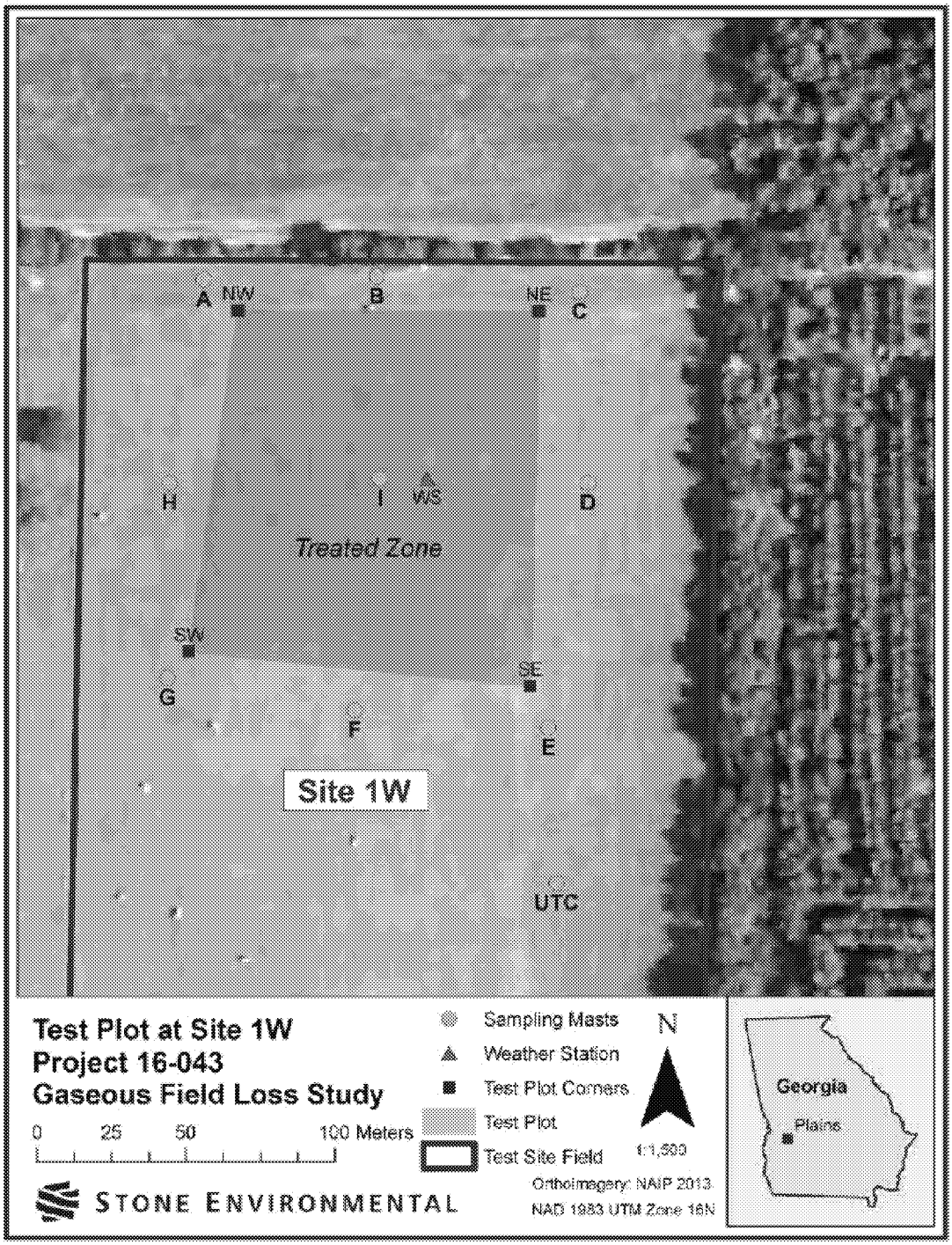


Figure 2. Field and monitor layout for site 1W (from Braydon et al., 2016)



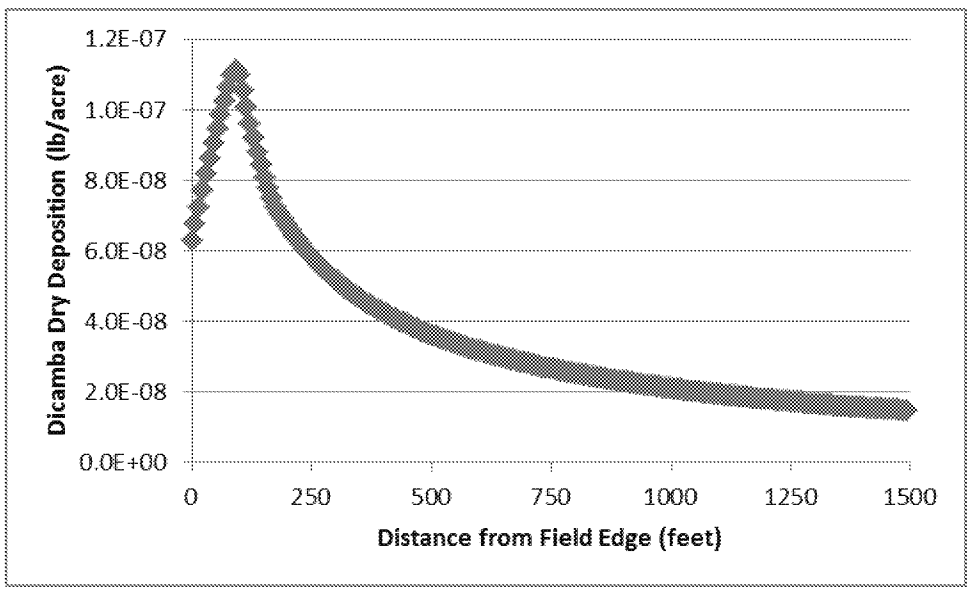
Estimated Offsite Deposition Values

An analysis was performed using EPA's AERSCREEN model to estimate downwind deposition levels based on the fluxes estimated in this report. AERSCREEN is the screening model for AERMOD. A 40-acre field was assumed with a release height of 0.4 meters, the height of the Bermuda grass. Standard assumptions were made for the Bowen ratio (2.0), albedo (0.18), and roughness length (0.05). An initial σ_{zo} of 0.4 meters was assumed, corresponding to the release height.

AERSCREEN is not designed to estimate deposition levels; it only estimates air concentrations. However, dry deposition can be estimated from air concentrations by multiplying by the deposition velocity (AERMOD Deposition Algorithms – Science Document (Revised Draft)). Waite et al. (2002) estimated a mean dicamba deposition velocity of 0.013 m/sec. This value was used to estimate dry deposition levels based on the estimated air concentrations from AERSCREEN.

Calculations were made using the peak flux estimate of 0.0022 $\mu g/m^2/sec$ (3-6 hours at Site 1W). The AERSCREEN output is shown in Appendix A and the estimated dry deposition is plotted versus distance from the edge of the field in Figure 3. The 1-hour deposition peaks at 1.11×10^{-7} lb/A at about 100 feet from the field edge. The 1-hour deposition falls below 10^{-7} lb/A by about 1200 feet.

Figure 3. Estimated deposition of dicamba (lb/A) by distance from the edge of a 40 acre field



Note that the deposition estimates presented above are for 1-hour. To derive a very conservative estimate of the 24-hour deposition, the values can be multiplied by 24. Alternatively, a refined analysis could be conducted with AERMOD using historical meteorological data and a flux profile over the first day of the application.

Conclusions

Dicamba flux estimates were made from data collected for applications in Preston, Georgia at 5 lbs a.e./gal. Two methods were used to estimate the flux, including the aerodynamic method and the indirect method. Due to limited offsite detects, the aerodynamic method estimates are considered more reliable. The peak flux estimate with the aerodynamic method was 0.0022 $\mu g/m^2/sec$.

AERSCREEN was run to estimate downwind deposition levels for a 40 acre field. The estimated 1-hour deposition peaked at 1.11×10^{-7} lb/A at about 100 feet from the field edge. The 1-hour deposition fell below 10^{-8} lb/A by about 1200 feet.

References

Brayden BH; Toth BN; Beguin SJ. 2016. Sampling for possible gaseous field loss after application of a commercial herbicide. Final report – field phase. Report prepared by Stone Environmental for BASF Crop Protection. Sponsor study ID 813945.

Majewski MS; Glotfelty DE; Tha Paw UK; Sieber JN. 1990. A field comparison of several methods for measuring pesticide evaporation rates from soil. *Environmental Science & Technology*, 24:1490-1497.

Pruitt WO; Morgan DL; Lourence FJ. 1973. Momentum and mass transfers in the surface boundary layer. *Quarterly Journal of the Royal Meteorological Society*, 99:370-386.

Ross LJ; Johnson B; Kim KD; Hsu J. 1996. Prediction of methyl bromide flux from area sources using the ISCST model. *Journal of Environmental Quality*. 25:885–891.

Waite DT; Sproull JR; Quiring DV; Cessna AJ. 2002. Dry atmospheric deposition and deposition velocities of dicamba, 2,4-dichlorophenoxyacetic acid and γ-1,2,3,4,5,6-hexachlorocyclohexane. *Analytica Chimica Acta*. 467:245-252.

Appendix A – AERSCREEN Output

```
AERSCREEN 15181 / AERMOD 15181                                    05/23/16
                                                                  20:09:34

TITLE: BASF

-----------------------------------------------------------------------------
******************************  AREA PARAMETERS  ****************************
-----------------------------------------------------------------------------

SOURCE EMISSION RATE:         0.360E-03 g/s             0.286E-02 lb/hr

AREA EMISSION RATE:           0.222E-08 g/(s-m2)        0.176E-07 lb/(hr-m2)
AREA HEIGHT:                       0.30 meters               0.98 feet
AREA SOURCE LONG SIDE:           402.40 meters            1320.21 feet
AREA SOURCE SHORT SIDE:          402.40 meters            1320.21 feet
INITIAL VERTICAL DIMENSION:        0.40 meters               1.31 feet
RURAL OR URBAN:                   RURAL

FLAGPOLE RECEPTOR HEIGHT:          1.50 meters               4.92 feet

INITIAL PROBE DISTANCE =          5000. meters             16404. feet


-----------------------------------------------------------------------------
************************  BUILDING DOWNWASH PARAMETERS  **********************
-----------------------------------------------------------------------------

               BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES


-----------------------------------------------------------------------------
***************************  FLOW SECTOR ANALYSIS  ***************************
                 25 meter receptor spacing: 1. meters - 5000. meters
-----------------------------------------------------------------------------


   MAXIMUM  IMPACT  RECEPTOR

   Zo        SURFACE   1-HR CONC  RADIAL  DIST   TEMPORAL
   SECTOR    ROUGHNESS  (ug/m3)    (deg)   (m)    PERIOD
  ---------------------------------------------------
      1*       0.050    0.9546      45   300.0     ANN
* = worst case diagonal


-----------------------------------------------------------------------------
**********************  MAKEMET METEOROLOGY PARAMETERS  *********************
-----------------------------------------------------------------------------

MIN/MAX TEMPERATURE:    288.0 / 311.0 (K)

MINIMUM WIND SPEED:       0.5 m/s

ANEMOMETER HEIGHT:     10.000 meters

SURFACE CHARACTERISTICS INPUT: USER ENTERED

ALBEDO:                  0.18
BOWEN RATIO:             2.00
ROUGHNESS LENGTH:       0.050 (meters)


       METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT
       -------------------------------------------------------------

 YR MO DY JDY HR
 -- -- -- --- --
 10 01 11  11 01

    HO     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    ZO  BOWEN ALBEDO  REF WS
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
-0.37  0.019 -9.000  0.020 -999.   30.      1.7 0.050   2.00   0.18    0.50

   HT  REF TA     HT
- - - - - - - - - - -
  10.0   311.0    2.0
```

```
----------------------------------------------------------------------------
*********************** AERSCREEN AUTOMATED DISTANCES ********************
                 OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE
----------------------------------------------------------------------------
```

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.5380	2524.99	0.2229
25.00	0.5797	2550.00	0.2212
50.01	0.6215	2575.00	0.2195
75.00	0.6618	2600.00	0.2179
100.00	0.7008	2625.01	0.2162
125.00	0.7386	2650.00	0.2146
150.01	0.7751	2675.00	0.2130
174.99	0.8105	2700.00	0.2114
200.00	0.8448	2725.01	0.2098
225.00	0.8781	2749.99	0.2083
250.00	0.9104	2775.00	0.2068
274.99	0.9418	2800.00	0.2053
300.00	0.9546	2825.00	0.2038
325.00	0.9414	2849.99	0.2023
350.00	0.9039	2875.00	0.2009
375.01	0.8631	2900.00	0.1995
400.00	0.8236	2925.00	0.1981
425.00	0.7868	2950.01	0.1967
450.00	0.7529	2975.00	0.1953
475.01	0.7218	3000.00	0.1940
500.00	0.6932	3025.00	0.1926
525.00	0.6670	3050.01	0.1913
550.00	0.6429	3075.00	0.1901
575.01	0.6205	3100.00	0.1888
599.99	0.6054	3125.00	0.1875
625.00	0.5913	3150.00	0.1862
650.00	0.5779	3174.99	0.1849
675.00	0.5651	3200.00	0.1837
699.99	0.5527	3225.00	0.1824
725.00	0.5410	3250.00	0.1812
750.00	0.5297	3274.99	0.1800
775.00	0.5189	3300.00	0.1788
800.01	0.5086	3325.00	0.1777
825.00	0.4987	3350.00	0.1765
850.00	0.4892	3375.01	0.1754
875.00	0.4800	3400.00	0.1742
900.01	0.4713	3425.00	0.1731
924.99	0.4629	3450.00	0.1720
950.00	0.4548	3475.01	0.1710
975.00	0.4470	3499.99	0.1699
1000.00	0.4395	3525.00	0.1688
1024.99	0.4322	3550.00	0.1678
1050.00	0.4252	3575.00	0.1668
1075.00	0.4185	3599.99	0.1657
1100.00	0.4119	3625.00	0.1647
1125.01	0.4056	3650.00	0.1637
1150.00	0.3995	3675.00	0.1628
1175.00	0.3936	3700.01	0.1618
1200.00	0.3879	3725.00	0.1608
1225.01	0.3824	3750.00	0.1599
1250.00	0.3770	3775.00	0.1589
1275.00	0.3718	3800.01	0.1580
1300.00	0.3667	3825.00	0.1571
1325.01	0.3618	3850.00	0.1562
1349.99	0.3571	3875.00	0.1553
1375.00	0.3525	3900.00	0.1544
1400.00	0.3480	3924.99	0.1535
1425.00	0.3436	3950.00	0.1527
1449.99	0.3393	3975.00	0.1518
1475.00	0.3352	4000.00	0.1510
1500.00	0.3311	4024.99	0.1502
1525.00	0.3272	4050.00	0.1493

1550.01	0.3234	4075.00	0.1485
1575.00	0.3196	4100.00	0.1477
1600.00	0.3159	4125.01	0.1469
1625.00	0.3124	4150.00	0.1461
1650.01	0.3088	4175.00	0.1453
1674.99	0.3054	4200.00	0.1446
1700.00	0.3020	4225.01	0.1438
1725.00	0.2987	4249.99	0.1430
1750.00	0.2956	4275.00	0.1423
1774.99	0.2925	4300.00	0.1415
1800.00	0.2895	4325.00	0.1408
1825.00	0.2865	4349.99	0.1401
1850.00	0.2836	4375.00	0.1393
1875.01	0.2808	4400.00	0.1386
1900.00	0.2780	4425.00	0.1379
1925.00	0.2752	4450.01	0.1372
1950.00	0.2726	4475.00	0.1365
1975.01	0.2699	4500.00	0.1358
1999.99	0.2674	4525.00	0.1351
2025.00	0.2648	4550.01	0.1345
2050.00	0.2624	4575.00	0.1338
2075.00	0.2599	4600.00	0.1331
2099.99	0.2576	4625.00	0.1325
2125.00	0.2552	4650.00	0.1318
2150.00	0.2529	4674.99	0.1312
2175.00	0.2507	4700.00	0.1306
2199.99	0.2485	4725.00	0.1299
2225.00	0.2463	4750.00	0.1293
2250.00	0.2442	4774.99	0.1287
2275.00	0.2421	4800.00	0.1281
2300.01	0.2400	4825.00	0.1274
2325.00	0.2380	4850.00	0.1268
2350.00	0.2360	4875.01	0.1262
2375.00	0.2341	4900.00	0.1256
2400.01	0.2321	4925.00	0.1251
2424.99	0.2303	4950.00	0.1245
2450.00	0.2284	4975.01	0.1239
2475.00	0.2266	4999.99	0.1233
2500.00	0.2248		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.9566	0.9566	0.9566	0.9566	N/A

DISTANCE FROM SOURCE 312.00 meters

IMPACT AT THE AMBIENT BOUNDARY	0.5380	0.5380	0.5380	0.5380	N/A

DISTANCE FROM SOURCE 1.00 meters

Message

From: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]
Sent: 3/31/2016 12:38:44 PM
To: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]
Subject: RE: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

Sorry for the add'l email, but we'd ask EPA to note the language already written by the agency elsewhere in the label (emphasis added):

FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO *NOT CONTAIN A DICAMBA TOLERANCE GENE OR ARE NOT NATURALLY TOLERANT TO DICAMBA*

Dan Jenkins
U.S. Agency Lead
Regulatory Affairs
Monsanto Company
1300 I St., NW
Suite 450 East
Washington, DC 20005
Office: 202-383-2851
Cell: 571-732-6575

From: JENKINS, DANIEL J [AG/1920]
Sent: Thursday, March 31, 2016 8:02 AM
To: 'Rowland, Grant'; 'Kenny, Daniel'; 'Montague, Kathryn V.'
Subject: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

We're cleaning things up, but please see our comments re

110 ft buffer: *addition of "from" could be read to mean that you must have 110' between spray and field edge regardless of the "exceptions" (adjacent road, planted field any of the exceptions). That could result in 110' + the distance of any the excepted areas. Here is a proposed fix:*

"Maintain a 110 foot in-field buffer (when applying 16 fl oz of this product per acre), or a 220 foot in-field buffer (when applying 32 fl oz of this product per acre) on from all outer edges of the field, less the distance of any of the adjacent areas specified below."

Adjacent ag fields: *it doesn't make sense that non-broadleafs with registered uses can be included in the buffer distance calculation, but if a neighbor plants the exact same gm dicamba tolerant crops and it is adjacent it can't be. We strongly suggest the following:*

Planted agricultural fields containing crops with a natural tolerance to dicamba including corn, sorghum, proso millet, small grains and sugarcane and crops containing a dicamba tolerance gene including Roundup Ready II Xtend soybeans and Bollgard II Xtendflex Cotton.

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

Message

From: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]
Sent: 3/31/2016 12:01:36 PM
To: Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]
Subject: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf
Attachments: M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

We're cleaning things up, but please see our comments re

110 ft buffer: *addition of "from" could be read to mean that you must have 110' between spray and field edge regardless of the "exceptions" (adjacent road, planted field any of the exceptions). That could result in 110' + the distance of any the excepted areas. Here is a proposed fix:*

"Maintain a 110 foot in-field buffer (when applying 16 fl oz of this product per acre), or a 220 foot in-field buffer (when applying 32 fl oz of this product per acre) on from all outer edges of the field, less the distance of any of the adjacent areas specified below."

Adjacent ag fields: *it doesn't make sense that non-broadleafs with registered uses can be included in the buffer distance calculation, but if a neighbor plants the exact same gm dicamba tolerant crops and it is adjacent it can't be. We strongly suggest the following:*

Planted agricultural fields containing crops with a natural tolerance to dicamba including corn, sorghum, proso millet, small grains and sugarcane and crops containing a dicamba tolerance gene including Roundup Ready II Xtend soybeans and Bollgard II Xtendflex Cotton.

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR M1691 HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using M1691 Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

M1691

Herbicide

EPA Reg. No. 524-582

GROUP	4	HERBICIDE

FOR PREEMERGENCE AND POSTEMERGENCE USE ON ROUNDUP READY 2 XTEND™ SOYBEAN

Keep out of reach of children

CAUTION!

In case of an emergency involving this product, call collect, day or night, 314-694-4000.

Bollgard II® Roundup Ready®, Roundup Ready 2 Xtend™ and XtendFlex™ are trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

ROUNDUP READY 2 XTEND™ SOYBEAN CONTAINS A PATENTED GENE THAT PROVIDES TOLERANCE TO DICAMBA, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO SOYBEANS THAT ARE NOT DICAMBA TOLERANT, INCLUDING SOYBEANS WITH A TRAIT ENGINEERED TO CONFER TOLERANCE TO AUXIN HERBICIDES OTHER THAN DICAMBA. FOLLOW THE REQUIREMENTS SET FORTH HEREIN TO PREVENT SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS. CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A DICAMBA TOLERANCE GENE OR ARE NOT

NATURALLY TOLERANT TO DICAMBA, COULD RESULT IN SEVERE PLANT INJURY OR DESTRUCTION.

Information on Roundup Ready 2 Xtend™ soybean can be obtained from your seed supplier or Monsanto representative. Roundup Ready 2 Xtend™ soybean must be purchased from an authorized licensed seed supplier.

The instructions contained in this Monsanto Supplemental Label include all applications of M1691 Herbicide that may be made to Roundup Ready 2 Xtend™ soybean during the complete cropping season. DO NOT combine these instructions with other instructions in the "SOYBEAN" Section of any other M1691 Herbicide label for use over crops that do not contain the dicamba tolerance trait.

Note: Roundup Ready 2 Xtend™ soybean and methods of controlling weeds and applying dicamba in a Roundup Ready 2 Xtend™ soybean crop are protected under U.S. patent law. No license to use Roundup Ready 2 Xtend™ soybean is granted or implied with the purchase of this herbicide product. Roundup Ready 2 Xtend™ soybean is owned by Monsanto and a license must be obtained from Monsanto before using it. Contact your Authorized Monsanto Retailer for information on obtaining a license to Roundup Ready 2 Xtend™ soybean.

See the "PRODUCT INFORMATION" and "APPLICATION EQUIPMENT AND TECHNIQUES sections of the M1691 Herbicide product label for important product use information. The directions found on this supplemental label are controlling, where inconsistencies are found with the label booklet.

TYPES OF APPLICATIONS: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

M1691 Herbicide is approved by U.S. EPA to be used in the following states, subject to county restriction as noted: Alabama, Arkansas, Arizona, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas, Virginia, West Virginia, Wisconsin.

USE INSTRUCTIONS: Apply this product in a minimum of 10 gallons of spray solution per acre as a broadcast application. For best performance, control weeds early when they are less than 4 inches. Timely application will improve control and reduce weed competition. Refer to the following table for maximum application rates of this product with Roundup Ready 2 Xtend™ soybeans.

Maximum Application Rates	
Combined total per year for all applications	64 fluid ounces per acre (2.0 lb a.e. dicamba per acre)
Total of all Burndown/Early preplant, Preplant, At-Planting, and Preemergence applications	32 fluid ounces per acre (1.0 lb a.e. dicamba per acre)

ED_002084_00044379-00002

Total of all In-crop applications from emergence up to and including beginning bloom (R1 stage soybeans)	32 fluid ounces per acre (1.0 lb a.e. dicamba per acre)
Maximum In-crop, single application	16 fluid ounces per acre (0.5 lb a.e. dicamba per acre)

a.e. – acid equivalent
Refer to Table 1 of the M1691 Herbicide label booklet for application rates for weed type and growth stage controlled by this product. Maximum in-crop application rate should be used when treating tough to control weeds, dense vegetative growth or weeds with a well-established root system.

Preplant, At-Planting, Preemergence
USE INSTRUCTIONS: This product may be used to control broadleaf weeds and may be applied before, during or immediately after planting Roundup Ready 2 Xtend™ soybean. Refer to the "WEEDS CONTROLLED" section of the label booklet for M1691 Herbicide for specific weeds controlled.

RESTRICTIONS: The maximum combined quantity of this product that may be applied for all preplant, at-planting, and preemergence applications is 32 fluid ounces (1.0 lb a.e. dicamba) per acre per ~~season~~. The maximum application rate for a single, preplant, at-planting, or preemergence application must not exceed 32 fluid ounces (1.0 lb a.e. dicamba) per acre.

Postemergence (In-crop)
USE INSTRUCTIONS: This product may be used to control broadleaf weeds in Roundup Ready 2 Xtend™ soybean. In-crop applications of this product can be made from emergence (cracking) up to and including beginning bloom (R1 growth stage of soybeans). The maximum rate for any single, in-crop application must not exceed 16 fluid ounces (0.5 lb a.e. dicamba) per acre. This is also the minimum single application rate in order to reduce the selection for resistant weeds. For best performance, control weeds early when they are less than 4 inches. Monsanto Company does not warrant product performance of applications to labeled weeds greater than 4 inches in height. A second application of this product up to the R1 crop growth stage may be necessary to control new flushes of weeds. Allow at least 7 days between applications. For best results, apply M1691 Herbicide after some weed re-growth has occurred.

Application of this product postemergent and under stressful environments may cause temporary loss of turgor, a response commonly described as leaf droop in RR2X soybeans. Typically, affected plants recover in 1-3 days depending on the level of droop and environmental conditions.

RESTRICTIONS: The combined total application rate from crop emergence up to R1 must not exceed 32 fluid ounces (1.0 lb a.e. dicamba) per acre. The maximum single, in-crop application rate must not exceed 16 fluid ounces (0.5 lb a.e. dicamba). The combined total per year for all applications must not exceed 64 fluid ounces (2.0 lb a.e dicamba) per acre.
Allow at least 7 days between final application and harvest or feeding of soybean forage. Allow at least 14 days between final application and harvest or feeding of soybean hay.

TANK-MIXING INSTRUCTIONS:

RESTRICTIONS:

- **DO NOT TANK MIX ANY OTHER HERBICIDE WITH M1691 HERBICIDE.**

TANK MIXING INSTRUCTIONS FOR ADJUVANTS

M1691 Herbicide may only be tank-mixed with adjuvants that have been tested and found by EPA not to have an unreasonable adverse effect on the spray drift properties of M1691 Herbicide. A list of those EPA approved adjuvants and use rates may be found at www.M1691tankmix.com. DO NOT tank mix any adjuvant with M1691 Herbicide unless:

1. You check the list of EPA approved adjuvants found not to have an unreasonable adverse effect on the spray drift properties of M1691 Herbicide at www.M1691tankmix.com no more than 7 days before applying M1691 Herbicide; and
2. The intended adjuvant tank-mix with M1691 Herbicide is identified on that list of tested and approved adjuvants; and
3. The intended adjuvant tank-mix with M1691 Herbicide is not prohibited on this label.
4. Additional Adjuvant Warnings and Restrictions:

- Some COC, HSOC and MSO adjuvants may cause a temporary crop response.
- Do not tank mix products containing ammonium salts such as ammonium sulfate and urea ammonium nitrate.
- Drift reduction agents listed on the website above can minimize the percentage of driftable fines. However, the applicator must check with the DRA manufacturer to determine if the approved DRA will work effectively with the spray nozzle, the spray pressure, and the desired spray solution.

MONSANTO MAKES NO RECOMMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY ADJUVANT THAT MAY APPEAR ON THE WEBSITE REFERENCED ABOVE, REGARDLESS OF WHETHER SUCH ADJUVANT IS USED ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH ADJUVANT ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. See the section titled "LIMIT OF WARRANTY AND LIABILITY" herein for more information.

WEED RESISTANCE MANAGEMENT

Some naturally occurring weed biotypes that are tolerant (resistant) to dicamba may exist due to genetic variability in a weed population. Where resistant biotypes exist, the repeated use of herbicides with the same modes of action can lead to the selection for resistant weeds. Certain agronomic practices can delay or reduce the likelihood that resistant weed populations will develop and can be utilized to manage weed resistance once it occurs.

Use a minimum of 0.5 lb a.e./A (16 fl oz/A) of this product in a single application in order to minimize the selection for resistant weeds.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued availability of this product depends on the successful management of the weed resistance program; therefore, it is very important to perform the following actions.

To aid in the prevention of developing weeds resistant to this product, the following steps should be followed where practical:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Apply full rates of M1691 Herbicide for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in weed species.
- Report any incidence of non-performance of this product against a particular weed species to your Monsanto retailer, representative or call [INSERT PHONE NUMBER]
- If resistance is suspected, treat weed escapes with an herbicide having a mode of action other than Group 4 and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other modes of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of this product with non-Group 4 herbicides.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

Contact the local agricultural extension service, Monsanto representative, ag retailer or crop consultant for further guidance on weed control practices as needed.

APPLICATION EQUIPMENT AND TECHNIQUES:
DO NOT APPLY THIS PRODUCT TO ROUNDUP READY 2 XTEND™ SOYBEAN USING AERIAL SPRAY EQUIPMENT.

Apply this product using properly maintained and calibrated equipment capable of delivering the desired volumes.

Spray Drift Management

Do not allow herbicide solution to mist, drip, drift or splash onto desirable vegetation because severe injury or destruction to desirable broadleaf plants could result. The following drift management requirements must be followed.

Controlling Droplet Size
Drift potential may be reduced by applying large droplets that provide sufficient coverage and control. Applying larger droplets can reduce drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions (see the "**Wind Speed and Direction**", "**Temperature and Humidity**" and "**Temperature Inversions**" sections of this label).

- **Nozzle type.** Use the Tee Jet® TTI11004 nozzle with a maximum operating pressure of 63 psi when applying M1691 Herbicide. Do not use any other nozzle and pressure combination not specifically allowed by this label.

- **Spray Volume.** Apply this product in a minimum of 10 gallons of spray solution per acre. Use a higher spray volume when treating dense vegetation. Higher spray volumes may also allow the use of larger nozzle orifices (sizes) which produce coarser spray droplets.

- **Equipment Ground Speed.** Select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but do not exceed a ground speed of 15 miles per hour. Slower speeds generally result in better spray coverage and deposition on the target area.

- **Spray boom Height.** Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but do not exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Larger droplets have a lower surface to volume ratio and are impacted less by temperature and humidity. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions. Do not apply during a temperature inversion because off-target movement potential is high.

- During a temperature inversion, the atmosphere is very stable and vertical air mixing is restricted, which can cause small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions.
- Temperature inversions are characterized by increasing temperatures with altitude and are common on evenings and nights with limited cloud cover and light to no wind. Cooling of air at the earth's surface takes place and warmer air is trapped above it. They begin to form as the sun sets and often continue into the morning.
- Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft

smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

- The inversion will dissipate with increased winds (above 3 MPH) or at sunrise when the surface air begins to warm (generally 3°F from morning low).

Wind Speed and Direction

- Drift potential is lowest between wind speeds of 3 to 10 miles per hour.
- Do not apply at wind speeds greater than 15 mph.
- For M1691 Herbicide wind speed and direction restrictions see below table:

Wind speed	Application conditions and restrictions
<3 mph	Do not apply M1691 Herbicide
3-10 mph	Optimum M1691 Herbicide application conditions provided all other application requirements in this label are met.
>10 – 15 mph	Do not apply product when wind is blowing toward sensitive areas
> 15 mph	Do not apply M1691 Herbicide

NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Sensitive Areas

Threatened and Endangered Species

~~Maintain a 110 foot buffer (when applying 16 fl oz of this product per acre), or a 220 foot buffer (when applying 32 fl oz of this product per acre) on all outer edges of the field.~~

To maintain the required buffer zone:

- No application swath can be initiated in, or into an area that is within the applicable buffer distance ~~of a sensitive area.~~
- The following areas may be included in the buffer distance calculation when adjacent to field edges:
  - Roads, paved or gravel surfaces.
  - ~~Planted agricultural fields containing crops that are tolerant to dicamba including non-broadleaf plants like corn, wheat, dicamba-tolerant soybeans and dicamba-tolerant cotton.~~
  - Agricultural fields that have been prepared for planting.
  - Areas covered by the footprint of a building, shade house, silo, feed crib, or other man made structure with walls and or roof.

Non-target Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption. ~~Avoid~~ contact of herbicide with foliage, green stems, exposed non-woody roots of crops, and desirable plants, including beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potato, soybean, sunflower, tobacco, tomato, and other broadleaf plants, because severe injury or destruction may result, including plants in a greenhouse. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants. Applicators are required to

ED_002084_00044379-00007

ensure that they are aware of the proximity to sensitive areas, and to avoid potential adverse effects from off-target movement of M1691 Herbicide. ~~The~~ applicator must survey the application site for neighboring sensitive areas prior to application. The applicator also ~~should~~ consult sensitive crop registries for locating sensitive areas where available.

Failure to follow the requirements in this label could result in severe injury or destruction to desirable sensitive broadleaf crops and trees when contacting their roots, stems or foliage.

Specifically, commercially grown tomatoes and other fruiting vegetables (EPA crop group 8), cucurbits (EPA crop group 9), and grapes are sensitive to dicamba. In order to prevent unintended damage from any drift of this product, do not apply this product when the wind is blowing toward adjacent commercially grown sensitive crops.

Application Awareness

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR

The interaction of equipment and weather related factors must be monitored to maximize performance and on-target spray deposition. The applicator is responsible for considering all of these factors when making a spray decision. The applicator is responsible for compliance with state and local pesticide drift regulations.

Proper spray system equipment cleanout

Minute quantities of dicamba may cause injury to non-dicamba-tolerant soybeans and other sensitive crops (see the "Sensitive Areas" section of this label for more information).
Clean equipment immediately after using this product, using a triple rinse procedure as follows:

1. After spraying, drain the sprayer (including boom and lines) immediately. Do not allow the spray solution to remain in the spray boom lines overnight prior to flushing.
2. Flush tank, hoses, boom and nozzles with clean water.
3. Inspect and clean all strainers, screens and filters.
4. Prepare a cleaning solution with a commercial detergent or sprayer cleaner or ammonia according to the manufacturer's directions.
5. Take care to wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines and nozzles for at least 1 minute with the cleaning solution.
7. Repeat above steps for two additional times to accomplish an effective triple rinse.
8. Remove nozzles, screens and strainers and clean separately in the cleaning solution after completing the above procedures.
9. Appropriately dispose of rinsate from steps 1-7 in compliance with all applicable laws and regulations.
10. Drain sump, filter and lines.
11. Rinse the complete spraying system with clean water.

All rinse water must be disposed of in compliance with local, state, and federal requirements.

CROP ROTATIONAL RESTRICTIONS:

No rotational cropping restrictions apply when rotating to Roundup Ready 2 Xtend™ soybean or Bollgard II® XtendFlex™ cotton. For other crops the interval between application and planting

ED_002084_00044379-00008

rotational crop is given below. When counting days from the application of this product, do not count days when the ground is frozen.. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

Planting/replanting restrictions for M1691 Herbicide applications of 24 fluid ounces per acre or less:
For corn, cotton (except Bollgard II® Xtendflex™ cotton), sorghum, and soybean (except Roundup Ready 2 Xtend™ soybean), follow the planting restrictions in the directions for use for preplant application in **Section 10. Crop-Specific Information** of the label booklet. Do not plant barley, oat, wheat, and other grass seedings for 15 days for every 8 fluid ounces of this product applied per acre east of the Mississippi River and 22 days for every 8 fluid ounces per acre applied west of the Mississippi River. No planting restrictions apply beyond 120 days after application of this product.

Planting/replanting restrictions for applications of more than 24 fluid ounces and up to 32 fluid ounces of M1691 Herbicide per acre:
Wait a minimum of 120 days after application of this product before planting corn, sorghum and cotton (except Bollgard II® Xtendflex™ cotton) east of the Rocky Mountains and before planting all other crops (except Roundup Ready 2 Xtend™ soybean) grown in areas receiving 30 inches or more rainfall annually. Wait a minimum of 180 days before planting crops in areas with less than 30 inches of annual rainfall. Wait a minimum of 30 days for every 16 fluid ounces of this product applied per acre before planting barley, oat, wheat, and other grass seedings east of the Mississippi River and 45 days for every 16 fluid ounces of this product applied per acre west of the Mississippi River.

LIMIT OF WARRANTY AND LIABILITY

Monsanto Company ("Company") warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in this supplemental label ("Directions") when used in accordance with the Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein. Specifically, and without limiting the foregoing, MONSANTO MAKES NO RECCOMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY ADJUVANT THAT MAY APPEAR ON THE WEBSITE REFERENCED IN THE TANK-MIXING INSTRUCTIONS HEREIN, REGARDLESS OF WHETHER SUCH ADJUVANT IS USED ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH ADJUVANT ALONE OR IN A TANK MIX WITH M1691 HERBICIDE.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those expressly recommended by Company in the Directions, application to or contact with desirable vegetation, failure of this product to control weed biotypes which develop resistance to dicamba, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range

specified in the Directions, or the presence of products other than those expressly recommended by Company in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For in-crop (over-the-top) uses on Roundup Ready Xtend crops, crop safety and weed control performance are not warranted by Company when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.
Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©[YEAR]

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63167 USA

[*INSERT DATE*]

[*INSERT PRINT PLATE NUMBER*]

[*INSERT SUPPLEMENTAL LABEL EXPIRATION DATE*]

ED_002084_00044379-00010

Message

From: Jeffrey H Birk [jeffrey.birk@basf.com]
Sent: 4/7/2016 12:50:57 PM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]
CC: Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Corbin, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1db182663b134e46b3fec580f8e0b5f2-Mark Corbin]; Maximilian M Safarpour [maximilian.safarpour@basf.com]
Subject: RE: Egan and Mortensen dicamba volatility paper
Attachments: Egan-Mortensen paper review 4-7-16.docx

Hello Dan,

After reviewing the Egan and Mortensen paper, BASF concluded that the study design has several deficiencies that make any conclusions about dicamba volatility questionable at best. To further evaluate the merits of the research BASF requested Dr. Andrew Hewitt, to review the paper and provide his perspective on the research as it pertains to the evaluation of dicamba volatility. Please find Dr. Hewitt's review attached for your consideration.

Please let me know if you or your team have any questions after considering Dr. Hewitt's review.

Thanks,

Jeff

Jeffrey H. Birk, Ph.D.
Product Registration Manager

Phone: 919-547-2622 Mobile: 919-225-9220 E-Mail: jeffrey.birk@basf.com
Postal Address: 26 Davis Drive, RTP, NC 27709

All contents of this e-mail and any attachments there to are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Kenny, Daniel [mailto:Kenny.Dan@epa.gov]
Sent: Friday, March 18, 2016 10:12 AM
To: Maximilian M Safarpour <maximilian.safarpour@basf.com>; Jeffrey H Birk <jeffrey.birk@basf.com>
Cc: Rowland, Grant <Rowland.Grant@epa.gov>
Subject: FW: Egan and Mortensen volatility paper

Hello Max and Jeff. It was good to see you yesterday. In response to your request for a copy of the Egan volatility study with dicamba from our meeting yesterday, please see the attached file. Please let me know if you have any questions.

Thanks,
Dan

From: Corbin, Mark
Sent: Friday, March 18, 2016 9:04 AM
To: Wagman, Michael <Wagman.Michael@epa.gov>; Kenny, Daniel <Kenny.Dan@epa.gov>
Subject: RE: Egan and Mortensen volatility paper

Here is a hard copy to send to BASF in case you cannot access the website

---

From: Wagman, Michael
Sent: Thursday, March 17, 2016 5:46 PM
To: Kenny, Daniel <Kenny.Dan@epa.gov>
Cc: Corbin, Mark <Corbin.Mark@epa.gov>
Subject: Egan and Mortensen volatility paper

Hi Dan,

Here's the egan and mortensen paper. Mark also said you might have some more questions on chronic risk and listed/non-listed species. I'm around for another ½ hour if you want to give me a call.

http://onlinelibrary.wiley.com/doi/10.1002/etc.1778/full

Prof. Andrew Hewitt
School of Agriculture and Food Sciences
University of Queensland
April 6, 2016

Review of Egan and Mortensen (2012) Quantifying Vapor Drift of Dicamba Herbicide Applied to Soybean.

A key assumption on which the research was conducted was that the variables affecting volatility and therefore vapor drift potential of dicamba are related to the formulation and the meteorological conditions. The Introduction lists only these two issues and the experimental design seems to follow the same assumption. However, a third and more important factor actually applies, namely the application of dicamba using appropriate techniques that will minimize or avoid any losses of dicamba to the environment both at the time of application (in drift, exacerbated in warm, evaporative conditions) and subsequently (as ongoing vapors of particles). It has been known for decades that finer sprays drift more than coarser sprays. This is because the smaller droplets remain airborne for longer than their larger counterparts, with aerosol sized droplets potentially remaining airborne for 30 minutes or longer. Avoiding small droplets with diameter below 100-200 microns is a key to avoiding droplets remaining airborne and being carried by the wind. Droplets larger than this size range tend to sediment rapidly to the ground and therefore cannot drift far or long. The researchers selected a nozzle, the AIXR11002, that produces a spray with >5% of its spray volume in droplets with diameter below 150 µm whereas dicamba is usually applied in the field as sprays that are Very Coarse or Extremely Coarse with nominally no droplet smaller than 150 µm. It is therefore not surprising that the authors measured dicamba effects beyond the application area, because it is well known that these finer sprays can travel for larger distances beyond the sprayed field and the smallest droplets can remain airborne for a long time after application. Based on the application volume rate applied by the researchers, approximately 10 L of spray would have drifted per hectare of treated land. This initial airborne drift would have been a key cause of plant damage that was observed in the study. The authors state that they measured wind speed but there are no data in the article to assess what this was at the time of the application and within the 30 minutes between the application occurring and the potted plants being placed in the field for exposure to vapor drift. Without knowing the wind speed and criticially the atmospheric stability at the time of application an assessment cannot be made as to the fate of the 10 L/ha of airborne drift flux. In relatively stable conditions and low wind speed, this could have caused exposure to the potted plants through primary drift rather than secondary (or vapor) drift. A "real world" study design would use a more appropriate nozzle such as the TTI or ULD types. The correlation between plant damage and temperature is not surprising for cases of drift where evaporation of droplets is more rapid in warmer, dryer air, and such evaporation causes the now-smaller droplets to remain airborne for longer as their fall time to the ground is longer.

Secondly, the authors placed their sensitive plants (bio-indicators) at a close distances (e.g. 21 m) to the center of the sprayed plot. Good practice would normally assume that any application of any herbicide within distances up to 100 m of sensitive crops would involve special care in avoiding exposure through selection of nozzles coarser than the one used in this study and constant wind direction away from the sensitive area. Given the concern expressed above that exposure could have been in the form of primary drift, this is a further issue with the study design.

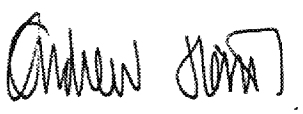
The authors did not directly measure vapor drift but used a surrogate approach to its assessment. A direct measurement would require appropriate air sampling. Indirect assessments such as plant damage are not possible unless it can be assured that the exposure is only from the alleged source, i.e. volatile material after the initial drift losses. The authors did not establish that this was the case.

The sensitive plants were stored in a vehicle parked approximately 100m from the field. However this would need to be upwind to assure no exposure to drift of the applied spray. Such an assurance was not provided in the paper. The manuscript states that there were control plants but it does not state that these were in the same vehicle as the exposed plants to allow for any inadvertent exposure to airborne dicamba.

The authors need to state the exact composition of the spray mix including any adjuvants because these will have a large effect on the spray and therefore any drift or vapor drift movements. Adjuvants can also affect the volatility of sprays.

Caution is needed in interpreting the "distance" data because the distances are from the center of the treated block. To adjust for equivalent distance from the edge of the block (which would be the normal application of no-spray buffer zones in field practice), one half of the block width needs to be subtracted from each distance value (i.e. 9.15 m). Therefore, alleged damage distances to 23 m from the center of the field actually mean distances to 14 m downwind from the edge of the treated field.

In conclusion, whether or not the findings of the work are indicators of actual vapor drift exposure, the research suggesting plant damage to a distance of 14 m from the field edge cannot be applied to sprays using TTI and ULD type nozzles which produce nominally no "Fine" droplets. Spray fate is complex and the available source for spray losses to the atmosphere from volatilization varies with the application method. Given that dicamba should be applied with nozzles that do not produce Fine droplets, the experimental data on which any vapor or droplet drift exposure assessments are made should be for such spraying systems as TTI nozzles.



Professor Andrew Hewitt, PhD, MSc, DIC
The University of Queensland (80%) and The University of Nebraska (20%)
Tel: +61-427-025-354
Email: [HYPERLINK "mailto:a.hewitt@uq.edu.au"]

Message

From: Jeffrey H Birk [jeffrey.birk@basf.com]
Sent: 4/26/2016 6:43:57 PM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]
CC: Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]
Subject: Dicamba inadvertent residue tolerances

Hello Dan,

Although BASF and Monsanto have not received any official notice from the Agency on the status of the proposed dicamba inadvertent residue tolerances in sensitive crops, it is our understanding that the Agency has decided not to review the tolerance petition. Naturally this is a very disappointing, especially since BASF and Monsanto invested in this effort for the benefit of sensitive crop growers like Steve Smith and for state enforcement agencies that have to deal with herbicide drift complaints. Our hope is that the Agency would reconsider this decision and review the proposed tolerance petition in time for a potential 2017 use season. The unavailability of these proposed inadvertent tolerances is also of concern, because one or more states are considering not registering dicamba for use in the DT system without having the proposed inadvertent residue tolerances established.

Thank you for your consideration on this matter, and I at least wanted to give you a heads up that you may be hearing concerns from states and grower groups about the apparent lack of Agency action on the proposed dicamba inadvertent residue tolerances.

Jeff

Jeffrey H. Birk, Ph.D.
Product Registration Manager

Phone: 919-547-2622 Mobile: 919-225-9220 E-Mail: jeffrey.birk@basf.com
Postal Address: 26 Davis Drive, RTP, NC 27709

All contents of this e-mail and any attachments there to are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

Message

From: Jeffrey H Birk [jeffrey.birk@basf.com]
Sent: 2/19/2016 1:39:31 PM
To: Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]
Subject: dicamba tolerance petition for sensitive crops

Hello Kay and Dan,

I understand from speaking with Monsanto, that there have been some questions recently about how the exposure treatments were designed for the dicamba inadvertent crop residue trials, submitted in support of the propose residue tolerances in dicamba sensitive crops. I believe this was well explained in Section B of the tolerance petition, so I have copied it below. The overall objective was to be able to address any possible drift complaint with regards to consumption of the affected crop with a residue tolerance that would allow the commodity to be consumed. If after reviewing there are still remaining questions, please let me know and I would be glad to discuss.

Thank you,

Jeff

SECTION B

Amount, Frequency, and Time of Application of Dicamba

Any pesticide applied via spray application may result in off-target movement. Dicamba is currently labeled for preemergence and postemergence applications in a variety of crops including corn, soybean, small grain, etc. Applications of dicamba for labeled uses may result in off-target movement onto adjacent food or feed crops which may result in inadvertent residues. Labeled uses of dicamba require application rates ranging from 0.05 to 1.0 lb dicamba acid per acre, depending on the use. Most in-crop uses for dicamba are made at an application rate of 0.5 lbs dicamba per acre.

To estimate appropriate deposition levels of dicamba due to off-target movement, AgDrift modeling was employed. The estimated deposition from AgDrift was 0.1 lb/A dicamba acid at distances no greater than 3.28 feet downwind from the point of application based on a conservative modeling scenario (fine to medium/coarse droplet size distribution, maximum application rate [1.0 lb/A] , 10 mph wind speed). This scenario is conservative because application requirements such as a prohibiting spraying when the wind is blowing toward sensitive crops, wind speed and wind direction restrictions, and nozzle size restrictions will reduce the potential for off-target movement.

Based on conservative assumptions, and only for the purpose of generating residue data to set allowable dicamba tolerances, a worse case scenario was created based on estimated deposition adjacent to the field using deposition estimates from the conservative modeling described above at the highest allowable dicamba application rate. Specifically, direct over-the-top applications of Clarity herbicide (EPA Reg. No 7969-137) were made to the crops shortly before or on the day of harvest with an application rate of 0.1 lb dicamba acid per acre to expose the proposed dicamba sensitive crops to dicamba residues. The treated food/feed items were harvested immediately after the spray dried or after the prescribed preharvest interval. The following preharvest intervals were observed to allow for the potential translocation of dicamba residues to commodities that were not exposed directly to the dicamba spray:

Crop	PHI
Cucurbit vegetables	2 days
Legume vegetables	2 days
Peanut	7 days
Root & Tuber vegetables	7 days

Jeffrey H. Birk, Ph.D.
Product Registration Manager

Phone: 919-547-2622 Mobile: 919-225-9220 E-Mail: jeffrey.birk@basf.com
Postal Address: 26 Davis Drive, RTP, NC 27709

All contents of this e-mail and any attachments there to are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

Message

From: Maximilian M Safarpour [maximilian.safarpour@basf.com]
Sent: 3/18/2016 4:18:49 PM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Jeffrey H Birk [jeffrey.birk@basf.com]
CC: Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]
Subject: RE: Egan and Mortensen volatility paper

Hi Dan,

It was good to see yesterday. Thanks to you and Mark for sharing this publication with us. Enjoy your weekend.

Regards,

Max

Maximilian M. Safarpour, Ph.D. Department Head, Global Regulatory & Government Affairs

Phone: +1 919 547-2675 Mobile: +1-609-510-1538 Fax: +1 919 547-2850 E-Mail: maximilian.safarpour@basf.com
Postal Address: BASF Corporation, Research Triangle Park, 27709 Research Triangle Park, USA

150 years
BASF - We create chemistry

All contents of this e-mail and any attachments thereto are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Kenny, Daniel [mailto:Kenny.Dan@epa.gov]
Sent: Friday, March 18, 2016 10:12 AM
To: Maximilian M Safarpour <maximilian.safarpour@basf.com>; Jeffrey H Birk <jeffrey.birk@basf.com>
Cc: Rowland, Grant <Rowland.Grant@epa.gov>
Subject: FW: Egan and Mortensen volatility paper

Hello Max and Jeff. It was good to see you yesterday. In response to your request for a copy of the Egan volatility study with dicamba from our meeting yesterday, please see the attached file. Please let me know if you have any questions.

Thanks,
Dan

From: Corbin, Mark
Sent: Friday, March 18, 2016 9:04 AM
To: Wagman, Michael <Wagman.Michael@epa.gov>; Kenny, Daniel <Kenny.Dan@epa.gov>
Subject: RE: Egan and Mortensen volatility paper

Here is a hard copy to send to BASF in case you cannot access the website

From: Wagman, Michael
Sent: Thursday, March 17, 2016 5:46 PM

To: Kenny, Daniel <Kenny.Dan@epa.gov>
Cc: Corbin, Mark <Corbin.Mark@epa.gov>
Subject: Egan and Mortensen volatility paper

Hi Dan,

Here's the egan and mortensen paper. Mark also said you might have some more questions on chronic risk and listed/non-listed species. I'm around for another ½ hour if you want to give me a call.

http://onlinelibrary.wiley.com/doi/10.1002/etc.1778/full

Message

From: Jeffrey H Birk [jeffrey.birk@basf.com]
Sent: 3/18/2016 2:20:01 PM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Maximilian M Safarpour [maximilian.safarpour@basf.com]
CC: Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]
Subject: RE: Egan and Mortensen volatility paper

Hello Dan,

Thanks for sending along the referenced paper and for spending your time with us yesterday. We will review the paper and provide any feedback that we feel may be appropriate as it pertains to dicamba volatility.

All the best on getting the public comment period open this month.

Jeff

Jeffrey H. Birk, Ph.D.
Product Registration Manager

Phone: 919-547-2622 Mobile: 919-225-9220 E-Mail: jeffrey.birk@basf.com
Postal Address: 26 Davis Drive, RTP, NC 27709

All contents of this e-mail and any attachments there to are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Kenny, Daniel [mailto:Kenny.Dan@epa.gov]
Sent: Friday, March 18, 2016 10:12 AM
To: Maximilian M Safarpour <maximilian.safarpour@basf.com>; Jeffrey H Birk <jeffrey.birk@basf.com>
Cc: Rowland, Grant <Rowland.Grant@epa.gov>
Subject: FW: Egan and Mortensen volatility paper

Hello Max and Jeff. It was good to see you yesterday. In response to your request for a copy of the Egan volatility study with dicamba from our meeting yesterday, please see the attached file. Please let me know if you have any questions.

Thanks,
Dan

From: Corbin, Mark
Sent: Friday, March 18, 2016 9:04 AM
To: Wagman, Michael <Wagman.Michael@epa.gov>; Kenny, Daniel <Kenny.Dan@epa.gov>
Subject: RE: Egan and Mortensen volatility paper

Here is a hard copy to send to BASF in case you cannot access the website

---

From: Wagman, Michael
Sent: Thursday, March 17, 2016 5:46 PM
To: Kenny, Daniel <Kenny.Dan@epa.gov>
Cc: Corbin, Mark <Corbin.Mark@epa.gov>
Subject: Egan and Mortensen volatility paper

Hi Dan,

Here's the egan and mortensen paper. Mark also said you might have some more questions on chronic risk and listed/non-listed species. I'm around for another ½ hour if you want to give me a call.

http://onlinelibrary.wiley.com/doi/10.1002/etc.1778/full

Message

From: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]
Sent: 3/31/2016 3:52:48 PM
To: Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]
CC: BHAKTA, TINA [AG/1000] [tina.bhakta@monsanto.com]
Subject: RE: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf
Attachments: M1691 Herbicide DT soybean Label_March_31_2016_revisions_finaldraft_URL1....pdf

Grant:

Please see attached. Does EPA intend to make a press release?

Thank you,

Dan Jenkins
U.S. Agency Lead
Regulatory Affairs
Monsanto Company
1300 I St., NW
Suite 450 East
Washington, DC 20005
Office: 202-383-2851
Cell: 571-732-6575

From: Rowland, Grant [mailto:Rowland.Grant@epa.gov]
Sent: Thursday, March 31, 2016 11:31 AM
To: JENKINS, DANIEL J [AG/1920]
Cc: BHAKTA, TINA [AG/1000]
Subject: RE: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

Dan,

We have a little time left. Found one mistake. Can you make this quick change on page 7 of the soybean label under **Sensitive areas** to match the cotton label.

maintain the required buffer zone:

- No application swath can be initiated in, or into an area that is within the applicable buffer distance ~~of a sensitive area.~~
- The following areas may be included in the buffer distance calculation when adjacent to field edges:
  - Roads, paved or gravel surfaces.

Grant Rowland
Herbicide Branch
Registration Division
Office of Pesticide Programs
703-347-0254

From: JENKINS, DANIEL J [AG/1920] [mailto:daniel.j.jenkins@monsanto.com]
Sent: Thursday, March 31, 2016 10:03 AM
To: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; Rowland, Grant <Rowland.Grant@epa.gov>; Kenny, Daniel <Kenny.Dan@epa.gov>
Subject: RE: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

Dan:

Per our conversation. Please see attached. Note we had to revert to the [insert URL here] instead of the website address for tank mixes, bc it is not quite ready yet, but will be soon.

Thank you,

Dan Jenkins
U.S. Agency Lead
Regulatory Affairs
Monsanto Company
1300 I St., NW
Suite 450 East
Washington, DC 20005
Office: 202-383-2851
Cell: 571-732-6575

From: Montague, Kathryn V. [mailto:Montague.Kathryn@epa.gov]
Sent: Thursday, March 31, 2016 8:49 AM
To: JENKINS, DANIEL J [AG/1920]; Rowland, Grant; Kenny, Daniel
Subject: RE: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

Hi, Dan,

We're looking into these, and will get back to you ASAP.

One question on the ag crops, though – how would the applicator know that adjacent cotton or soybeans are the tolerant versions?

Thanks,
Kay

From: JENKINS, DANIEL J [AG/1920] [mailto:daniel.j.jenkins@monsanto.com]
Sent: Thursday, March 31, 2016 8:02 AM
To: Rowland, Grant <Rowland.Grant@epa.gov>; Kenny, Daniel <Kenny.Dan@epa.gov>; Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

We're cleaning things up, but please see our comments re

110 ft buffer: *addition of "from" could be read to mean that you must have 110' between spray and field edge regardless of the "exceptions" (adjacent road, planted field any of the exceptions). That could result in 110' + the distance of any the excepted areas. Here is a proposed fix:*

"Maintain a 110 foot in-field buffer (when applying 16 fl oz of this product per acre), or a 220 foot in-field buffer (when applying 32 fl oz of this product per acre) on from all outer edges of the field, less the distance of any of the adjacent areas specified below."

Adjacent ag fields: *it doesn't make sense that non-broadleafs with registered uses can be included in the buffer distance calculation, but if a neighbor plants the exact same gm dicamba tolerant crops and it is adjacent it can't be. We strongly suggest the following:*

Planted agricultural fields containing crops with a natural tolerance to dicamba including corn, sorghum, proso millet, small grains and sugarcane and crops containing a dicamba tolerance gene including Roundup Ready II Xtend soybeans and Bollgard II Xtendflex Cotton.

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR M1691 HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using M1691 Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

This supplemental label expires on xx/xx/xxxx and must not be used or distributed after this date.

M1691

Herbicide

EPA Reg. No. 524-582

GROUP	4	HERBICIDE

FOR PREEMERGENCE AND POSTEMERGENCE USE ON ROUNDUP READY 2 XTEND™ SOYBEAN

Keep out of reach of children

CAUTION!

In case of an emergency involving this product, call collect, day or night, 314-694-4000.

Bollgard II® Roundup Ready®, Roundup Ready 2 Xtend™ and XtendFlex™ are trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

ROUNDUP READY 2 XTEND™ SOYBEAN CONTAINS A PATENTED GENE THAT PROVIDES TOLERANCE TO DICAMBA, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO SOYBEANS THAT ARE NOT DICAMBA TOLERANT, INCLUDING SOYBEANS WITH A TRAIT ENGINEERED TO CONFER TOLERANCE TO AUXIN

ED_002084_00045326-00001

HERBICIDES OTHER THAN DICAMBA. FOLLOW THE REQUIREMENTS SET FORTH HEREIN TO PREVENT SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS. CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A DICAMBA TOLERANCE GENE OR ARE NOT NATURALLY TOLERANT TO DICAMBA, COULD RESULT IN SEVERE PLANT INJURY OR DESTRUCTION.

Information on Roundup Ready 2 Xtend™ soybean can be obtained from your seed supplier or Monsanto representative. Roundup Ready 2 Xtend™ soybean must be purchased from an authorized licensed seed supplier.

The instructions contained in this Monsanto Supplemental Label include all applications of M1691 Herbicide that may be made to Roundup Ready 2 Xtend™ soybean during the complete cropping season. DO NOT combine these instructions with other instructions in the "SOYBEAN" Section of any other M1691 Herbicide label for use over crops that do not contain the dicamba tolerance trait.

Note: Roundup Ready 2 Xtend™ soybean and methods of controlling weeds and applying dicamba in a Roundup Ready 2 Xtend™ soybean crop are protected under U.S. patent law. No license to use Roundup Ready 2 Xtend™ soybean is granted or implied with the purchase of this herbicide product. Roundup Ready 2 Xtend™ soybean is owned by Monsanto and a license must be obtained from Monsanto before using it. Contact your Authorized Monsanto Retailer for information on obtaining a license to Roundup Ready 2 Xtend™ soybean.

See the "PRODUCT INFORMATION" and "APPLICATION EQUIPMENT AND TECHNIQUES sections of the M1691 Herbicide product label for important product use information. The directions found on this supplemental label are controlling, where inconsistencies are found with the label booklet.

TYPES OF APPLICATIONS: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

M1691 Herbicide is approved by U.S. EPA to be used in the following states, subject to county restriction as noted: Alabama, Arkansas, Arizona, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas, Virginia, West Virginia, Wisconsin.

Restrictions:

- Do not apply this product aerially.
- Do not make application of this product if rain is expected in the next 24 hours.

USE INSTRUCTIONS: Apply this product in a minimum of 10 gallons of spray solution per acre as a broadcast application. For best performance, control weeds early when they are less than 4 inches. Timely application will improve control and reduce weed competition. Refer to the following table for maximum application rates of this product with Roundup Ready 2 Xtend™ soybeans.

Maximum Application Rates	
Combined total per year for all applications	64 fluid ounces per acre (2.0 lb a.e. dicamba per acre)
Total of all Burndown/Early preplant, Preplant, At-Planting, and Preemergence applications	32 fluid ounces per acre (1.0 lb a.e. dicamba per acre)
Total of all In-crop applications from emergence up to and including beginning bloom (R1 stage soybeans)	32 fluid ounces per acre (1.0 lb a.e. dicamba per acre)
Maximum In-crop, single application	16 fluid ounces per acre (0.5 lb a.e. dicamba per acre)

a.e. – acid equivalent

Refer to Table 1 of the M1691 Herbicide label booklet for application rates for weed type and growth stage controlled by this product. Maximum in-crop application rate should be used when treating tough to control weeds, dense vegetative growth or weeds with a well-established root system.

Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be used to control broadleaf weeds and may be applied before, during or immediately after planting Roundup Ready 2 Xtend™ soybean. Refer to the "WEEDS CONTROLLED" section of the label booklet for M1691 Herbicide for specific weeds controlled.

RESTRICTIONS: The maximum combined quantity of this product that may be applied for all preplant, at-planting, and preemergence applications is 32 fluid ounces (1.0 lb a.e. dicamba) per acre per year. The maximum application rate for a single, preplant, at-planting, or preemergence application must not exceed 32 fluid ounces (1.0 lb a.e. dicamba) per acre.

Postemergence (In-crop)

USE INSTRUCTIONS: This product may be used to control broadleaf weeds in Roundup Ready 2 Xtend™ soybean. In-crop applications of this product can be made from emergence (cracking) up to and including beginning bloom (R1 growth stage of soybeans). The maximum rate for any single, in-crop application must not exceed 16 fluid ounces (0.5 lb a.e. dicamba) per acre. This is also the minimum single application rate in order to reduce the selection for resistant weeds. For best performance, control weeds early when they are less than 4 inches. Monsanto Company does not warrant product performance of applications to labeled weeds greater than 4 inches in height. A second application of this product up to the R1 crop growth stage may be necessary to control new flushes of weeds. Allow at least 7 days between applications. For best results, apply M1691 Herbicide after some weed re-growth has occurred.

Application of this product postemergent and under stressful environments may cause temporary loss of turgor, a response commonly described as leaf droop in RR2X soybeans. Typically, affected plants recover in 1-3 days depending on the level of droop and environmental conditions.

RESTRICTIONS: The combined total application rate from crop emergence up to R1 must not exceed 32 fluid ounces (1.0 lb a.e. dicamba) per acre. The maximum single, in-crop application rate must not exceed 16 fluid ounces (0.5 lb a.e. dicamba). The combined total per year for all applications must not exceed 64 fluid ounces (2.0 lb a.e dicamba) per acre.

Allow at least 7 days between final application and harvest or feeding of soybean forage. Allow at least 14 days between final application and harvest or feeding of soybean hay.

TANK-MIXING INSTRUCTIONS:

RESTRICTIONS:

- **DO NOT TANK MIX ANY OTHER HERBICIDE WITH M1691 HERBICIDE.**

TANK MIXING INSTRUCTIONS FOR ADJUVANTS

M1691 Herbicide may only be tank-mixed with adjuvants that have been tested and found by EPA not to have an unreasonable adverse effect on the spray drift properties of M1691 Herbicide. A list of those EPA approved adjuvants and use rates may be found at [INSERT URL HERE]. DO NOT tank mix any adjuvant with M1691 Herbicide unless:

1. You check the list of EPA approved adjuvants found not to have an unreasonable adverse effect on the spray drift properties of M1691 Herbicide at [INSERT URL HERE] no more than 7 days before applying M1691 Herbicide; and
2. The intended adjuvant tank-mix with M1691 Herbicide is identified on that list of tested and approved adjuvants; and
3. The intended adjuvant tank-mix with M1691 Herbicide is not prohibited on this label.
4. Additional Adjuvant Warnings and Restrictions:

- Some COC, HSOC and MSO adjuvants may cause a temporary crop response.
- Do not tank mix products containing ammonium salts such as ammonium sulfate and urea ammonium nitrate.
- Drift reduction agents listed on the website above can minimize the percentage of driftable fines. However, the applicator must check with the DRA manufacturer to determine if the approved DRA will work effectively with the spray nozzle, the spray pressure, and the desired spray solution.

MONSANTO MAKES NO RECOMMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY ADJUVANT THAT MAY APPEAR ON THE WEBSITE REFERENCED ABOVE, REGARDLESS OF WHETHER SUCH ADJUVANT IS USED ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH ADJUVANT ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. See the section titled "LIMIT OF WARRANTY AND LIABILITY" herein for more information.

WEED RESISTANCE MANAGEMENT

Some naturally occurring weed biotypes that are tolerant (resistant) to dicamba may exist due to

genetic variability in a weed population. Where resistant biotypes exist, the repeated use of herbicides with the same modes of action can lead to the selection for resistant weeds. Certain agronomic practices can delay or reduce the likelihood that resistant weed populations will develop and can be utilized to manage weed resistance once it occurs.

Use a minimum of 0.5 lb a.e./A (16 fl oz/A) of this product in a single application in order to minimize the selection for resistant weeds.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued availability of this product depends on the successful management of the weed resistance program; therefore, it is very important to perform the following actions.

To aid in the prevention of developing weeds resistant to this product, the following steps should be followed where practical:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Apply full rates of M1691 Herbicide for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in weed species.
- Report any incidence of non-performance of this product against a particular weed species to your Monsanto retailer, representative or call [INSERT PHONE NUMBER]
- If resistance is suspected, treat weed escapes with an herbicide having a mode of action other than Group 4 and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other modes of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of this product with non-Group 4 herbicides.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

Contact the local agricultural extension service, Monsanto representative, ag retailer or crop consultant for further guidance on weed control practices as needed.

APPLICATION EQUIPMENT AND TECHNIQUES:
DO NOT APPLY THIS PRODUCT TO ROUNDUP READY 2 XTEND™ SOYBEAN USING AERIAL SPRAY EQUIPMENT.

Apply this product using properly maintained and calibrated equipment capable of delivering the desired volumes.

Spray Drift Management
Do not allow herbicide solution to mist, drip, drift or splash onto desirable vegetation because severe injury or destruction to desirable broadleaf plants could result. The following drift management requirements must be followed .

Controlling Droplet Size
Drift potential may be reduced by applying large droplets that provide sufficient coverage and control. Applying larger droplets can reduce drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions (see the "**Wind Speed and Direction**", "**Temperature and Humidity**" and "**Temperature Inversions**" sections of this label).

- **Nozzle type.** Use the Tee Jet® TTI11004 nozzle with a maximum operating pressure of 63 psi when applying M1691 Herbicide. Do not use any other nozzle and pressure combination not specifically allowed by this supplemental label.

- **Spray Volume.** Apply this product in a minimum of 10 gallons of spray solution per acre. Use a higher spray volume when treating dense vegetation. Higher spray volumes may also allow the use of larger nozzle orifices (sizes) which produce coarser spray droplets.

- **Equipment Ground Speed.** Select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but do not exceed a ground speed of 15 miles per hour. Slower speeds generally result in better spray coverage and deposition on the target area.

- **Spray boom Height.** Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but do not exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Larger droplets have a lower surface to volume ratio and are impacted less by temperature and humidity. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions. Do not apply during a temperature inversion because off-target movement potential is high.

- During a temperature inversion, the atmosphere is very stable and vertical air mixing is restricted, which can cause small, suspended droplets to remain in a concentrated

ED_002084_00045326-00006

cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions.

- Temperature inversions are characterized by increasing temperatures with altitude and are common on evenings and nights with limited cloud cover and light to no wind. Cooling of air at the earth's surface takes place and warmer air is trapped above it. They begin to form as the sun sets and often continue into the morning.
- Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- The inversion will dissipate with increased winds (above 3 MPH) or at sunrise when the surface air begins to warm (generally 3°F from morning low).

Wind Speed and Direction

- Drift potential is lowest between wind speeds of 3 to 10 miles per hour.
- Do not apply at wind speeds greater than 15 mph.
- For M1691 Herbicide wind speed and direction restrictions see below table:

Wind speed	Application conditions and restrictions
<3 mph	Do not apply M1691 Herbicide
3-10 mph	Optimum M1691 Herbicide application conditions provided all other application requirements in this label are met.
>10 – 15 mph	Do not apply product when wind is blowing toward sensitive areas
> 15 mph	Do not apply M1691 Herbicide

NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Sensitive Areas

Threatened and Endangered Species

Maintain a 110 foot buffer (when applying 16 fl oz of this product per acre), or a 220 foot buffer (when applying 32 fl oz of this product per acre) from all outer edges of the field, less the distance of any of the adjacent areas specified below.

To maintain the required buffer zone:

- No application swath can be initiated in, or into an area that is within the applicable buffer distance.
- The following areas may be included in the buffer distance calculation when adjacent to field edges:
  - Roads, paved or gravel surfaces.
  - Planted agricultural fields containing corn, sorghum, proso millet, small grains and sugarcane.
  - Agricultural fields that have been prepared for planting.
  - Areas covered by the footprint of a building, shade house, silo, feed crib, or other man made structure with walls and or roof.

Non-target Susceptible Plants
Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption. Do not allow contact of herbicide with foliage, green stems, exposed non-woody roots of crops, and desirable plants, including beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potato, soybean, sunflower, tobacco, tomato, and other broadleaf plants, because severe injury or destruction may result, including plants in a greenhouse. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants. Applicators are required to ensure that they are aware of the proximity to sensitive areas, and to avoid potential adverse effects from off-target movement of M1691 Herbicide. Before making an application, the applicator must survey the application site for neighboring sensitive areas prior to application. The applicator must also consult sensitive crop registries for locating sensitive areas where available.

Failure to follow the requirements in this label could result in severe injury or destruction to desirable sensitive broadleaf crops and trees when contacting their roots, stems or foliage.

Specifically, commercially grown tomatoes and other fruiting vegetables (EPA crop group 8), cucurbits (EPA crop group 9), and grapes are sensitive to dicamba. In order to prevent unintended damage from any drift of this product, do not apply this product when the wind is blowing toward adjacent commercially grown sensitive crops.

Application Awareness
AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR

The interaction of equipment and weather related factors must be monitored to maximize performance and on-target spray deposition. The applicator is responsible for considering all of these factors when making a spray decision. The applicator is responsible for compliance with state and local pesticide drift regulations.

Proper spray system equipment cleanout
Minute quantities of dicamba may cause injury to non-dicamba-tolerant soybeans and other sensitive crops (see the "Sensitive Areas" section of this label for more information).
Clean equipment immediately after using this product, using a triple rinse procedure as follows:

1. After spraying, drain the sprayer (including boom and lines) immediately. Do not allow the spray solution to remain in the spray boom lines overnight prior to flushing.
2. Flush tank, hoses, boom and nozzles with clean water.
3. Inspect and clean all strainers, screens and filters.
4. Prepare a cleaning solution with a commercial detergent or sprayer cleaner or ammonia according to the manufacturer's directions.
5. Take care to wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines and nozzles for at least 1 minute with the cleaning solution.
7. Repeat above steps for two additional times to accomplish an effective triple rinse.
8. Remove nozzles, screens and strainers and clean separately in the cleaning solution after completing the above procedures.
9. Appropriately dispose of rinsate from steps 1-7 in compliance with all applicable laws and regulations.
10. Drain sump, filter and lines.

ED_002084_00045326-00008

11. Rinse the complete spraying system with clean water.

All rinse water must be disposed of in compliance with local, state, and federal requirements.

CROP ROTATIONAL RESTRICTIONS:
No rotational cropping restrictions apply when rotating to Roundup Ready 2 Xtend™ soybean or Bollgard II® XtendFlex™ cotton. For other crops the interval between application and planting rotational crop is given below. When counting days from the application of this product, do not count days when the ground is frozen.. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

Planting/replanting restrictions for M1691 Herbicide applications of 24 fluid ounces per acre or less:
For corn, cotton (except Bollgard II® Xtendflex™ cotton), sorghum, and soybean (except Roundup Ready 2 Xtend™ soybean), follow the planting restrictions in the directions for use for preplant application in **Section 10. Crop-Specific Information** of the label booklet. Do not plant barley, oat, wheat, and other grass seedings for 15 days for every 8 fluid ounces of this product applied per acre east of the Mississippi River and 22 days for every 8 fluid ounces per acre applied west of the Mississippi River. No planting restrictions apply beyond 120 days after application of this product.

Planting/replanting restrictions for applications of more than 24 fluid ounces and up to 32 fluid ounces of M1691 Herbicide per acre:
Wait a minimum of 120 days after application of this product before planting corn, sorghum and cotton (except Bollgard II® Xtendflex™ cotton) east of the Rocky Mountains and before planting all other crops (except Roundup Ready 2 Xtend™ soybean) grown in areas receiving 30 inches or more rainfall annually. Wait a minimum of 180 days before planting crops in areas with less than 30 inches of annual rainfall. Wait a minimum of 30 days for every 16 fluid ounces of this product applied per acre before planting barley, oat, wheat, and other grass seedings east of the Mississippi River and 45 days for every 16 fluid ounces of this product applied per acre west of the Mississippi River.

LIMIT OF WARRANTY AND LIABILITY

Monsanto Company ("Company") warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in this supplemental label ("Directions") when used in accordance with the Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein. Specifically, and without limiting the foregoing, MONSANTO MAKES NO RECCOMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY ADJUVANT THAT MAY APPEAR ON THE WEBSITE REFERENCED IN THE TANK-MIXING INSTRUCTIONS HEREIN, REGARDLESS OF WHETHER SUCH ADJUVANT IS USED ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH ADJUVANT ALONE OR IN A TANK MIX WITH M1691 HERBICIDE.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those expressly recommended by Company in the Directions, application to or contact with desirable vegetation, failure of this product to control weed biotypes which develop resistance to dicamba, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those expressly recommended by Company in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For in-crop (over-the-top) uses on Roundup Ready Xtend crops, crop safety and weed control performance are not warranted by Company when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.
Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©[YEAR]

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63167 USA

[*INSERT DATE*]

[*INSERT PRINT PLATE NUMBER*]

[*INSERT SUPPLEMENTAL LABEL EXPIRATION DATE*]

ED_002084_00045326-00010

Message

From: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]
Sent: 3/31/2016 2:02:59 PM
To: Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]
Subject: RE: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf
Attachments: M1691 Herbicide DT soybean Label_March_31_2016_revisions_finaldraft_URL.PDF; M1691 Herbicide DGT Cotton_Label_March_31_2016_revisions_finaldraft_URL.PDF

Dan:

Per our conversation. Please see attached. Note we had to revert to the [insert URL here] instead of the website address for tank mixes, bc it is not quite ready yet, but will be soon.

Thank you,

Dan Jenkins
U.S. Agency Lead
Regulatory Affairs
Monsanto Company
1300 I St., NW
Suite 450 East
Washington, DC 20005
Office: 202-383-2851
Cell: 571-732-6575

From: Montague, Kathryn V. [mailto:Montague.Kathryn@epa.gov]
Sent: Thursday, March 31, 2016 8:49 AM
To: JENKINS, DANIEL J [AG/1920]; Rowland, Grant; Kenny, Daniel
Subject: RE: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

Hi, Dan,

We're looking into these, and will get back to you ASAP.

One question on the ag crops, though – how would the applicator know that adjacent cotton or soybeans are the tolerant versions?

Thanks,
Kay

From: JENKINS, DANIEL J [AG/1920] [mailto:daniel.j.jenkins@monsanto.com]
Sent: Thursday, March 31, 2016 8:02 AM
To: Rowland, Grant <Rowland.Grant@epa.gov>; Kenny, Daniel <Kenny.Dan@epa.gov>; Montague, Kathryn V.

<Montague.Kathryn@epa.gov>
Subject: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

We're cleaning things up, but please see our comments re

110 ft buffer: *addition of "from" could be read to mean that you must have 110' between spray and field edge regardless of the "exceptions" (adjacent road, planted field any of the exceptions). That could result in 110' + the distance of any the excepted areas. Here is a proposed fix:*

"Maintain a 110 foot in-field buffer (when applying 16 fl oz of this product per acre), or a 220 foot in-field buffer (when applying 32 fl oz of this product per acre) on from all outer edges of the field, less the distance of any of the adjacent areas specified below."

Adjacent ag fields: *it doesn't make sense that non-broadleafs with registered uses can be included in the buffer distance calculation, but if a neighbor plants the exact same gm dicamba tolerant crops and it is adjacent it can't be. We strongly suggest the following:*

Planted agricultural fields containing crops with a natural tolerance to dicamba including corn, sorghum, proso millet, small grains and sugarcane and crops containing a dicamba tolerance gene including Roundup Ready II Xtend soybeans and Bollgard II Xtendflex Cotton.

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR M1691 HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using M1691herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

This supplemental label expires on xx/xx/xxxx and must not be used or distributed after this date.

M1691

HERBICIDE

EPA Reg. No. 524-582

GROUP	4	HERBICIDE

FOR PREEMERGENCE AND POSTEMERGENCE USE ON BOLLGARD II® XTENDFLEX COTTON

Keep out of reach of children

CAUTION!

In case of an emergency involving this product, call collect, day or night, 314-694-4000.

Bollgard II® Roundup Ready®, Roundup Ready 2 Xtend™ and XtendFlex™ are trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

BOLLGARD II XTENDFLEX COTTON CONTAINS A PATENTED GENE THAT PROVIDES TOLERANCE TO DICAMBA, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO COTTON THAT IS NOT DICAMBA TOLERANT, INCLUDING COTTON WITH A

ED_002084_00045330-00001

TRAIT ENGINEERED TO CONFER TOLERANCE TO AUXIN HERBICIDES OTHER THAN DICAMBA. FOLLOW THE REQUIREMENTS SET FORTH HEREIN TO PREVENT SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS. CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A DICAMBA TOLERANCE GENE OR ARE NOT NATURALLY TOLERANT TO DICAMBA, COULD RESULT IN SEVERE PLANT INJURY OR DESTRUCTION.

Information on Bollgard II® XtendFlex™ cotton can be obtained from your seed supplier or Monsanto representative. Bollgard II® XtendFlex™ cotton must be purchased from an authorized licensed seed supplier.

The instructions contained in this Monsanto Supplemental Label include all applications of M1691 herbicide that may be made to Bollgard II® XtendFlex™ cotton during the complete cropping season. DO NOT combine these instructions with other instructions in the "COTTON" Section of any other M1691 herbicide label for use over crops that do not contain the dicamba tolerance trait.

Note: Bollgard II® XtendFlex™ cotton and methods of controlling weeds and applying dicamba in a Bollgard II® XtendFlex™ cotton crop are protected under U.S. patent law. A license to use Bollgard II® XtendFlex™ cotton seed must be obtained prior to use. No license to use Bollgard II® XtendFlex™ cotton is granted or implied with the purchase of this herbicide product. Bollgard II® XtendFlex™ cotton is owned by Monsanto and a license must be obtained from Monsanto before using it. Contact your Authorized Monsanto Retailer for information on obtaining a license to Bollgard II® XtendFlex™ cotton.

See the "PRODUCT INFORMATION" and "APPLICATION EQUIPMENT AND TECHNIQUES" sections of the M1691 Herbicide product label for important product use information. The directions found on this supplemental label are controlling, where inconsistencies are found with the label booklet.

TYPES OF APPLICATIONS: Preplant; At-Planting; Preemergence; Postemergence (In-crop).

M1691 Herbicide is approved by U.S. EPA to be used in the following states, subject to county restriction as noted: Alabama, Arkansas, Arizona, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas, Virginia, West Virginia, Wisconsin.

Restrictions:

- Do not apply this product aerially.
- Do not make application of this product if rain is expected in the next 24 hours.

USE INSTRUCTIONS: Apply this product in a minimum of 10 gallons of spray solution per acre as a broadcast application. For best performance, control weeds early when they are less than 4 inches. Timely application will improve control and reduce weed competition. Refer to the following table for maximum application rates of this product with Bollgard II® XtendFlex™ cotton.

Maximum Application Rates	
Combined total per year for all applications	64 fluid ounces per acre (2.0 lb a.e. dicamba per acre)
Total of all Preplant, At-Planting, and Preemergence applications	32 fluid ounces per acre (1.0 lb a.e. dicamba per acre)
Total of all In-crop applications from emergence up to 7 days pre-harvest	64 fluid ounces per acre (2.0 lb a.e. dicamba per acre)
Maximum In-crop, single application	16 fluid ounces per acre (0.5 lb a.e. dicamba per acre)

a.e. – acid equivalent

Refer to Table 1 of the M1691 herbicide label booklet for application rates for weed type and growth stage controlled by this product. Maximum in-crop application rate should be used when treating tough to control weeds, dense vegetative growth or weeds with a well-established root system.

Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be used to control broadleaf weeds and may be applied before, during or immediately after planting of Bollgard II® XtendFlex™ cotton. Refer to the "WEEDS CONTROLLED" section of the label booklet for M1691 herbicide for specific weeds controlled.

RESTRICTIONS: The maximum combined quantity of this product that may be applied for all preplant, at-planting, and preemergence applications is 32 fluid ounces (1.0 lb a.e. dicamba) per acre per year. The maximum application rate for a single, preplant, at-planting, or preemergence application must not exceed 32 fluid ounces (1.0 lb a.e. dicamba) per acre. If applying a spring preplant treatment following application of a fall preplant (postharvest) treatment, then the combination of both treatments may not exceed 2 pounds a.e. dicamba per acre.

Postemergence (In-crop)

USE INSTRUCTIONS: This product may be used to control broadleaf weeds in Bollgard II® XtendFlex™ cotton. In-crop applications of this product can be made from emergence up to 7 days prior to harvest. The maximum rate for any single, in-crop application must not exceed 16 fluid ounces (0.5 lb a.e. dicamba) per acre. This is also the minimum single application rate in order to reduce the selection for resistant weeds For best performance, control weeds early when they are less than 4 inches. Monsanto Company does not warrant product performance of applications to labeled weeds greater than 4 inches in height. Sequential applications of this product may be necessary to control new flushes of weeds or on tough-to-control weeds. Allow at least 7 days between applications. A pre-harvest application of this product may be made up to 7 days before harvest.

Postemergence applications of this product mixed with adjuvants may cause a leaf response to Bollgard II® XtendFlex™ cotton. The symptoms usually appear as necrotic spots on fully expanded leaves. To reduce the incidence and severity of the necrosis, consider increasing the spray volume to 15 GPA or greater and lower adjuvant rates. EC-based products that are tank mixed with products containing dicamba may increase the severity of the leaf damage.

RESTRICTIONS: The combined total applied from crop emergence up to 7 days prior to harvest must not exceed 64 fluid ounces (2.0 lb a.e. dicamba) per acre. The maximum single, in-crop application rate must not exceed 16 fluid ounces (0.5 lb a.e. dicamba). The combined total per year for all applications must not exceed 64 fluid ounces (2.0 lb a.e. dicamba) per acre. For example, if a preplant application of 32 fluid ounces (1.0 lb a.e. dicamba) per acre was made, then the combined total in-crop applications must not exceed 32 fluid ounces (1.0 lb a.e. dicamba) per acre.

Allow at least 7 days between applications and allow at least 7 days between final application and harvest or feeding of cottonseed and cotton gin by-products.

TANK-MIXING INSTRUCTIONS:

RESTRICTIONS:

- **DO NOT TANK MIX ANY OTHER HERBICIDE WITH M1691 HERBICIDE.**

TANK MIXING INSTRUCTIONS FOR ADJUVANTS

M1691 Herbicide may only be tank-mixed with adjuvants that have been tested and found by EPA not to have an unreasonable adverse effect on the spray drift properties of M1691 Herbicide. A list of those EPA approved adjuvants and use rates may be found at [INSERT URL HERE]. DO NOT tank mix any adjuvant with M1691 Herbicide unless:

1. You check the list of EPA approved adjuvants found not to have an unreasonable adverse effect on the spray drift properties of M1691 Herbicide at [INSERT URL HERE] no more than 7 days before applying M1691 Herbicide; and
2. The intended adjuvant tank-mix with M1691 Herbicide is identified on that list of tested and approved adjuvants; and
3. The intended adjuvant tank-mix with M1691 Herbicide is not prohibited on this label.
4. Additional Adjuvant Warnings and Restrictions:

- Some COC, HSOC and MSO adjuvants may cause a temporary crop response.
- Do not tank mix products containing ammonium salts such as ammonium sulfate and urea ammonium nitrate.
- Drift reduction agents listed on the website above can minimize the percentage of driftable fines. However, the applicator must check with the DRA manufacturer to determine if the approved DRA will work effectively with the spray nozzle, the spray pressure, and the desired spray solution.

MONSANTO MAKES NO RECOMMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY ADJUVANT THAT MAY APPEAR ON THE WEBSITE REFERENCED ABOVE, REGARDLESS OF WHETHER SUCH ADJUVANT IS USED ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH ADJUVANT ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. See the section titled "LIMIT OF WARRANTY AND LIABILITY" herein for more information.

WEED RESISTANCE MANAGEMENT

Some naturally occurring weed biotypes that are tolerant (resistant) to dicamba may exist due to genetic variability in a weed population. Where resistant biotypes exist, the repeated use of herbicides with the same modes of action can lead to the selection for resistant weeds. Certain agronomic practices can delay or reduce the likelihood that resistant weed populations will develop and can be utilized to manage weed resistance once it occurs.

Use a minimum of 0.5 lb a.e./A (16 fl oz/A) of this product in a single application in order to minimize the selection for resistant weeds.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued availability of this product depends on the successful management of the weed resistance program; therefore, it is very important to perform the following actions.

To aid in the prevention of developing weeds resistant to this product, the following steps should be followed where practical:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Apply full rates of M1691 Herbicide for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in weed species.
- Report any incidence of non-performance of this product against a particular weed species to your Monsanto retailer, representative or call [INSERT PHONE NUMBER]
- If resistance is suspected, treat weed escapes with an herbicide having a mode of action other than Group 4 and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other modes of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of this product with non-Group 4 herbicides.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

ED_002084_00045330-00005

Contact the local agricultural extension service, Monsanto representative, ag retailer or crop consultant for further guidance on weed control practices as needed.

APPLICATION EQUIPMENT AND TECHNIQUES:
DO NOT APPLY THIS PRODUCT TO ROUNDUP READY 2 XTEND™ SOYBEAN USING AERIAL SPRAY EQUIPMENT.

Apply this product using properly maintained and calibrated equipment capable of delivering the desired volumes.

Spray Drift Management
Do not allow herbicide solution to mist, drip, drift or splash onto desirable vegetation because severe injury or destruction to desirable broadleaf plants could result. The following drift management requirements must be followed .

Controlling Droplet Size
Drift potential may be reduced by applying large droplets that provide sufficient coverage and control. Applying larger droplets can reduce drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions (see the "**Wind Speed and Direction", "Temperature and Humidity"** and "**Temperature Inversions"** sections of this label).

- **Nozzle type.** Use the Tee Jet® TTI11004 nozzle with a maximum operating pressure of 63 psi when applying M1691 Herbicide. Do not use any other nozzle and pressure combination not specifically allowed by this supplemental label.

- **Spray Volume.** Apply this product in a minimum of 10 gallons of spray solution per acre. Use a higher spray volume when treating dense vegetation. Higher spray volumes may also allow the use of larger nozzle orifices (sizes) which produce coarser spray droplets.

- **Equipment Ground Speed.** Select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but do not exceed a ground speed of 15 miles per hour. Slower speeds generally result in better spray coverage and deposition on the target area.

- **Spray boom Height.** Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but do not exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Larger droplets have a lower surface to volume ratio and are impacted less by temperature and humidity. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions. Do not apply during a temperature inversion because off-target movement potential is high.

- During a temperature inversion, the atmosphere is very stable and vertical air mixing is restricted, which can cause small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions.
- Temperature inversions are characterized by increasing temperatures with altitude and are common on evenings and nights with limited cloud cover and light to no wind. Cooling of air at the earth's surface takes place and warmer air is trapped above it. They begin to form as the sun sets and often continue into the morning.
- Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- The inversion will dissipate with increased winds (above 3 MPH) or at sunrise when the surface air begins to warm (generally 3°F from morning low).

Wind Speed and Direction

- Drift potential is lowest between wind speeds of 3 to 10 miles per hour.
- Do not apply at wind speeds greater than 15 mph.
- For M1691 Herbicide wind speed and direction restrictions see below table:

Wind speed	Application conditions and restrictions
<3 mph	Do not apply M1691 Herbicide
3-10 mph	Optimum M1691 Herbicide application conditions provided all other application requirements in this label are met.
>10 – 15 mph	Do not apply product when wind is blowing toward sensitive areas
> 15 mph	Do not apply M1691 Herbicide

NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Sensitive Areas

Threatened and Endangered Species

Maintain a 110 foot buffer (when applying 16 fl oz of this product per acre), or a 220 foot buffer (when applying 32 fl oz of this product per acre) from all outer edges of the field, less the distance of any of the adjacent areas specified below.

To maintain the required buffer zone:

- No application swath can be initiated in, or into an area that is within the applicable buffer distance.
- The following areas may be included in the buffer distance calculation when adjacent to field edges:
    - Roads, paved or gravel surfaces.
    - Planted agricultural fields containing corn, sorghum, proso millet, small grains and sugarcane.

- Agricultural fields that have been prepared for planting.
- Areas covered by the footprint of a building, shade house, silo, feed crib, or other man made structure with walls and or roof.

Non-target Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption. Do not allow contact of herbicide with foliage, green stems, exposed non-woody roots of crops, and desirable plants, including beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potato, soybean, sunflower, tobacco, tomato, and other broadleaf plants, because severe injury or destruction may result, including plants in a greenhouse. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants. Applicators are required to ensure that they are aware of the proximity to sensitive areas, and to avoid potential adverse effects from off-target movement of M1691 Herbicide. Before making an application, the applicator must survey the application site for neighboring sensitive areas prior to application. The applicator must also consult sensitive crop registries for locating sensitive areas where available.

Failure to follow the requirements in this label could result in severe injury or destruction to desirable sensitive broadleaf crops and trees when contacting their roots, stems or foliage.

Specifically, commercially grown tomatoes and other fruiting vegetables (EPA crop group 8), cucurbits (EPA crop group 9), and grapes are sensitive to dicamba. In order to prevent unintended damage from any drift of this product, do not apply this product when the wind is blowing toward adjacent commercially grown sensitive crops.

Application Awareness

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR

The interaction of equipment and weather related factors must be monitored to maximize performance and on-target spray deposition. The applicator is responsible for considering all of these factors when making a spray decision. The applicator is responsible for compliance with state and local pesticide drift regulations.

Proper spray system equipment cleanout

Minute quantities of dicamba may cause injury to non-dicamba-tolerant soybeans and other sensitive crops (see the "Sensitive Areas" section of this label for more information).

Clean equipment immediately after using this product, using a triple rinse procedure as follows:

1. After spraying, drain the sprayer (including boom and lines) immediately. Do not allow the spray solution to remain in the spray boom lines overnight prior to flushing.
2. Flush tank, hoses, boom and nozzles with clean water.
3. Inspect and clean all strainers, screens and filters.
4. Prepare a cleaning solution with a commercial detergent or sprayer cleaner or ammonia according to the manufacturer's directions.
5. Take care to wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines and nozzles for at least 1 minute with the cleaning solution.

7. Repeat above steps for two additional times to accomplish an effective triple rinse.
8. Remove nozzles, screens and strainers and clean separately in the cleaning solution after completing the above procedures.
9. Appropriately dispose of rinsate from steps 1-7 in compliance with all applicable laws and regulations.
10. Drain sump, filter and lines.
11. Rinse the complete spraying system with clean water.

All rinse water must be disposed of in compliance with local, state, and federal requirements.

CROP ROTATIONAL RESTRICTIONS:
No rotational cropping restrictions apply when rotating to Bollgard II® XtendFlex™ cotton or Roundup Ready® 2 Xtend soybean.

For other crops the interval between application and planting rotational crop is given below. When counting days from the application of this product, do not count days when the ground is frozen.. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

Planting/replanting restrictions for M1691 Herbicide applications of 24 fluid ounces per acre or less:
For corn, cotton (except Bollgard II® Xtendflex™ cotton), sorghum, and soybean (except Roundup Ready® 2 Xtend soybean), follow the planting restrictions in the directions for use for preplant application in **Section 10. Crop-Specific Information** of the label booklet. Do not plant barley, oat, wheat, and other grass seedings for 15 days for every 8 fluid ounces of this product applied per acre east of the Mississippi River and 22 days for every 8 fluid ounces per acre applied west of the Mississippi River. No planting restrictions apply beyond 120 days after application of this product.

Planting/replanting restrictions for applications of more than 24 fluid ounces and up to 32 fluid ounces of M1691 Herbicide per acre:
Wait a minimum of 120 days after application of this product before planting corn, sorghum and cotton (except Bollgard II® Xtendflex™) east of the Rocky Mountains and before planting all other crops (except Roundup Ready® 2 Xtend soybean) grown in areas receiving 30 inches or more rainfall annually. Wait a minimum of 180 days before planting crops in areas with less than 30 inches of annual rainfall. Wait a minimum of 30 days for every 16 fluid ounces of this product applied per acre before planting barley, oat, wheat, and other grass seedings east of the Mississippi River and 45 days for every 16 fluid ounces of this product applied per acre west of the Mississippi River.

LIMIT OF WARRANTY AND LIABILITY

Monsanto Company ("Company") warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in this supplemental label ("Directions") when used in accordance with the Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein. Specifically, and without limiting the foregoing, MONSANTO MAKES NO RECCOMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY

ADJUVANT THAT MAY APPEAR ON THE WEBSITE REFERENCED IN THE TANK-MIXING INSTRUCTIONS HEREIN, REGARDLESS OF WHETHER SUCH ADJUVANT IS USED ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH ADJUVANT ALONE OR IN A TANK MIX WITH M1691 HERBICIDE.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those expressly recommended by Company in the Directions, application to or contact with desirable vegetation, failure of this product to control weed biotypes which develop resistance to dicamba, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those expressly recommended by Company in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For in-crop (over-the-top) uses on Roundup Ready Xtend crops, crop safety and weed control performance are not warranted by Company when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.
Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©[YEAR]

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63167 USA

[*INSERT DATE*]

[*INSERT PRINT PLATE NUMBER*]

[*INSERT SUPPLEMENTAL LABEL EXPIRATION DATE*]

ED_002084_00045330-00010

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR M1691 HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using M1691 Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

This supplemental label expires on xx/xx/xxxx and must not be used or distributed after this date.

M1691

Herbicide

EPA Reg. No. 524-582

GROUP	4	HERBICIDE

FOR PREEMERGENCE AND POSTEMERGENCE USE ON ROUNDUP READY 2 XTEND™ SOYBEAN

Keep out of reach of children

CAUTION!

In case of an emergency involving this product, call collect, day or night, 314-694-4000.

Bollgard II® Roundup Ready®, Roundup Ready 2 Xtend™ and XtendFlex™ are trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

ROUNDUP READY 2 XTEND™ SOYBEAN CONTAINS A PATENTED GENE THAT PROVIDES TOLERANCE TO DICAMBA, THE ACTIVE INGREDIENT IN THIS PRODUCT. THIS PRODUCT WILL CAUSE SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS IF APPLIED TO SOYBEANS THAT ARE NOT DICAMBA TOLERANT, INCLUDING SOYBEANS WITH A TRAIT ENGINEERED TO CONFER TOLERANCE TO AUXIN

HERBICIDES OTHER THAN DICAMBA. FOLLOW THE REQUIREMENTS SET FORTH HEREIN TO PREVENT SEVERE CROP INJURY OR DESTRUCTION AND YIELD LOSS. CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS THAT DO NOT CONTAIN A DICAMBA TOLERANCE GENE OR ARE NOT NATURALLY TOLERANT TO DICAMBA, COULD RESULT IN SEVERE PLANT INJURY OR DESTRUCTION.

Information on Roundup Ready 2 Xtend™ soybean can be obtained from your seed supplier or Monsanto representative. Roundup Ready 2 Xtend™ soybean must be purchased from an authorized licensed seed supplier.

The instructions contained in this Monsanto Supplemental Label include all applications of M1691 Herbicide that may be made to Roundup Ready 2 Xtend™ soybean during the complete cropping season. DO NOT combine these instructions with other instructions in the "SOYBEAN" Section of any other M1691 Herbicide label for use over crops that do not contain the dicamba tolerance trait.

Note: Roundup Ready 2 Xtend™ soybean and methods of controlling weeds and applying dicamba in a Roundup Ready 2 Xtend™ soybean crop are protected under U.S. patent law. No license to use Roundup Ready 2 Xtend™ soybean is granted or implied with the purchase of this herbicide product. Roundup Ready 2 Xtend™ soybean is owned by Monsanto and a license must be obtained from Monsanto before using it. Contact your Authorized Monsanto Retailer for information on obtaining a license to Roundup Ready 2 Xtend™ soybean.

See the "PRODUCT INFORMATION" and "APPLICATION EQUIPMENT AND TECHNIQUES sections of the M1691 Herbicide product label for important product use information. The directions found on this supplemental label are controlling, where inconsistencies are found with the label booklet.

TYPES OF APPLICATIONS: Preplant; At-Planting; Preemergence; Postemergence (In-crop)

M1691 Herbicide is approved by U.S. EPA to be used in the following states, subject to county restriction as noted: Alabama, Arkansas, Arizona, Colorado, Delaware, Florida (excluding Palm Beach County), Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee (excluding Wilson County), Texas, Virginia, West Virginia, Wisconsin.

Restrictions:

- Do not apply this product aerially.
- Do not make application of this product if rain is expected in the next 24 hours.

USE INSTRUCTIONS: Apply this product in a minimum of 10 gallons of spray solution per acre as a broadcast application. For best performance, control weeds early when they are less than 4 inches. Timely application will improve control and reduce weed competition. Refer to the following table for maximum application rates of this product with Roundup Ready 2 Xtend™ soybeans.

Maximum Application Rates	
Combined total per year for all applications	64 fluid ounces per acre (2.0 lb a.e. dicamba per acre)
Total of all Burndown/Early preplant, Preplant, At-Planting, and Preemergence applications	32 fluid ounces per acre (1.0 lb a.e. dicamba per acre)
Total of all In-crop applications from emergence up to and including beginning bloom (R1 stage soybeans)	32 fluid ounces per acre (1.0 lb a.e. dicamba per acre)
Maximum In-crop, single application	16 fluid ounces per acre (0.5 lb a.e. dicamba per acre)

a.e. – acid equivalent

Refer to Table 1 of the M1691 Herbicide label booklet for application rates for weed type and growth stage controlled by this product. Maximum in-crop application rate should be used when treating tough to control weeds, dense vegetative growth or weeds with a well-established root system.

Preplant, At-Planting, Preemergence

USE INSTRUCTIONS: This product may be used to control broadleaf weeds and may be applied before, during or immediately after planting Roundup Ready 2 Xtend™ soybean. Refer to the "WEEDS CONTROLLED" section of the label booklet for M1691 Herbicide for specific weeds controlled.

RESTRICTIONS: The maximum combined quantity of this product that may be applied for all preplant, at-planting, and preemergence applications is 32 fluid ounces (1.0 lb a.e. dicamba) per acre per year. The maximum application rate for a single, preplant, at-planting, or preemergence application must not exceed 32 fluid ounces (1.0 lb a.e. dicamba) per acre.

Postemergence (In-crop)

USE INSTRUCTIONS: This product may be used to control broadleaf weeds in Roundup Ready 2 Xtend™ soybean. In-crop applications of this product can be made from emergence (cracking) up to and including beginning bloom (R1 growth stage of soybeans). The maximum rate for any single, in-crop application must not exceed 16 fluid ounces (0.5 lb a.e. dicamba) per acre. This is also the minimum single application rate in order to reduce the selection for resistant weeds. For best performance, control weeds early when they are less than 4 inches. Monsanto Company does not warrant product performance of applications to labeled weeds greater than 4 inches in height. A second application of this product up to the R1 crop growth stage may be necessary to control new flushes of weeds. Allow at least 7 days between applications. For best results, apply M1691 Herbicide after some weed re-growth has occurred.

Application of this product postemergent and under stressful environments may cause temporary loss of turgor, a response commonly described as leaf droop in RR2X soybeans. Typically, affected plants recover in 1-3 days depending on the level of droop and environmental conditions.

RESTRICTIONS: The combined total application rate from crop emergence up to R1 must not exceed 32 fluid ounces (1.0 lb a.e. dicamba) per acre. The maximum single, in-crop application rate must not exceed 16 fluid ounces (0.5 lb a.e. dicamba). The combined total per year for all applications must not exceed 64 fluid ounces (2.0 lb a.e dicamba) per acre.

Allow at least 7 days between final application and harvest or feeding of soybean forage. Allow at least 14 days between final application and harvest or feeding of soybean hay.

TANK-MIXING INSTRUCTIONS:

RESTRICTIONS:

- **DO NOT TANK MIX ANY OTHER HERBICIDE WITH M1691 HERBICIDE.**

TANK MIXING INSTRUCTIONS FOR ADJUVANTS

M1691 Herbicide may only be tank-mixed with adjuvants that have been tested and found by EPA not to have an unreasonable adverse effect on the spray drift properties of M1691 Herbicide. A list of those EPA approved adjuvants and use rates may be found at [INSERT URL HERE]. DO NOT tank mix any adjuvant with M1691 Herbicide unless:

1. You check the list of EPA approved adjuvants found not to have an unreasonable adverse effect on the spray drift properties of M1691 Herbicide at [INSERT URL HERE] no more than 7 days before applying M1691 Herbicide; and
2. The intended adjuvant tank-mix with M1691 Herbicide is identified on that list of tested and approved adjuvants; and
3. The intended adjuvant tank-mix with M1691 Herbicide is not prohibited on this label.
4. Additional Adjuvant Warnings and Restrictions:

- Some COC, HSOC and MSO adjuvants may cause a temporary crop response.
- Do not tank mix products containing ammonium salts such as ammonium sulfate and urea ammonium nitrate.
- Drift reduction agents listed on the website above can minimize the percentage of driftable fines. However, the applicator must check with the DRA manufacturer to determine if the approved DRA will work effectively with the spray nozzle, the spray pressure, and the desired spray solution.

MONSANTO MAKES NO RECOMMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY ADJUVANT THAT MAY APPEAR ON THE WEBSITE REFERENCED ABOVE, REGARDLESS OF WHETHER SUCH ADJUVANT IS USED ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH ADJUVANT ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. See the section titled "LIMIT OF WARRANTY AND LIABILITY" herein for more information.

WEED RESISTANCE MANAGEMENT

Some naturally occurring weed biotypes that are tolerant (resistant) to dicamba may exist due to

genetic variability in a weed population. Where resistant biotypes exist, the repeated use of herbicides with the same modes of action can lead to the selection for resistant weeds. Certain agronomic practices can delay or reduce the likelihood that resistant weed populations will develop and can be utilized to manage weed resistance once it occurs.

Use a minimum of 0.5 lb a.e./A (16 fl oz/A) of this product in a single application in order to minimize the selection for resistant weeds.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued availability of this product depends on the successful management of the weed resistance program; therefore, it is very important to perform the following actions.

To aid in the prevention of developing weeds resistant to this product, the following steps should be followed where practical:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Apply full rates of M1691 Herbicide for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in weed species.
- Report any incidence of non-performance of this product against a particular weed species to your Monsanto retailer, representative or call [INSERT PHONE NUMBER]
- If resistance is suspected, treat weed escapes with an herbicide having a mode of action other than Group 4 and/or use non-chemical methods to remove escapes, as practical, with the goal of preventing further seed production.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other modes of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of this product with non-Group 4 herbicides.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

Contact the local agricultural extension service, Monsanto representative, ag retailer or crop consultant for further guidance on weed control practices as needed.

APPLICATION EQUIPMENT AND TECHNIQUES:
DO NOT APPLY THIS PRODUCT TO ROUNDUP READY 2 XTEND™ SOYBEAN USING AERIAL SPRAY EQUIPMENT.

Apply this product using properly maintained and calibrated equipment capable of delivering the desired volumes.

Spray Drift Management
Do not allow herbicide solution to mist, drip, drift or splash onto desirable vegetation because severe injury or destruction to desirable broadleaf plants could result. The following drift management requirements must be followed .

Controlling Droplet Size
Drift potential may be reduced by applying large droplets that provide sufficient coverage and control. Applying larger droplets can reduce drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions (see the "**Wind Speed and Direction**", "**Temperature and Humidity**" and "**Temperature Inversions**" sections of this label).

- **Nozzle type.** Use the Tee Jet® TTI11004 nozzle with a maximum operating pressure of 63 psi when applying M1691 Herbicide. Do not use any other nozzle and pressure combination not specifically allowed by this supplemental label.

- **Spray Volume.** Apply this product in a minimum of 10 gallons of spray solution per acre. Use a higher spray volume when treating dense vegetation. Higher spray volumes may also allow the use of larger nozzle orifices (sizes) which produce coarser spray droplets.

- **Equipment Ground Speed.** Select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but do not exceed a ground speed of 15 miles per hour. Slower speeds generally result in better spray coverage and deposition on the target area.

- **Spray boom Height.** Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but do not exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Larger droplets have a lower surface to volume ratio and are impacted less by temperature and humidity. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions. Do not apply during a temperature inversion because off-target movement potential is high.

- During a temperature inversion, the atmosphere is very stable and vertical air mixing is restricted, which can cause small, suspended droplets to remain in a concentrated

ED_002084_00045331-00006

cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions.

- Temperature inversions are characterized by increasing temperatures with altitude and are common on evenings and nights with limited cloud cover and light to no wind. Cooling of air at the earth's surface takes place and warmer air is trapped above it. They begin to form as the sun sets and often continue into the morning.
- Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- The inversion will dissipate with increased winds (above 3 MPH) or at sunrise when the surface air begins to warm (generally 3°F from morning low).

Wind Speed and Direction

- Drift potential is lowest between wind speeds of 3 to 10 miles per hour.
- Do not apply at wind speeds greater than 15 mph.
- For M1691 Herbicide wind speed and direction restrictions see below table:

Wind speed	Application conditions and restrictions
<3 mph	Do not apply M1691 Herbicide
3-10 mph	Optimum M1691 Herbicide application conditions provided all other application requirements in this label are met.
>10 – 15 mph	Do not apply product when wind is blowing toward sensitive areas
> 15 mph	Do not apply M1691 Herbicide

NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Sensitive Areas

Threatened and Endangered Species

Maintain a 110 foot buffer (when applying 16 fl oz of this product per acre), or a 220 foot buffer (when applying 32 fl oz of this product per acre) from all outer edges of the field, less the distance of any of the adjacent areas specified below.

To maintain the required buffer zone:

- No application swath can be initiated in, or into an area that is within the applicable buffer distance of a sensitive area.
- The following areas may be included in the buffer distance calculation when adjacent to field edges:
    - Roads, paved or gravel surfaces.
    - Planted agricultural fields containing corn, sorghum, proso millet, small grains and sugarcane.
    - Agricultural fields that have been prepared for planting.
    - Areas covered by the footprint of a building, shade house, silo, feed crib, or other man made structure with walls and or roof.

Non-target Susceptible Plants
Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption. Do not allow contact of herbicide with foliage, green stems, exposed non-woody roots of crops, and desirable plants, including beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potato, soybean, sunflower, tobacco, tomato, and other broadleaf plants, because severe injury or destruction may result, including plants in a greenhouse. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants. Applicators are required to ensure that they are aware of the proximity to sensitive areas, and to avoid potential adverse effects from off-target movement of M1691 Herbicide. Before making an application, the applicator must survey the application site for neighboring sensitive areas prior to application. The applicator must also consult sensitive crop registries for locating sensitive areas where available.

Failure to follow the requirements in this label could result in severe injury or destruction to desirable sensitive broadleaf crops and trees when contacting their roots, stems or foliage.

Specifically, commercially grown tomatoes and other fruiting vegetables (EPA crop group 8), cucurbits (EPA crop group 9), and grapes are sensitive to dicamba. In order to prevent unintended damage from any drift of this product, do not apply this product when the wind is blowing toward adjacent commercially grown sensitive crops.

Application Awareness
AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR

The interaction of equipment and weather related factors must be monitored to maximize performance and on-target spray deposition. The applicator is responsible for considering all of these factors when making a spray decision. The applicator is responsible for compliance with state and local pesticide drift regulations.

Proper spray system equipment cleanout
Minute quantities of dicamba may cause injury to non-dicamba-tolerant soybeans and other sensitive crops (see the "Sensitive Areas" section of this label for more information).
Clean equipment immediately after using this product, using a triple rinse procedure as follows:

1. After spraying, drain the sprayer (including boom and lines) immediately. Do not allow the spray solution to remain in the spray boom lines overnight prior to flushing.
2. Flush tank, hoses, boom and nozzles with clean water.
3. Inspect and clean all strainers, screens and filters.
4. Prepare a cleaning solution with a commercial detergent or sprayer cleaner or ammonia according to the manufacturer's directions.
5. Take care to wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines and nozzles for at least 1 minute with the cleaning solution.
7. Repeat above steps for two additional times to accomplish an effective triple rinse.
8. Remove nozzles, screens and strainers and clean separately in the cleaning solution after completing the above procedures.
9. Appropriately dispose of rinsate from steps 1-7 in compliance with all applicable laws and regulations.
10. Drain sump, filter and lines.

ED_002084_00045331-00008

11. Rinse the complete spraying system with clean water.

All rinse water must be disposed of in compliance with local, state, and federal requirements.

CROP ROTATIONAL RESTRICTIONS:
No rotational cropping restrictions apply when rotating to Roundup Ready 2 Xtend™ soybean or Bollgard II® XtendFlex™ cotton. For other crops the interval between application and planting rotational crop is given below. When counting days from the application of this product, do not count days when the ground is frozen.. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

Planting/replanting restrictions for M1691 Herbicide applications of 24 fluid ounces per acre or less:
For corn, cotton (except Bollgard II® Xtendflex™ cotton), sorghum, and soybean (except Roundup Ready 2 Xtend™ soybean), follow the planting restrictions in the directions for use for preplant application in **Section 10. Crop-Specific Information** of the label booklet. Do not plant barley, oat, wheat, and other grass seedings for 15 days for every 8 fluid ounces of this product applied per acre east of the Mississippi River and 22 days for every 8 fluid ounces per acre applied west of the Mississippi River. No planting restrictions apply beyond 120 days after application of this product.

Planting/replanting restrictions for applications of more than 24 fluid ounces and up to 32 fluid ounces of M1691 Herbicide per acre:
Wait a minimum of 120 days after application of this product before planting corn, sorghum and cotton (except Bollgard II® Xtendflex™ cotton) east of the Rocky Mountains and before planting all other crops (except Roundup Ready 2 Xtend™ soybean) grown in areas receiving 30 inches or more rainfall annually. Wait a minimum of 180 days before planting crops in areas with less than 30 inches of annual rainfall. Wait a minimum of 30 days for every 16 fluid ounces of this product applied per acre before planting barley, oat, wheat, and other grass seedings east of the Mississippi River and 45 days for every 16 fluid ounces of this product applied per acre west of the Mississippi River.

LIMIT OF WARRANTY AND LIABILITY

Monsanto Company ("Company") warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in this supplemental label ("Directions") when used in accordance with the Directions under the conditions described therein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein. Specifically, and without limiting the foregoing, MONSANTO MAKES NO RECCOMENDATION OR WARRANTY HEREIN REGARDING THE USE OF ANY ADJUVANT THAT MAY APPEAR ON THE WEBSITE REFERENCED IN THE TANK-MIXING INSTRUCTIONS HEREIN, REGARDLESS OF WHETHER SUCH ADJUVANT IS USED ALONE OR IN A TANK MIX WITH M1691 HERBICIDE. BUYER AND ALL USERS ARE SOLELY RESPONSIBLE FOR ANY LACK OF PERFORMANCE, LOSS, OR DAMAGE IN CONNECTION WITH THE USE OR HANDLING OF ANY SUCH ADJUVANT ALONE OR IN A TANK MIX WITH M1691 HERBICIDE.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those expressly recommended by Company in the Directions, application to or contact with desirable vegetation, failure of this product to control weed biotypes which develop resistance to dicamba, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those expressly recommended by Company in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For in-crop (over-the-top) uses on Roundup Ready Xtend crops, crop safety and weed control performance are not warranted by Company when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.
Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©[YEAR]

MONSANTO COMPANY
800 N. LINDBERGH BLVD.
ST. LOUIS, MISSOURI 63167 USA

[*INSERT DATE*]

[*INSERT PRINT PLATE NUMBER*]

[*INSERT SUPPLEMENTAL LABEL EXPIRATION DATE*]

ED_002084_00045331-00010

Message

From: Montague, Kathryn V. [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C50D485150734F6E85059D64DD80A353-KATHRYN V. MONTAGUE]
Sent: 3/31/2016 12:49:10 PM
To: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]
Subject: RE: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

Hi, Dan,

We're looking into these, and will get back to you ASAP.

One question on the ag crops, though – how would the applicator know that adjacent cotton or soybeans are the tolerant versions?

Thanks,
Kay

From: JENKINS, DANIEL J [AG/1920] [mailto:daniel.j.jenkins@monsanto.com]
Sent: Thursday, March 31, 2016 8:02 AM
To: Rowland, Grant <Rowland.Grant@epa.gov>; Kenny, Daniel <Kenny.Dan@epa.gov>; Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Subject: Emailing - M1691 Herbicide DT soybean Label_March_29_2016_revisions_final epa edits 3 30 2016djj.pdf

We're cleaning things up, but please see our comments re

110 ft buffer: *addition of "from" could be read to mean that you must have 110' between spray and field edge regardless of the "exceptions" (adjacent road, planted field any of the exceptions). That could result in 110' + the distance of any the excepted areas. Here is a proposed fix:*

"Maintain a 110 foot in-field buffer (when applying 16 fl oz of this product per acre), or a 220 foot in-field buffer (when applying 32 fl oz of this product per acre) on from all outer edges of the field, less the distance of any of the adjacent areas specified below."

Adjacent ag fields: *it doesn't make sense that non-broadleafs with registered uses can be included in the buffer distance calculation, but if a neighbor plants the exact same gm dicamba tolerant crops and it is adjacent it can't be. We strongly suggest the following:*

Planted agricultural fields containing crops with a natural tolerance to dicamba including corn, sorghum, proso millet, small grains and sugarcane and crops containing a dicamba tolerance gene including Roundup Ready II Xtend soybeans and Bollgard II Xtendflex Cotton.

This email and any attachments were sent from a Monsanto email account and may contain confidential and/or privileged information. If you are not the intended recipient, please contact the sender and delete this email and any attachments immediately. Any unauthorized use, including disclosing, printing, storing, copying or distributing this email, is prohibited. All emails and attachments sent to or from Monsanto email accounts may be subject to monitoring, reading, and archiving by Monsanto, including its affiliates and subsidiaries, as permitted by applicable law. Thank you.

Message

From: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]
Sent: 2/10/2016 3:14:54 PM
To: Kenny, Daniel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1be9bb592f144269bcd41dd3a6d8a6d4-Daniel C. Kenny]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]
CC: Cowles, James [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=684502c4acad4894b1fed6fae1c6d74d-Cowles, James]; Corbin, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1db182663b134e46b3fec580f8e0b5f2-Mark Corbin]; BHAKTA, TINA [AG/1000] [tina.bhakta@monsanto.com]
Subject: Dicamba mtg request

Importance: High

All:

We would like to meet with EFED next week (Thursday afternoon?) for one hour.

Agenda:
Technical feedback re volatility
DCSA status

Thanks,

Dan Jenkins
U.S. Agency Lead
Regulatory Affairs
Monsanto Company
1300 I St., NW
Suite 450 East
Washington, DC 20005
Office: 202-383-2851
Cell: 571-732-6575

This e-mail message may contain privileged and/or confidential information, and is intended to be received only by persons entitled
to receive such information. If you have received this e-mail in error, please notify the sender immediately. Please delete it and
all attachments from any servers, hard drives or any other media. Other use of this e-mail by you is strictly prohibited.

All e-mails and attachments sent and received are subject to monitoring, reading and archival by Monsanto, including its
subsidiaries. The recipient of this e-mail is solely responsible for checking for the presence of "Viruses" or other "Malware".

Monsanto, along with its subsidiaries, accepts no liability for any damage caused by any such code transmitted by or accompanying
this e-mail or any attachment.

The information contained in this email may be subject to the export control laws and regulations of the United States, potentially
including but not limited to the Export Administration Regulations (EAR) and sanctions regulations issued by the U.S. Department of
Treasury, Office of Foreign Asset Controls (OFAC). As a recipient of this information you are obligated to comply with all
applicable U.S. export laws and regulations.

Message

From: Kenny, Daniel [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=1BE9BB592F144269BCD41DD3A6D8A6D4-DANIEL C. KENNY]
Sent: 3/18/2016 2:12:09 PM
To: Max Safarpour [maximilian.safarpour@basf.com]; Jeffrey H Birk [jeffrey.birk@basf.com]
CC: Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]
Subject: FW: Egan and Mortensen volatility paper
Attachments: Egan_volatility_2012.pdf

Hello Max and Jeff. It was good to see you yesterday. In response to your request for a copy of the Egan volatility study with dicamba from our meeting yesterday, please see the attached file. Please let me know if you have any questions.

Thanks,
Dan

From: Corbin, Mark
Sent: Friday, March 18, 2016 9:04 AM
To: Wagman, Michael <Wagman.Michael@epa.gov>; Kenny, Daniel <Kenny.Dan@epa.gov>
Subject: RE: Egan and Mortensen volatility paper

Here is a hard copy to send to BASF in case you cannot access the website

---

From: Wagman, Michael
Sent: Thursday, March 17, 2016 5:46 PM
To: Kenny, Daniel <Kenny.Dan@epa.gov>
Cc: Corbin, Mark <Corbin.Mark@epa.gov>
Subject: Egan and Mortensen volatility paper

Hi Dan,

Here's the egan and mortensen paper. Mark also said you might have some more questions on chronic risk and listed/non-listed species. I'm around for another ½ hour if you want to give me a call.

http://onlinelibrary.wiley.com/doi/10.1002/etc.1778/full

SETAC PRESS

Environmental Toxicology and Chemistry, Vol. 31, No. 5, pp. 1023–1031, 2012
© 2012 SETAC
Printed in the USA
DOI: 10.1002/etc.1778

QUANTIFYING VAPOR DRIFT OF DICAMBA HERBICIDES APPLIED TO SOYBEAN

J. Franklin Egan* and David A. Mortensen
Department of Crop and Soil Sciences, The Pennsylvania State University, University Park, Pennsylvania USA

(*Submitted* 26 *October* 2011; *Returned for Revision* 4 *December* 2011; *Accepted* 23 *December* 2011)

Abstract—Recent advances in biotechnology have produced cultivars of corn, soybean, and cotton resistant to the synthetic-auxin herbicide dicamba. This technology will allow dicamba herbicides to be applied in new crops, at new periods in the growing season, and over greatly expanded areas, including postemergence applications in soybean. From past and current use in corn and small grains, dicamba vapor drift and subsequent crop injury to sensitive broadleaf crops has been a frequent problem. In the present study, the authors measured dicamba vapor drift in the field from postemergence applications to soybean using greenhouse-grown soybean as a bioassay system. They found that when the volatile dimethylamine formulation is applied, vapor drift could be detected at mean concentrations of 0.56 g acid equivalent dicamba/ha (0.1% of the applied rate) at 21 m away from a treated 18.3 × 18.3 m plot. Applying the diglycolamine formulation of dicamba reduced vapor drift by 94.0%. With the dimethylamine formulation, the extent and severity of vapor drift was significantly correlated with air temperature, indicating elevated risks if dimethylamine dicamba is applied early to midsummer in many growing regions. Additional research is needed to more fully understand the effects of vapor drift exposures to nontarget crops and wild plants. Environ. Toxicol. Chem. 2012;31:1023–1031. © 2012 SETAC

Keywords—Herbicide Dose–response modeling Plant toxicology Environmental transport Genetically modified organisms

INTRODUCTION

Recent advances in biotechnology have produced cultivars of corn, soybean, and cotton resistant to the synthetic auxin herbicide dicamba (3,6-dichloro-*o*-anisic acid) [1,2]. This technology will allow dicamba herbicides to be applied to new crops and under new conditions, including postemergence applications in soybean. Because of the increased prevalence of glyphosate-resistant weeds in glyphosate-resistant soybean and other crops, this technology package of cultivars, with stacked glyphosate- and dicamba-resistance traits, may be an attractive weed control choice for many soybean growers and may be adopted rapidly [2,3].

Dicamba is a synthetic-auxin herbicide that is active on a wide range of broadleaf plant species and has been used widely in corn, small grain, and pasture weed control for more than five decades. Dicamba is a moderately volatile compound, and vapor drift and nontarget crop and wild plant injury have been recurring problems during these 50 years of use [4–7]. These issues have previously limited use of dicamba to cereal crops and pastures, and have forced restrictions on its use in rotations with broadleaf crops. Herbicide-resistance biotechnology may expand the risks of injury to nontarget crops and vegetation by enabling dicamba to be applied to new crops, over an expanded growing season, and over significantly larger areas. For example, although current herbicide labels require as much as a 45-d delay between early season dicamba applications and the planting of a subsequent soybean crop [8], a farmer in the midwestern United States growing dicamba-resistant soybean varieties would instead have the option of applying dicamba early to midsummer after the soybean has fully emerged [9].

Although vapor drift has been a widely recognized risk when applying dicamba, there is little peer-reviewed data available to assess the extent of herbicide vapor drift and the factors that influence it in the field [4–7]. Growers typically settle disputes over drift damage to crops informally and without reporting incidents to authorities; therefore, it is very difficult to accurately estimate the frequency and severity of nontarget crop damage through vapor drift or other routes of exposure [10]. Anticipating the release of dicamba resistance biotechnology, numerous American farmers, extension scientists, and grower organizations have expressed concern over drift and crop injury [11]. Furthermore, a growing body of research has demonstrated that wild plants near farms play an important role in supporting beneficial insects such as pollinators and biocontrol agents [12–14], and herbicide drift could diminish the abundance and fitness of these plant resources [15].

Several potential management options may be available to mitigate risks of vapor drift from dicamba-resistant cropping systems. First, various formulations of the dicamba active ingredient have different volatilities and potentials for vapor drift. For example, in herbicide promotional literature, the diglycolamine salt of dicamba is purported to be eight times less volatile than the dimethylamine salt [16], although again little peer-reviewed data are available to evaluate these claims under field conditions. Second, if specific environmental conditions that promote vapor drift can be identified, herbicide applications could be avoided on the most drift-prone days. For example, because volatility is driven by temperature, postemergence applications when daytime temperatures are above a certain threshold may be especially problematic.

In light of these concerns, we thought it essential to carefully assess the potential for vapor drift under some of the new application conditions that herbicide-resistant biotechnology will enable before the resistant cultivars are commercialized. Working in the context of postemergence dicamba applications on soybean, we used a bioassay approach to measure and map dicamba vapor drift in the field. We used our data to examine three questions: (1) How far and at what concentrations does dicamba vapor drift from an area treated with dicamba? (2) What is the influence of herbicide formulation on the amount

* To whom correspondence may be addressed (jfe121@psu.edu).
Published online 23 February 2012 in Wiley Online Library (wileyonlinelibrary.com).

ED_002084_00045742-00001

and extent of dicamba vapor drift? and (3) What are the environmental factors (air temperature, air pressure, humidity, and wind speed) influences on the amount and extent of vapor drift?

MATERIALS AND METHODS

Field trials

We tracked dicamba vapor drift by conducting experiments using field soybeans and greenhouse-grown bioassay soybeans. Research was conducted in 2009 and 2010 at the Russell Larson Agricultural Experiment Station in Rock Springs, Pennsylvania, USA. In each year, six (2009) or eight (2010) fields were planted with a dicamba-susceptible, glyphosate-resistant cultivar (Chemgrow #3539) on staggered dates between mid-May and early June. Soybeans were no-till drilled in 19-cm rows in fields that had been planted with corn the previous year. Weed control was provided with a preplant application of chlorantsulam-methyl at 18 g active ingredient/ha and an early postemergence application of glyphosate at 1,262 g acid equivalent/ha. We then applied dicamba treatments to each field in late June to mid July, while soybean were in the V3 to V5 stage [17], which is a typical timing for postemergence herbicide applications on soybean. These treatment dates covered a range of environmental conditions that may influence vapor drift, including air pressure, relative humidity, air temperature, and wind speed. Therefore, the results span the likely range of vapor drift from postemergence applications on soybean.

In the center of each field, we treated an 18.3 × 18.3 m plot with a dicamba herbicide at a rate of 561 g acid equivalent/ha, applied with a total carrier volume of 187 L/ha. We used 561 g acid equivalent/ha because this is currently a common application rate in corn and is also within the range of rates that will be promoted for postemergence applications in dicamba resistant soybean [8,9,18]. In 2009, we treated all six fields with a formulated product containing the dimethylamine salt of dicamba [8]. In 2010, we treated five fields with dimethylamine dicamba and three fields with a formulated product containing the diglycolamine salt of dicamba [18]. We applied herbicides using a backpack CO_2 sprayer and a 3.05 m handheld boom equipped with AIXR11002 nozzles (TeeJet), calibrated to 241 kPa, and walked on at a speed of 1.3 m/s. Herbicide was applied to each field between 7:45 and 8:30 AM.

In advance of the herbicide application, we extended eight transects from the center of the treated plot in each field. These transects stretched from 25 to 90 m, depending on field size and shape. Designating the center of the treated plot as the zero point, we marked individual field soybean plants for recording dicamba herbicide injury symptoms every 3 m up to 25 m, every 5 m up to 40 m, and then every 10 m up to 100 m. To gauge variability at a single location, we marked three plants at 6, 12, and 21 m along each transect. We quantified injury symptoms on marked plants 28 d after herbicide treatment on a 100-point scale using a scale similar to that developed by Behrens and Lueschen [4] and Anderson et al. [19] (Table 1).

Injury on field soybean plants integrates both particle drift immediately following herbicide application and vapor drift potentially occurring over a longer period. To exclude particle drift and more precisely measure vapor drift occurring in the period following application, we used potted soybeans as bioassay plants. We grew sets of bioassay plants in a greenhouse under ambient light conditions, with one set for each treated field seeded one to three weeks following the planting of the corresponding field soybean. Greenhouse bioassay plants were grown in 3.8-L pots using an artificial soil mixture (Fafard pro germination mix) supplemented with 4.0 g of Osmocote 19-6-12 fertilizer (Scotts Miracle-Gro Company). The same soybean cultivar was planted in the field and greenhouse. Depending on field size, we grew between 104 and 144 bioassay plants per set. We randomly assigned each plant a position within a grid along a greenhouse table, with plants designated for the same field grouped on the same tables. We also randomly assigned each plant a position on one of the transects in its corresponding field. Greenhouse bioassay plants were assigned to the same positions as the field plants, with three plants also assigned to the 6, 12, and 21 m positions along each transect. We scored the bioassay plants for growth stage and measured height to the apical bud on the day immediately preceding field exposure.

Table 1. Dicamba injury symptom rating scale[a]

0	No effect, plant normal.
10	Slight crinkle of leaflets of terminal leaf.
20	Cupping of terminal leaflets, slight crinkle of leaflets of second leaf, growth rate normal.
30	Leaflets of two terminal leaves cupped, expansion of terminal leaf suppressed slightly.
40	Malformation and growth suppression of two terminal leaves, terminal leaf size less than one-half that of control. New axillary leaves developing at a substantially reduced rate.
50	No expansion of terminal leaf, second leaf size one-half that of control. Axillary leaf buds unable to open and develop.
60	Slight terminal growth, necrosis of terminal leaf, and axillary bud apparent. Chlorosis and necrosis in axillary leaf clusters.
70	Terminal bud dead, substantial, strongly malformed axillary shoot growth.
80	Limited axillary shoot growth, leaves present at time of treatment chlorotic with slight necrosis.
90	Plant dying, leaves mostly necrotic.
100	Plant dead.

[a] Adapted from Behrens and Lueschen [4] and Andersen et al. [19].

On the morning of each dicamba field application, we transported the bioassay plants from the greenhouse to the designated field. We parked the vehicle more than 100 m away from the treated plot, with all doors and windows closed during application. Thirty minutes after herbicide application (allowing time for particle drift to settle), a crew of four to six research technicians positioned the bioassay plants within approximately 20 cm of the marked field plants along the eight transects. In 2009, we collected the bioassay plants after 24 h of exposure in the field and then transported them back to the greenhouse. In 2010, complications with field operations (overnight rodent and deer damage) forced us to switch from a 24-h to 8-h exposure midway through the experiment. We then scored each bioassay plant for dicamba injury symptoms 14 d after herbicide treatment using the same scale used for field soybeans. A summary of the date of treatment, formulation, and exposure duration of bioassay plants for each field is provided in Table 2.

Several environmental variables were collected from each field trial to be included as potential explanatory variables in analysis of the data. A National Oceanic and Atmospheric Administration weather station at the research farm [20] located 100 to 2,100 m from each field collected temperature, air pressure, humidity, precipitation, and wind speed data in 1-min increments.

Control plants

To account for possible stresses of moving bioassay plants into the field and for possible inadvertent dicamba contamination, we included at least four plants each of two types of controls in each set of greenhouse bioassay plants. "Moved"

Table 2. Summary of field trials by formulation, duration of exposure, treatment date, number of bioassay plants, and number of false positive recordings

Field	Formulation	Exposure (h)	Treatment date	No. Plants	False-positives
KN4W	DMA	24	June 27, 2009	104	3
H	DMA	24	July 1, 2009	132	5
KN5	DMA	24	July 6, 2009	120	2
Ento	DMA	24	July 8, 2009	120	2
FryJ1	DMA	24	July 10, 2009	120	6
KN4E	DMA	24	July 16, 2009	120	1
KN6W	DMA	24	June 17, 2010	144	2
U8	DMA	24	June 23, 2010	112	1
KNE2	DMA	8	June 26, 2010	140	4
OMN	DMA	8	July 6, 2010	144	2
HarpAE	DMA	8	July 21, 2010	128	7
KN6E	DGA	24	June 18, 2010	144	2
G24	DGA	8	June 25, 2010	136	2
HarpAW	DGA	8	July 14, 2010	125	5

DMA = dimethylamine; DGA = diglycolamine.

controls were transported out to the research farm along with the other bioassay plants, but positioned in an untreated field at least 1,000 m from the dicamba application. "Moved" plants were left in the field for the same period as the corresponding bioassay plants and transported back to the greenhouse in the same van. Plants that were "not moved" were left in the greenhouse for the duration of the experiment. We scored both types of controls for injury at the same time intervals as the other bioassay plants in a set. Very slight injury symptoms were observed on one "not moved" plant in 2009 and one "not moved" plant in 2010 (ratings of 5 and 8 on our scale, respectively), and we suspected these observations as being false-positives.

Controlled dose–response experiments

We conducted dose–response experiments to relate injury symptoms observed on greenhouse bioassay plants to the amount of dicamba exposure. In 2009, a randomized complete block design experiment was conducted using six rates (56.1, 5.61, 0.561, 0.056, 0.006 g acid equivalent/ha plus a water control) of dimethylamine dicamba and 12 replications. Seeds were planted on September 29, 2009, using the same methods for the plants positioned in the field. Dicamba was applied in a closed chamber using a track sprayer on October 29, 2009, while plants were in the V3 stage. In 2010, a similar experiment was conducted using 10 rates (561, 56.1, 17.7, 5.61, 1.77, 0.561, 0.177, 0.056, 0.018, 0.006 g acid equivalent/ha plus a water control), two formulations (dimethylamine and diglycolamine), and five replications. Plants were seeded on June 9 and treated on July 2 using the track sprayer, while plants were in the V4 stage. In both years, we quantified injury symptoms on all plants 14 d after herbicide treatment.

Statistical analysis

Data preprocessing. In certain cases, we suspected a positive injury rating on a bioassay plant of being a false-positive. We judged a recording as a false-positive if it met all of the following three criteria: (1) no injury symptoms 28 d after herbicide treatment on the corresponding field soybean plant, (2) no injury on the bioassay plants located at either of the adjacent points along a transect, and (3) if more than one bioassay plant was located at the same position on the transects, these replicate plants all had zero injury ratings. For all subsequent data analysis, we took a conservative approach and removed all false positive data points to generate a reduced dataset (Table 2).

Dose–response curves. In both years, we found that a ln-linear model, where injury 14 d after herbicide treatment is described by the natural logarithm of the dicamba dose, fit the data very well. Although log-logistic models are often recommended for herbicide dose–response data, we did not find that these models were supported by the data [21]. We based this conclusion on lack-of-fit tests comparing a four-parameter log-logistic model to a one-way analysis of variance (ANOVA) model (for 2009, $F_{(2,68)} = 85.66$, $p < 0.001$; for 2010, $F_{(7,106)} = 31.91$, $p < 0.001$) [21].

For the 2010 data, we conducted a two-way ANOVA to test for the effects of dicamba dose, formulation (diglycolamine vs dimethylamine), and interactions of dose and formulation on injury 14 d after herbicide treatment. We found no evidence for any effect of formulation or interaction between formulation and dose on injury symptoms, and therefore pooled data across formulations to produce one ln-linear dose response curve for the 2010 data.

For each year, the ln-linear regression was then used to produce the inverse relationship describing ln (dose) as a function of injury value 14 d after herbicide treatment. This value was then converted to the arithmetic scale in units of g acid equivalent dicamba/ha. The 2009 curve was used strictly for 2009 plants, and the 2010 curve for 2010 plants.

Inverse distance weighted spatial interpolation surfaces. Data from our field trials includes information on both the extent (distance traveled) and severity (estimated dose of exposure) of dicamba vapor drift. We refined these aspects of the data into a concise spatial metric by building inverse distance weighted (IDW) spatial interpolation models [22] with the geostatistical analyst tools in ArcGIS [23]. For each field, we imported the data on each bioassay plant's location in the field and its estimated dose of exposure into an X/Y coordinate system in ArcGIS. We then evaluated a set of IDW models for each field that systematically varied the major and minor search radii and the minimum and maximum number of neighboring plants. We used the optimize power function in ArcGIS to set the power for the inverse distance weighting. For points where two or more replicate bioassay plants were positioned, we used the mean-estimated dose value. We selected the IDW model that minimized the root mean square of a regression model comparing the cross-validated predicted and measured estimated dose values. We then integrated across the interpolated surface to produce an estimate of the total g acid equivalent dicamba of vapor drift that resettled on plant surfaces outside of the treated plot across a given field (Fig. 1).

Mean comparisons of formulation and exposures. For the dimethylamine field trials, we conducted mean comparisons of the 2009 and 2010 data. For the 2010 data, we conducted mean comparisons of duration of exposure (8 vs 24 h) for the dimethylamine field trials and across formulations (dimethylamine vs diglycolamine). For each comparison, we conducted multiple *t* tests using the following three drift indices: (1) the total g acid equivalent dicamba of resettled vapor drift outside of the treated plot (calculated from the IDW surface); (2) the number of injured bioassay plants outside of the treated plot; and (3) the distance from the center of the treated plot of the farthest injured plant.

Dose-distance functions. We developed dose-distance functions to relate the estimated dose of exposure to the distance from the center of the treated plot. For each field, we visually

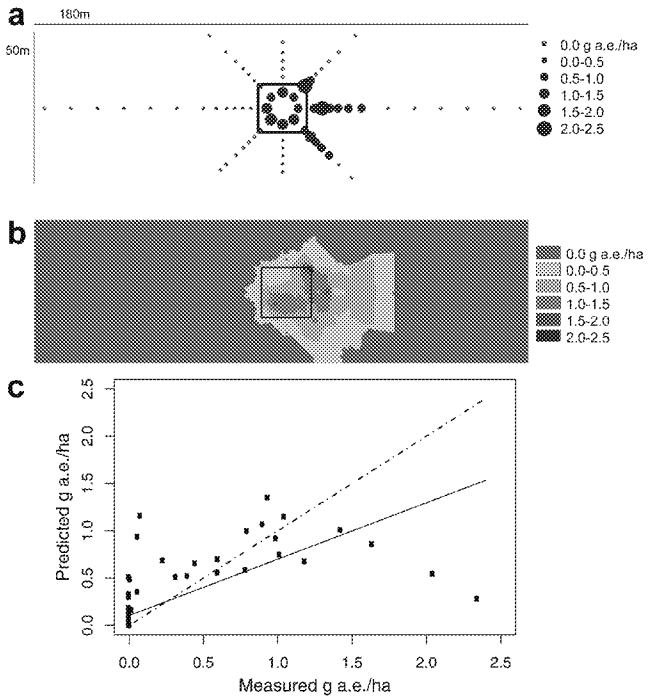


Fig. 1. Distribution of injured plants and estimated dose values (**a**), the resulting inverse distance weighted interpolated surface (**b**), and cross-validation plot of measured values and predicted values from the interpolated surface (**c**) for field KN4E (2009). In a and b, the square box in the center marks the border of the treated plot. In c, the solid line indicates the least-squares linear regression function of predicted against measured values, and the dashed line is the ideal 1:1 line. [Color figure can be seen in the online version of this article, available at wileyonlinelibrary.com].

inspected graphs of the vapor drift pattern in ArcGIS and then selected the two primary transects along which vapor drift was detected. We then pooled data from each field into one of three datasets, including dimethylamine 2009, dimethylamine 2010, and diglycolamine 2010. We then fit power functions of the form d = a*m^b [24,25], where d is the estimated dose, m is the distance from the center of the treated plot, and a and b are constants fitted using the non-linear least squares (nls) function in the statistical program R [26]. We also fit 95% upper and lower bootstrapped confidence bands for each curve using the nlsBoot function in R [26]. These confidence bands were used to calculate mean and upper and lower estimated doses of exposure at 5, 15, 25, 50, and 100 m from the center of the treated plot.

Correlations between drift indices and meteorological variables. We found that the mean value for air temperature, air pressure, relative humidity, and wind speed in the 8-h period after positioning the bioassay plants in the field adequately summarized the daily variation in these meteorological variables for each field trial. Using the data for the dimethylamine field trials, we tested for correlations between vapor drift and the meteorological variables by running separate stepwise multiple linear regression models on each of the three drift indices (total gram acid equivalent, number of points, and farthest distance). We used a p value of less than 0.10 as the criteria to retain a variable in the final model. Because the data set only includes 11 total dimethylamine field trials over two years, we were unable to include interaction terms between variables in the regression analyses. Also, because we had only three diglycolamine field trials, we were not able to explore correlations for this formulation.

RESULTS

Dose–response experiments

Log-linear models produced a very tight correlation between observed injury and treatment dose (in 2009, $r^2 = 97.3$, $p < 0.001$; in 2010, $r^2 = 96.6$, $p < 0.001$; Fig. 2). Based on a 95% confidence interval for the slope parameters of these models, the 2009 and 2010 data sets showed statistically distinct relationships between injury 14 d after herbicide treatment and ln(dose) (in 2009,95% CI of $b_1 = [0.131, 0.143]$; 2010, 95% CI of $b_1 = [0.103, 0.112]$). The 2010 model had a smaller slope, indicating that for the same scored level of injury, plants in 2010 were exposed to a smaller dose of dicamba. In 2010, bioassay plants grown in the greenhouse were significantly taller at the V3 to V4 stage immediately preceding exposure, likely due to warmer and sunnier conditions in the greenhouse in 2010.

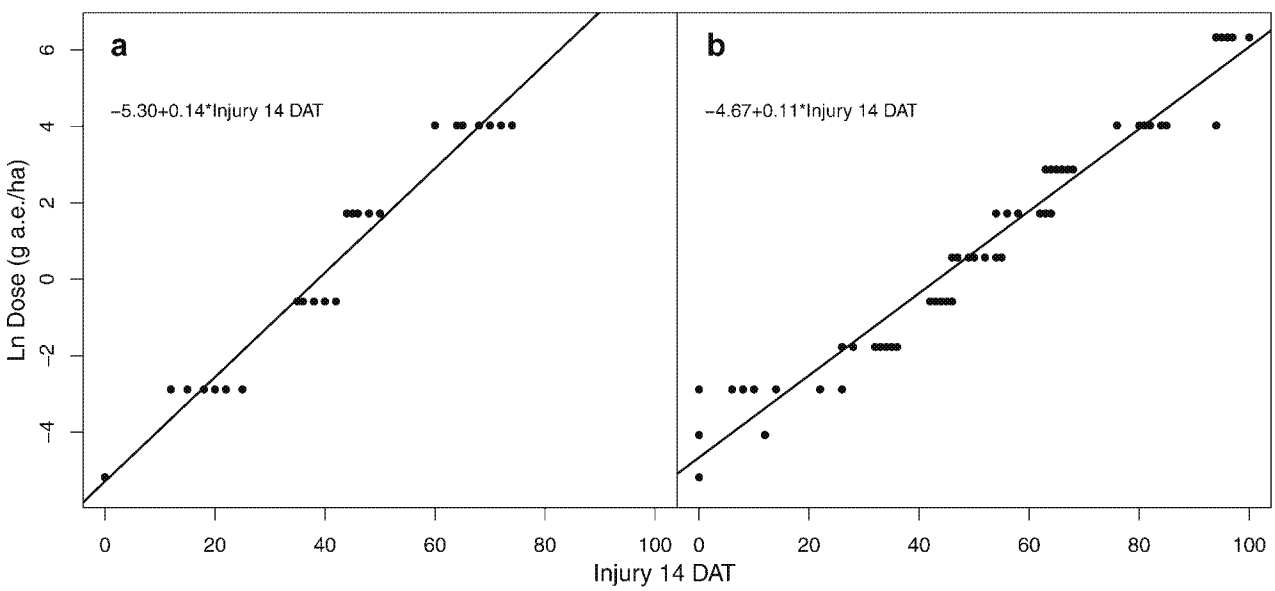


Fig. 2. Log-linear dose response curves and regression equations for 2009 (**a**) and 2010 (**b**) greenhouse bioassay dose-response experiments. DAT = days after herbicide treatment.

Differences in plant morphology may have led to differences in appearance of injury symptoms such that on average, plants were scored with higher levels of injury, both in the dose response experiment, and for bioassay plants exposed to vapors in the field. However, in both years, a single investigator scored every plant so there should be little variation due to interpretation of the injury scale, and injury ratings should be consistently related to dose within a year. Therefore, we applied the 2009 curve only to 2009 bioassay plants and the 2010 curve only to 2010 bioassay plants.

Inverse distance weighted surfaces

As estimated from the IDW models, the total g acid equivalent of dicamba vapor drift resettled outside of the treated plot for the different years, exposure times, and formulations are summarized in Figure 3a. A total of 18.8 g acid equivalent dicamba was applied to each treated plot, indicating that 0.07 to 0.32% (dimethylamine 2009), 0.38 to 1.4% (dimethylamine 2010), and 0.02 to 0.04% (diglycolamine 2010) of applied dicamba resettled on nontarget plant surfaces as vapor drift. These values for dimethylamine dicamba are somewhat higher than measured volatility rates from laboratory data provided by the U. S. Environmental Protection Agency (U.S. EPA) [27]. Similar data was not available for diglycolamine herbicides. Inspection of the cross-validation regression plot for each IDW surface showed reasonable correspondence between dose values estimated from the dose–response curve and dose values predicted by the IDW surface model for low-dose estimates (i.e., bioassay plants with zero or relatively low injury 14 d after herbicide treatment). However, for higher estimated dose values, the IDW surface models tended to substantially underestimate the measured dose (Fig. 1c). This pattern suggests that our estimates for total g acid equivalent of dicamba resettled as vapor drift derived by integrating across the IDW surface are conservative estimates.

Mean comparisons

All three drift indices revealed similar patterns of vapor drift in the field trials (Fig. 3). Observed injury was more frequent and occurred at higher estimated doses over farther distances in 2010 than in 2009. There were no significant differences for any of the indices comparing 8- and 24-h exposures in 2010, indicating that the majority of vapor drift detectable by our method occurs during the first 8 h following herbicide application. In 2010, pronounced differences occurred between dimethylamine and diglycolamine exposures with diglycolamine achieving a 94.0% reduction in total dicamba vapor drift resettled outside of the treated area (0.16 vs 0.01 g acid equivalent), a 75.8% reduction in number of injured bioassay plants outside of the treated plot (40.0 vs 9.7 plants) and a 55.1% reduction in farthest distance of injury (52.0 vs 23.3 m from center). Consequently, for the dose-distance analysis, we separated the 2009 dimethylamine, 2010 dimethylamine, and 2010 diglycolamine data, but pooled data from 8-h and 24-h exposures.

Dose-distance functions

For the dimethylamine 2010 dataset, mean-estimated exposures were above 0.1% of the application rate (0.56 g acid equivalent/ha) as far as 21 m outside of the treated area (Fig. 4, Table 3). Mean predicted doses were near zero for the diglycolamine applications within 10 m from the edge of the treated plot.

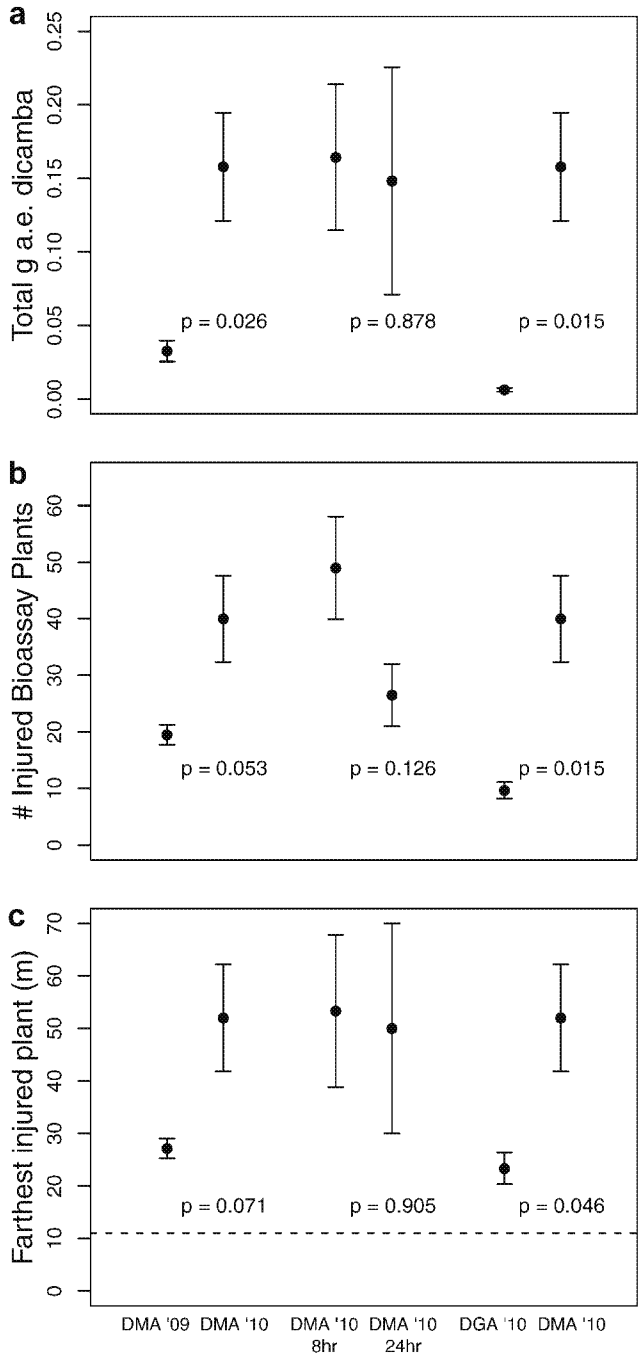


Fig. 3. Mean comparisons by year, exposure time, and formulation type for three drift indices: total g acid equivalent dicamba resettled as vapor drift outside of the treated plot (**a**), number of injured bioassay plants outside of the treated plot (**b**), and the distance from the center of the treated plot of the farthest injured bioassay plant (**c**). The dashed line in c shows the boundary of the treated plot. Displayed p values are for two-sample t tests. DMA = dimethylamine; DGA = diglycolamine.

Correlations with meteorological variables

For the dimethylamine exposures, temperature was a significant predictor in total g acid equivalent dicamba resettled as vapor drift and the distance of farthest injury, with warmer days showing more vapor drift (Fig. 5, Table 4). Relative humidity was also significantly and positively correlated with the total g acid equivalent dicamba vapor drift and the distance of farthest observed injury. Air pressure and wind speed were not significant predictors of any of the three drift indices, and none of the

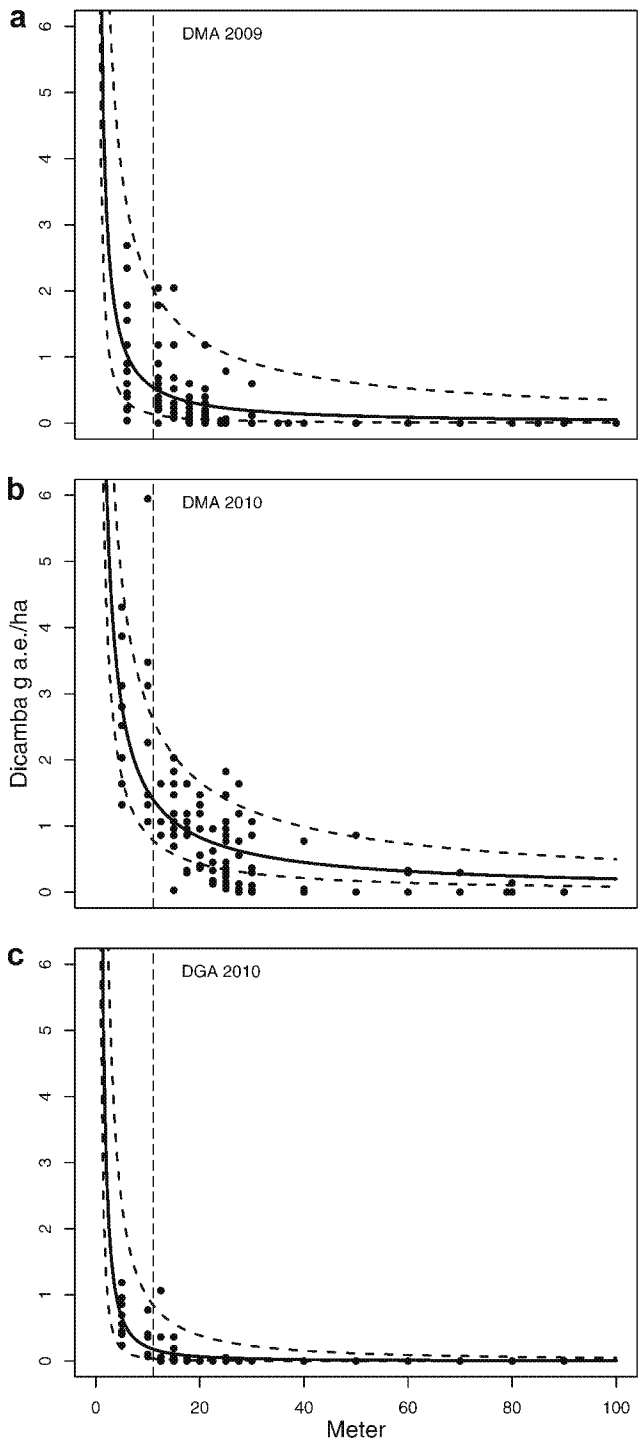


Fig. 4. Dose-distance functions along the main two transects of observed drift for dimethylamine (DMA) 2009 exposures (**a**), DMA 2010 exposures (**b**), and diglycolamine (DGA) 2010 exposures (**c**). Dashed curves reflect bootstrapped upper and lower 95% CI curves for the mean response function. The zero meter point indicates the center of the treated plot and the dashed vertical line shows the location of the plot boundary.

variables were significantly correlated with the total number of injured bioassay plants.

DISCUSSION

Advantages and limitations of the bioassay approach

Direct air sampling followed by gas chromatography/mass spectrometry has previously been used to measure the vapor drift of pesticides, particularly highly volatile soil fumigants [28–30]. Although these methods have high analytical precision, they require expensive and sensitive instrumentation, and therefore generally preclude measuring vapor drift over multiple days or with much spatial detail. Moreover, because air sampling will yield measurements in units of g/m^3 [28], it is not straightforward to translate these data into units of g/ha that are meaningful to weed scientists, agronomists, ecotoxicologists, or other researchers interested in understanding the effects of low herbicide doses on plants.

In contrast, our bioassay approach is simple and straightforward and therefore permits spatially explicit measurement of vapor drift over multiple exposure events (in the present study, 14 field trials). Previous research has indicated that bioassay methods can be an effective and accurate method for detecting airborne pesticides [6,31–33]. Because herbicide vapor drift may be influenced by a range of agronomic and environmental conditions, our bioassay data measuring dicamba vapor drift over multiple trial runs with a high degree of spatial resolution constitutes a valuable contribution of novel data. Moreover, our bioassay data is readily related to units of g acid equivalent/ha, which is more easily applied to agronomic and ecotoxicological problems.

Table 3. Summary of predicted values from dose-distance functions along primary drift axes for the DMA 2009, DMA 2010, and DGA 2010 data sets[a]

Curve	Distance (m)	Predicted dose (g acid equivalent/ha)
DMA 2009	5	1.25 (0.42, 3.70)
DMA 2009	15	0.39 (0.09, 1.54)
DMA 2009	25	0.23 (0.05, 1.03)
DMA 2009	50	0.11 (0.02, 0.60)
DMA 2009	100	0.05 (0.01, 0.34)
DMA 2010	5	2.81 (1.72, 4.74)
DMA 2010	15	1.07 (0.56, 2.06)
DMA 2010	25	0.68 (0.33, 1.40)
DMA 2010	50	0.37 (0.16, 0.83)
DMA 2010	100	0.20 (0.08, 0.49)
DGA 2010	5	0.66 (0.17, 2.57)
DGA 2010	15	0.11 (0.02, 0.61)
DGA 2010	25	0.05 (0.01, 0.32)
DGA 2010	50	0.02 (0.00, 0.13)
DGA 2010	100	0.01 (0.00, 0.05)

[a] Distance is from the center of the treated plot, and distance > 12 m are located outside of the treated plot. Bootstrapped 95% confidence intervals for predicted values are shown in parenthesis.
DMA = dimethylamine; DGA = diglycolamine.

Dose-distance relationships

When dimethylamine dicamba is applied, substantial vapor drift occurs (Figs. 1, 3, and 4; Table 3). For the 2010 dimethylamine data, a mean response of 0.56 g acid equivalent/ha is predicted 21 m from the edge of the treated area, with a 95% CI of 0.26 to 1.19 g acid equivalent/ha. Because our experimental design does not include assessment of particle drift or additional routes of exposure including residual herbicide in spray equipment [5] or atmospheric deposition [34], total nontarget exposures to crops and wild plants could be substantially greater than our predictions for vapor drift. Furthermore, an important related problem involves how vapor drift exposure scales up from plot, to field, to landscape scales. If approximately 0.56 g acid equivalent/ha of dimethylamine dicamba can be detected 21 m beyond a 335 m^2 experimental treated area, what will the dose-distance relationships be when a 33.5 ha field is treated (a 1,000-fold area increase)? What will the expected exposures

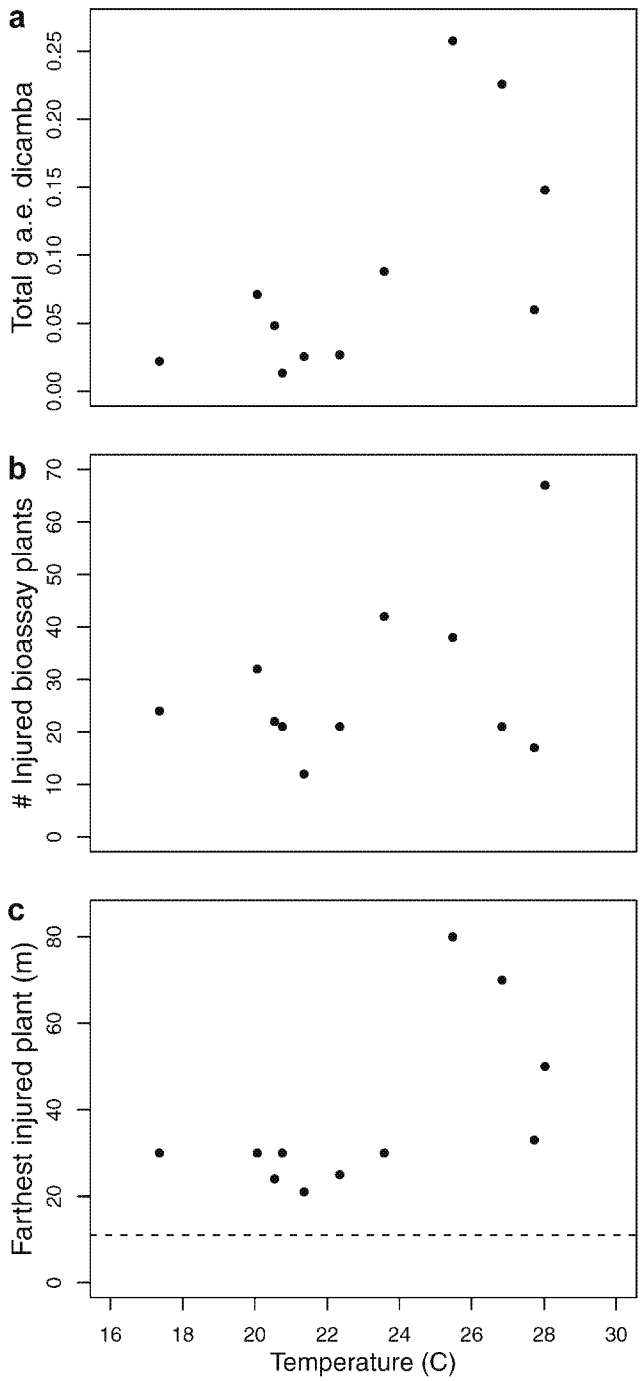


Fig. 5. Scatter plots for dimethylamine dicamba field trials of the correlation between temperature and three drift indices: total g acid equivalent dicamba resettled as vapor drift outside of the treated plot (**a**), number of injured bioassay plants outside of the treated plot (**b**), and the distance from the center of the treated plot of the farthest injured bioassay plant (**c**). The dashed line in c shows the boundary of the treated plot.

be when many fields across a landscape are treated? More research is needed to understand the scaling relationships associated with vapor drift.

More research is also needed to fully understand the response of nontarget plants to these low-dose exposures. The available literature suggests that small yield losses could be expected from a 0.56 g acid equivalent/ha exposure to susceptible soybean varieties [7,19,35–38]. However, data from the U.S. EPA vegetative vigor tests associated with the registration of dicamba products also indicate that 0.56 g acid equivalent/ha is well below the 25% effective concentration for biomass (or the dicamba dose affecting a 25% reduction in biomass) for several crops in the seedling stage, including soybean, tomato, canola, and cucumber, indicating little risk [39,40].

Table 4. Summary of results from DMA dicamba field trials from multiple linear regression models for three drift indices[a] as predicted by air temperature and relative humidity[b]

Response	Model	p	adjusted r^2
Grams of acid equivalent dicamba	$Y = -0.71 + 0.019^*(T) + 0.006^*(RH)$	0.018	0.5441
Number of injured plants	NS	NS	NS
Farthest injury	$Y = -145.01 + 4.053^*(T) + 1.402^*(RH)$	0.029	0.485

[a] Total grams of acid equivalent dicamba vapor drift resettled outside of the treated plot, number of injured bioassay plants outside of treated plot, and distance from center of the treated plot of farthest observed injury.
[b] Meteorological data was summarized as the mean of each variable for the 8-h interval following positioning of bioassay plants in the field.
DMA = dimethylamine; T = total air; RH = relative humidity; NS = No significant correlations.

Dicamba drift could also impact wild and sensitive vegetation growing in nearby crop fields. Data from Boutin et al. [39] showed that 0.56 g acid equivalent/ha is also well below the 25% effective concentration for biomass for 15 wild plant species grown in greenhouse conditions. However, to our knowledge, no other studies have examined the effects of low dicamba doses to wild plants, and more data are needed to understand the impacts of low dicamba exposures on wild plant fitness and ecosystem service provisioning under field conditions.

Effect of formulation

Our data demonstrate that the diglycolamine formulation has a dramatic effect on reducing dicamba vapor drift. Estimates of total g acid equivalent vapor drift outside of the treated area were reduced 94% relative to the dimethylamine formulation, and the dose-distance curves indicate that predicted mean exposures drop close to zero only short distances away from the treated area. However, because the diglycolamine salt is a newer chemistry packaged in name-brand products, several generic dimethylamine products are available at a significant cost savings. Perhaps largely because of these cost differences, dimethylamine is still applied on a large percentage of corn and small grain acreage. To prevent vapor drift and nontarget injury to susceptible crops and wild vegetation, it will therefore be imperative to encourage growers and applicators working with dicamba resistance biotechnology to choose diglycolamine over dimethylamine products. Wider adoption of diglycolamine products could be achieved through university extension and industry education programs, restrictions on herbicide labels (i.e., diglycolamine approved for postemergence soybean applications, but not dimethylamine), or through restrictions in the biotechnology licensing agreements that are shared between growers and seed companies. Alternatively, the U.S. EPA could enact a ban or moratorium on manufacturing and selling dimethylamine dicamba products. Although the diglycolamine formulation provided a substantial reduction in vapor drift, the mean distance of farthest injury was still 23.3 m from the center of the treated area for diglycolamine trials. This suggests that though the diglycolamine formulation will be an important tool

in mitigating vapor drift, nontarget dicamba injury to susceptible crops and wild plants may still occur.

Correlation with meteorological variables

Temperature was significantly correlated with two of the three drift summary indices (total g acid equivalent resettled and farthest injury). Air temperatures were also generally lower during the 2009 versus 2010 trials (21.7 vs 24.8°C average mean temperature over 8 h), partly explaining the higher drift indices observed in 2010. Because volatilization is driven by temperature, it is not surprising that this correlation was detected. However, temperature may have also influenced the susceptibility of the bioassay plants and their expression of injury symptoms, potentially confounding this result. Herbicide resistance biotechnology will allow dicamba to be applied later in a growing season (including postemergence applications on soybean), when air temperatures are warmer, which may increase the risk of nontarget crop injury if dimethylamine products are applied. Although current labels prohibit applying dimethylamine dicamba when temperatures exceed 29.4°C [8], our data suggests that relatively extensive vapor drift can occur on days when the mean daytime temperature is only above 25°C (Fig. 5).

The correlation between relative humidity and farthest injury may indicate that higher humidity increases the residence time of dicamba near plant surfaces or facilitates the uptake of dicamba by bioassay plants. Wind speed was not significantly correlated with any of the drift indices, indicating that unlike particle drift, vapor drift is not driven by wind transport. Due to the limited size of our dataset, these correlations should be interpreted as suggestive and warrant further investigation.

CONCLUSIONS

New herbicide resistance biotechnology will allow dicamba herbicides to be used over greatly expanded areas, and proactive research is needed to anticipate potential environmental risks, including vapor drift of dicamba herbicides. In the present study, we used a bioassay approach to track vapor drift of dicamba applied postemergence to soybean over multiple trial runs with a high degree of spatial detail. Vapor drift of the dimethylamine formulation of dicamba can be substantial (0.1% of applied concentration 20 m away from a treated plot) and was significantly correlated with air temperatures at the time of herbicide application. Relative to the dimethylamine formulation, diglycolamine dicamba greatly reduced (but did not eliminate) vapor drift. As registration and commercialization of dicamba-resistant biotechnology proceeds, additional research is needed to understand the impacts of low dicamba doses from vapor drift and other routes of exposure on nontarget crops and vegetation.

Acknowledgement—The authors thank B. Curran, S. Harkcom, and D. Lingenfelter for assistance designing and implementing this experiment. I. Graham, B. Carter, D. Sandy, and L. Ruhl provided additional help with field operations. M. Ryan, M. Schipanski, and the Penn State weed ecology group provided helpful comments on the manuscript. This research was largely supported through a U.S. Environmental Protection Agency Science to Achieve Results graduate fellowship.

REFERENCES

1. Behrens MR, Mutlu N, Chakraborty S, Dumitru R, Jiang WZ, LaVallee BJ, Herman PL, Clemente TE, Weeks DP. 2007. Dicamba resistance: enlarging and preserving biotechnology-based weed management strategies. *Sci* 316:1185–1188.
2. Waltz E. 2010. Glyphosate resistance threatens Roundup hegemony. *Nat Biotechnol* 28:537–538.
3. Mortensen DA, Egan JF, Maxwell BD, Ryan MR, Smith RG. 2012. Navigating a critical juncture for sustainable weed management. *Biosci* 62:75–85.
4. Behrens R, Lueschen WE. 1979. Dicamba volatility. *Weed Sci* 27:486–493.
5. Boerboom C. 2004. Field case studies of dicamba movement to soybeans. *Proceedings*, Wisconsin Fertilizer, Aglime, and Pest Management Conference, Madison, WI, USA.
6. Sciumbato AS, Chandler JM, Senseman SA, Bovey RW, Smith KL. 2004. Determining exposure to auxin-like herbicides. I. Quantifying injury to cotton and soybean. *Weed Technol* 18:1125–1134.
7. Auch DE, Arnold WE. 1978. Dicamba use and injury on soybeans (*Glycine-max*) in South Dakota. *Weed Sci* 26:471–475.
8. AgriSolutions. 2006. *Sterling Herbicide Label*. AgriSolutions, St. Paul, MN, USA.
9. Arnevik C. 2010. Dicamba tolerant crops – managing the performance minimizing the risk. *Proceedings*, North Central Weed Science Society annual meeting, Lexington, KY, USA, December 13-16.
10. Olszyk DM, Burdick CA, Pfleeger TG, Lee EH, Watrud LS. 2004. Assessing the risks to non-target terrestrial plants from herbicides. *J Agri Meteor* 60:221–242.
11. Smith S. 2010. Deployment of dicamba-resistant soybeans and what it will mean to canned and frozen food processors and specialty crop growers in the Midwest. Final/Technical Report. Domestic Policy Subcommittee of Committee on Oversight and Government Reform, Washington, DC, USA.
12. Kremen C, Williams NM, Bugg RL, Fay JP, Thorp RW. 2004. The area requirements of an ecosystem service: crop pollination by native bee communities in California. *Ecol Lett* 7:1109–1119.
13. Landis DA, Menalled FD, Costamagna AC, Wilkinson TK. 2005. Manipulating plant resources to enhance beneficial arthropods in agricultural landscapes. *Weed Sci* 53:902–908.
14. Isaacs R, Tuell J, Fiedler A, Gardiner M, Landis D. 2009. Maximizing arthropod-mediated ecosystem services in agricultural landscapes: the role of native plants. *Front Ecol Environ* 7:196–203.
15. Freemark K, Boutin C. 1995. Impacts of agricultural herbicide use on terrestrial wildlife in temperate landscapes – A review with special reference to North America. *Agric Ecosyst Environ* 52:67–91.
16. BASF Corporation. 2005. *Clarity Post Emergence Herbicide for Corn*. Research Triangle Park, NC, USA.
17. Pedersen P. 2004. *Soybean Growth and Development*. Iowa State University Extension, Ames, IA, USA.
18. BASF Corporation. 2008. *Clarity Herbicide Specimen Label*. Research Triangle Park, NC, USA.
19. Andersen SM, Clay SA, Wrage LJ, Matthees D. 2004. Soybean foliage residues of dicamba and 2,4-D and correlation to application rates and yield. *Agron J* 96:750–760.
20. National Oceanic and Atmospheric Administration. 2010. *Surface Radiation Network, Penn State, PA*. Washington, DC, USA.
21. Ritz C, Streibig JC. 2005. Bioassay analysis using R. *J Statist Softw* 12:1–22.
22. Bolstad P. 2008. *GIS Fundamentals: A First Text on Geographic Information Systems*, 3rd ed. Eider Press, St. Paul, MN, USA.
23. Environmental Systems Research Institute. 2005. *ArcGIS Geostatistical Analyst, Statistical Tools and Models for Data Exploration, Modeling, and Probabilistic Mapping*. Redlands, CA, USA.
24. Carlsen SCK, Spliid NH, Svensmark B. 2006. Drift of 10 herbicides after tractor spray application. 2. Primary drift (droplet drift). *Chemosphere* 64:778–786.
25. de Jong FMW, de Snoo GR, van ve Zandec JC. 2008. Estimated nationwide effects of pesticide spray drift on terrestrial habitats in the Netherlands. *J Environ Manage* 86:721–730.
26. Ritz C, Streibig JC. 2008. *Nonlinear Regression with R*. Springer Science and Business Media, New York, NY, USA.
27. Yu CC. 1988. *Addendum to Report # 480060-6 on olatility of Three Dicamba Formulations*. U.S. EPA MRID # 419666-02. U.S. Environmental Protection Agency, Washington, DC.
28. U.S. Enivornmental Protection Agency. 2009. *Scientific Issues Associated with Field Volatilization of Conventional Pesticides*. Washington DC.
29. Ferrari F, Trevisan M, Capri E. 2003. Predicting and measuring environmental concentration of pesticides in air after soil application. *J Environ Qual* 32:1623–1633.
30. Bedos C, Rousseau-Djabri MF, Loubet B, Durand B, Flura D, Briand O, Barriuso E. 2010. Fungicide volatilization measurements: inverse

modeling, role of vapor pressure, and state of foliar residue. *Environ Sci Technol* 44:2522–2528.
31. Alkhatib K, Mink GI, Reisenauer G, Parker R, Westberg H, Lamb B. 1993. Development of a biologically-based system for detection and tracking of airborne herbicides. *Weed Technol* 7:404–410.
32. Felsot AS, Bhatti MA, Mink GI, Reisenauer G. 1996. Biomonitoring with sentinel plants to assess exposure of nontarget crops to atmospheric deposition of herbicide residues. *Environ Tox Chem* 15:452–459.
33. Sciumbato AS, Chandler JM, Senseman SA, Bovey RW, Smith KL. 2004. Determining exposure to auxin-like herbicides. II. Practical application to quantify volatility. *Weed Technol* 18:1135–1142.
34. Tuduri L, Harner T, Blanchard P, Li YF, Poissant L, Waite DT, Murphy C, Belzer W. 2006. A review of currently used pesticides (CUPS) in Canadian air and precipitation. Part 2: Regional information and perspectives. *Atmosph Environ* 40:1579–1589.
35. Al–Khatib K, Peterson D. 1999. Soybean (*Glycine max*) response to simulated drift from selected sulfonylurea herbicides, dicamba, glyphosate, and glufosinate. *Weed Technol* 13:264–270.
36. Kelley KB, Wax LM, Hager AG, Riechers DE. 2005. Soybean response to plant growth regulator herbicides is affected by other postemergence herbicides. *Weed Sci* 53:101–112.
37. Wax LM, Knuth LA, Slife FW. 1969. Response of soybeans to 2,4–D, dicamba, and picloram. *Weed Sci* 17:388–393.
38. Weidenhamer JD, Triplett GB, Sobotka FE. 1989. Dicamba injury to soybean. *Agron J* 81:637–643.
39. Boutin C, Elmegaard N, Kjaer C. 2004. Toxicity testing of fifteen non-crop plant species with six herbicides in a greenhouse experiment: implications for risk assessment. *Ecotoxicol* 13:823–825.
40. U.S. Environmental Protection Agency. 2006. *Reregistration Eligibility Decision for Dicamba and Associated Salts*. Washington, DC.

Message

From: Kenny, Daniel [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=1BE9BB592F144269BCD41DD3A6D8A6D4-DANIEL C. KENNY]
Sent: 2/12/2016 12:21:29 AM
To: JENKINS, DANIEL J [AG/1920] [daniel.j.jenkins@monsanto.com]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]
CC: Cowles, James [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=684502c4acad4894b1fed6fae1c6d74d-Cowles, James]; Corbin, Mark [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1db182663b134e46b3fec580f8e0b5f2-Mark Corbin]; BHAKTA, TINA [AG/1000] [tina.bhakta@monsanto.com]
Subject: RE: Dicamba mtg request

Hi Dan. I've received your message, and as usual we are doing are best to accommodate your meeting requests, but schedules are full with activities that are directed at finishing our work with dicamba as soon as we can, which is presenting challenges with your timing. We will probably need to push it back a little, but Kay will be working on it more tomorrow. She'll be in touch soon and let you know what can be worked out.

We'll keep you posted.

Thanks,
Dan

From: JENKINS, DANIEL J [AG/1920] [mailto:daniel.j.jenkins@monsanto.com]
Sent: Wednesday, February 10, 2016 10:15 AM
To: Kenny, Daniel <Kenny.Dan@epa.gov>; Rowland, Grant <Rowland.Grant@epa.gov>; Montague, Kathryn V. <Montague.Kathryn@epa.gov>
Cc: Cowles, James <Cowles.James@epa.gov>; Corbin, Mark <Corbin.Mark@epa.gov>; BHAKTA, TINA [AG/1000] <tina.bhakta@monsanto.com>
Subject: Dicamba mtg request
Importance: High

All:

We would like to meet with EFED next week (Thursday afternoon?) for one hour.

Agenda:
Technical feedback re volatility
DCSA status

Thanks,

Dan Jenkins
U.S. Agency Lead
Regulatory Affairs
Monsanto Company
1300 I St., NW
Suite 450 East
Washington, DC 20005

Office: 202-383-2851
Cell: 571-732-6575

This e-mail message may contain privileged and/or confidential information, and is intended to be received only by persons entitled
to receive such information. If you have received this e-mail in error, please notify the sender immediately. Please delete it and
all attachments from any servers, hard drives or any other media. Other use of this e-mail by you is strictly prohibited.

All e-mails and attachments sent and received are subject to monitoring, reading and archival by Monsanto, including its
subsidiaries. The recipient of this e-mail is solely responsible for checking for the presence of "Viruses" or other "Malware".
Monsanto, along with its subsidiaries, accepts no liability for any damage caused by any such code transmitted by or accompanying
this e-mail or any attachment.

The information contained in this email may be subject to the export control laws and regulations of the United States, potentially
including but not limited to the Export Administration Regulations (EAR) and sanctions regulations issued by the U.S. Department of
Treasury, Office of Foreign Asset Controls (OFAC). As a recipient of this information you are obligated to comply with all
applicable U.S. export laws and regulations.

Message

From: Kenny, Daniel [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=1BE9BB592F144269BCD41DD3A6D8A6D4-DANIEL C. KENNY]
Sent: 11/23/2016 8:30:38 PM
To: Maximilian M Safarpour [maximilian.safarpour@basf.com]
CC: Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Jeffrey H Birk [jeffrey.birk@basf.com]
Subject: Re: BAPMA

Yes, I'm working on it now. I think people may have left for the day, but I'm leaving messages.

Sent from my iPhone

On Nov 23, 2016, at 3:07 PM, Maximilian M Safarpour <maximilian.safarpour@basf.com> wrote:

Hi Dan,

We checked the weather data and in most of the deeper south and Texas the average daily high is 90 degrees or more for June July and August. Arizona and California would be very problematic but I do not believe that they have the weed problems there so probably OK. I believe most use would be earlier in the season so folks could use it in the peak season.

Soybeans are a little better as you move into the Midwest the average high drops to the 80s in most places even in Kentucky.

I agree with your proposal. But before we move forward could you please confirm with EFED colleagues that, if they have considered 0.5 lb in their modeling. Please see my previous email.

I will be happy to include an advisory statement rather than a restriction. **Could you suggest to your team that, "in order to avoid possible injury to sensitive crops avoid applications when temperatures are expected to exceed 90 degrees during and immediately after application"**.

This will be a great help.

Thanks for your consideration.

Regards,

Max

Maximilian M. Safarpour, Ph.D. Department Head, Global Regulatory & Government Affairs

Phone: +1 919 547-2675 Mobile: +1-609-510-1538 Fax: +1 919 547-2850 E-Mail: maximilian.safarpour@basf.com
Postal Address: BASF Corporation, Research Triangle Park, 27709 Research Triangle Park, USA

150 years
BASF - We create chemistry

All contents of this e-mail and any attachments thereto are confidential unless explicitly specified

otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Maximilian M Safarpour
Sent: Wednesday, November 23, 2016 2:58 PM
To: 'Kenny, Daniel' <Kenny.Dan@epa.gov>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; Rowland, Grant <Rowland.Grant@epa.gov>; Jeffrey H Birk <jeffrey.birk@basf.com>
Subject: RE: BAPMA

Hi Dan,

Thank you for you for your email. It is an Interesting to note that our EFED colleagues are still talking about a 1.0 lb rate for BAPMA. Could you please confirm that they are using the 0.5 lb/A use rate limit in their flux calculations. The modeling that we sent last week only mentioned the difference if there was a 0.5 lb/A rate limit, but did not provide the actual numbers with the 0.5 lb/A rate, only 1.0.

Appreciate it. Max

Maximilian M. Safarpour, Ph.D. Department Head, Global Regulatory & Government Affairs

Phone: +1 919 547-2675 Mobile: +1-609-510-1538 Fax: +1 919 547-2850 E-Mail: maximilian.safarpour@basf.com
Postal Address: BASF Corporation, Research Triangle Park, 27709 Research Triangle Park, USA

150 years
BASF - We create chemistry

All contents of this e-mail and any attachments thereto are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Kenny, Daniel [mailto:Kenny.Dan@epa.gov]
Sent: Wednesday, November 23, 2016 12:05 PM
To: Maximilian M Safarpour <maximilian.safarpour@basf.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; Rowland, Grant <Rowland.Grant@epa.gov>
Subject: FW: BAPMA

Hi Max. I wanted to provide what information I could as a follow up to my email yesterday and let you know where we seem to be falling out on the volatility/buffer for the BAPMA salt. EFED is feeling like they've taken the bridging, drift, and volatility data about as far as they can, and I've got some summarizing bullets for you below. There is still some uncertainty with the volatility issue and that the spray drift buffer likely needs to be bigger than for the DGA because of the lower plant endpoint. However, if you read the last bullet, we may be able to find a temporary fix. For example, if the label incorporated a restriction against applying when temperatures are expected to be above 90 degrees Fahrenheit, we could probably go with a wind directional buffer that would be closer to 100 feet. That way, we could go ahead and register the product and look at the issue further post-registration to see if there's a path forward to removing the restriction in the future. Just an idea.

Please see EFED's comments below:

EFED has completed an analysis of the Bridging of the BAPMA salt of Dicamba to the entire Dicamba acid data set. EFED believes Bridging is appropriate and thus the existing New Use Risk Assessments and ESA Assessments for soy and cotton are applicable to the BAPMA salt action

EFED has considered the rebuttal of the DER for veg vigor data for the BAPMA salt and does not concur with the position in that rebuttal. Therefore, the NOEC for BAPMA remains at 0.0001 lb./acre

EFED has completed a weight of analysis approach for the establishment of an in-field buffer for the BAPMA salt which follows that used for the recently registered Dicamba DGA products (M1691 and M1768). That approach considers the field study as the strongest line of evidence and weighs alternative modeling with AGDISP and AgDRIFT to characterize the certainty in that conclusion. That study suggested an appropriate buffer would be 90 feet. However, several factors influence the establishment of an in-field buffer including

- <!--[if !supportLists]--><!--[endif]-->the field study estimated a distance to the DGA endpoint (0.00026 lb./acre) and not the new BAPMA endpoint (0.0001 lb./acre)
- <!--[if !supportLists]--><!--[endif]-->drift modeling suggests a wide range of possible outcomes using the proposed label limitations similar to the DGA analysis
- <!--[if !supportLists]--><!--[endif]-->employing a weight of evidence approach and accounting for the more sensitive BAPMA endpoint suggests the BAPMA specific drift buffer should be 280 feet (110 ft. x 2.6 difference in endpoint)
- <!--[if !supportLists]--><!--[endif]-->as with the DGA, the in-field drift buffer would only be in the direction of wind at the time of application

EFED has considered two sets of field volatility data conducted under differing temperature conditions. EFED's analysis mirrors that employed for the M1691 and M1768 and suggests that

- <!--[if !supportLists]--><!--[endif]-->the potential for volatility is higher for the BAPMA salt than for the DGA salt
- <!--[if !supportLists]--><!--[endif]-->for the 0.5 lb./acre rate the distance to the NOEC level from volatility approaches approximately 100 feet for upper bound exposures. The distance would be double for the 1.0 lb./acre rate though this is only applied pre-emergent where volatility is less likely to occur
- <!--[if !supportLists]--><!--[endif]-->the majority of modeled estimates, considering the BAPMA dicamba flux data with a weather conditions from different locations where dicamba is used across the country, suggest no exposure above the NOEC beyond the edge of the field
- <!--[if !supportLists]--><!--[endif]-->volatility appears to correlate with temperature, with significantly less flux occurring at less than 90F
- <!--[if !supportLists]--><!--[endif]-->taken together EFED cannot preclude off-site movement above the NOEC above 90°F in some locations and that an in-field buffer would need to approach 100 feet

Please let us know what your thoughts are at this point and we'll see what we can do.

Thanks,
Dan

Message

From: Kenny, Daniel [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=1BE9BB592F144269BCD41DD3A6D8A6D4-DANIEL C. KENNY]
Sent: 11/23/2016 8:28:46 PM
To: Maximilian M Safarpour [maximilian.safarpour@basf.com]
CC: Montague, Kathryn V. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c50d485150734f6e85059d64dd80a353-Kathryn V. Montague]; Rowland, Grant [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5b004bc79f1f40b0a181a584a8c64495-Rowland, Grant]; Jeffrey H Birk [jeffrey.birk@basf.com]
Subject: Re: BAPMA

Absolutely. They told me they had taken that into account, but I'm checking with them to make extra sure and so that they can explain it. I'll follow up as soon as I can.

Sent from my iPhone

On Nov 23, 2016, at 2:58 PM, Maximilian M Safarpour <maximilian.safarpour@basf.com> wrote:

> Hi Dan,
>
> Thank you for you for your email. It is an Interesting to note that our EFED colleagues are still talking about a 1.0 lb rate for BAPMA. Could you please confirm that they are using the 0.5 lb/A use rate limit in their flux calculations. The modeling that we sent last week only mentioned the difference if there was a 0.5 lb/A rate limit, but did not provide the actual numbers with the 0.5 lb/A rate, only 1.0.
>
> Appreciate it. Max

Maximilian M. Safarpour, Ph.D. Department Head, Global Regulatory & Government Affairs

Phone: +1 919 547-2675 Mobile: +1-609-510-1538 Fax: +1 919 547-2850 E-Mail: maximilian.safarpour@basf.com
Postal Address: BASF Corporation, Research Triangle Park, 27709 Research Triangle Park, USA

150 years
BASF - We create chemistry

All contents of this e-mail and any attachments thereto are confidential unless explicitly specified otherwise in this e-mail. If you are not the intended recipient, you are hereby formally notified that any use, copying or distribution of this e-mail, in whole or in part, is strictly prohibited. Please notify the sender by return e-mail and delete this e-mail from your system.

From: Kenny, Daniel [mailto:Kenny.Dan@epa.gov]
Sent: Wednesday, November 23, 2016 12:05 PM
To: Maximilian M Safarpour <maximilian.safarpour@basf.com>
Cc: Montague, Kathryn V. <Montague.Kathryn@epa.gov>; Rowland, Grant <Rowland.Grant@epa.gov>
Subject: FW: BAPMA

Hi Max. I wanted to provide what information I could as a follow up to my email yesterday and let you know where we seem to be falling out on the volatility/buffer for the BAPMA salt. EFED is feeling like

they've taken the bridging, drift, and volatility data about as far as they can, and I've got some summarizing bullets for you below. There is still some uncertainty with the volatility issue and that the spray drift buffer likely needs to be bigger than for the DGA because of the lower plant endpoint. However, if you read the last bullet, we may be able to find a temporary fix. For example, if the label incorporated a restriction against applying when temperatures are expected to be above 90 degrees Fahrenheit, we could probably go with a wind directional buffer that would be closer to 100 feet. That way, we could go ahead and register the product and look at the issue further post-registration to see if there's a path forward to removing the restriction in the future. Just an idea.

Please see EFED's comments below:

EFED has completed an analysis of the Bridging of the BAPMA salt of Dicamba to the entire Dicamba acid data set. EFED believes Bridging is appropriate and thus the existing New Use Risk Assessments and ESA Assessments for soy and cotton are applicable to the BAPMA salt action

EFED has considered the rebuttal of the DER for veg vigor data for the BAPMA salt and does not concur with the position in that rebuttal. Therefore, the NOEC for BAPMA remains at 0.0001 lb./acre

EFED has completed a weight of analysis approach for the establishment of an in-field buffer for the BAPMA salt which follows that used for the recently registered Dicamba DGA products (M1691 and M1768). That approach considers the field study as the strongest line of evidence and weighs alternative modeling with AGDISP and AgDRIFT to characterize the certainty in that conclusion. That study suggested an appropriate buffer would be 90 feet. However, several factors influence the establishment of an in-field buffer including

- <!--[if !supportLists]--><!--[endif]-->the field study estimated a distance to the DGA endpoint (0.00026 lb./acre) and not the new BAPMA endpoint (0.0001 lb./acre)
- <!--[if !supportLists]--><!--[endif]-->drift modeling suggests a wide range of possible outcomes using the proposed label limitations similar to the DGA analysis
- <!--[if !supportLists]--><!--[endif]-->employing a weight of evidence approach and accounting for the more sensitive BAPMA endpoint suggests the BAPMA specific drift buffer should be 280 feet (110 ft. x 2.6 difference in endpoint)
- <!--[if !supportLists]--><!--[endif]-->as with the DGA, the in-field drift buffer would only be in the direction of wind at the time of application

EFED has considered two sets of field volatility data conducted under differing temperature conditions. EFED's analysis mirrors that employed for the M1691 and M1768 and suggests that

- <!--[if !supportLists]--><!--[endif]-->the potential for volatility is higher for the BAPMA salt than for the DGA salt
- <!--[if !supportLists]--><!--[endif]-->for the 0.5 lb./acre rate the distance to the NOEC level from volatility approaches approximately 100 feet for upper bound exposures. The distance would be double for the 1.0 lb./acre rate though this is only applied pre-emergent where volatility is less likely to occur
- <!--[if !supportLists]--><!--[endif]-->the majority of modeled estimates, considering the BAPMA dicamba flux data with a weather conditions from different locations where dicamba is used across the country, suggest no exposure above the NOEC beyond the edge of the field
- <!--[if !supportLists]--><!--[endif]-->volatility appears to correlate with temperature, with significantly less flux occurring at less than 90F
- <!--[if !supportLists]--><!--[endif]-->taken together EFED cannot preclude off-site movement above the NOEC above 90°F in some locations and that an in-field buffer would need to approach 100 feet

Please let us know what your thoughts are at this point and we'll see what we can do.

Thanks,
Dan