FIELD STUDY OF LOCAL EXHAUST HOOD PERFORMANCE. REVISED FINAL REPORT FEBRUARY 19, 1996

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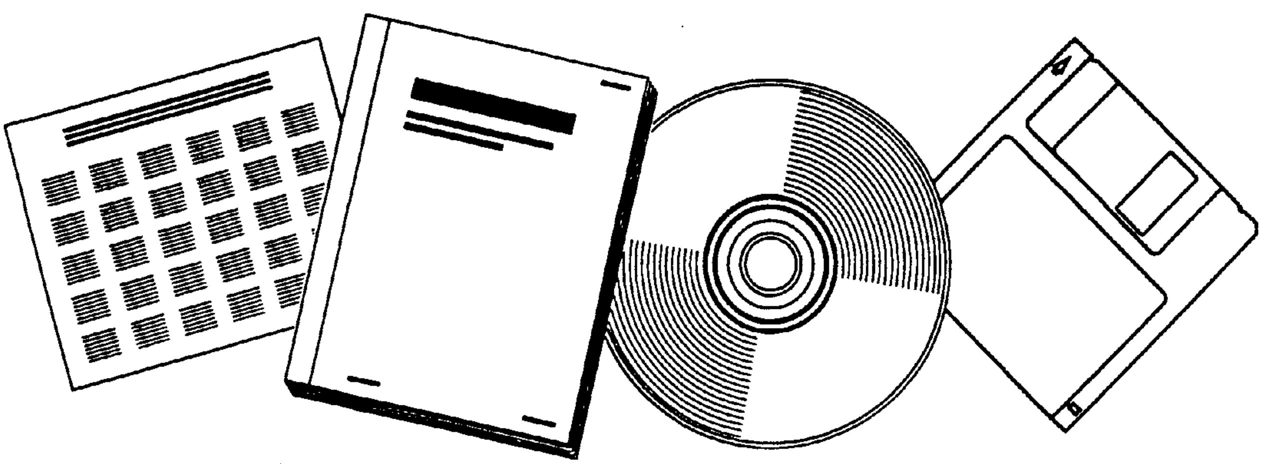
19 FEB 96



U.S. DEPARTMENT OF COMMERCE
National Technical Information Service

Field Study of Local Exhaust Hood Performance

Revised Final Report

February 19, 1996

NIOSH Grant 5 K01 OH00078-03

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BIBLIOGRAPHIC INFORMATION

PB97-156673

Report Nos:

Title: Field Study of Local Exhaust Hood Performance. Revised Final Report, February 19, 1996.

Date: 19 Feb 96

Authors: L. M. Conroy, R. Prodans, M. Lachman, and X. Yu.

Performing Organization: Illinois Univ. at Chicago. School of Public Health.

Sponsoring Organization: *National Inst. for Occupational Safety and Health, Cincinnati, OH.

Contract Nos: NIOSH-K01-OH-00078

Supplemental Notes: See also PB97-104889.

NTIS Field/Group Codes: 68A (Air Pollution & Control), 89H (Building Equipment, Furnishings, & Maintenance), 97R (Environmental Studies)

Price: PC A11/MF A03

Availability: This product may be ordered from NTIS by phone at (703)487-4650; by fax at (703)321-8547; and by email at 'orders@ntis.fedworld.gov'. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

Number of Pages: 210p

Keywords: *Degreasers, *Solvent vapors, *Exhaust ventilation, Air pollution control, Air flow, Control technology, Chicago(Illinois), Organic solvents, Ventilation, Training.

Abstract: A field study was performed to determine the performance of slot hoods used to exhaust vapor degreasers. Sixteen degreasers were used in the study. The objectives were to measure capture efficiency of local exhaust hoods used to control vapor degreasing tanks during normal operations, to measure crossdrafts in the vicinity of the vapor degreasing tanks, to use the measured crossdrafts and hood and source parameters to predict capture efficiency using a particular model, to compare predicted and measured capture efficiency, and to compare measured capture efficiencies and crassdrafts with observed degreaser activities. Local exhaust and general ventilation flow rates along with the physical dimensions of the work space and the degreaser were measured. There appeared to be reasonably good agreement between predicted and measured capture efficiency. However, poor agreement was obtained between predicted and measured efficiency for the interval efficiencies for each degreaser which could be due to turbulence, the effects of the cooling condenser on the degreaser.

50272-101

PB97-156673

REPORT DOCUMENTATION PAGE	1. REPORT NO.	2.	3.

4. Title and Subtitle Field Study of Local Exhaust Hood Performance, Revised Final Report

5. Report Date 1996/02/19

6.

7. Author(s) Conroy, L. M., R. Prodans, M. Lachman, and X. Yu

8. Performing Organization Rept. No.

9. Performing Organization Name and Address Environmental and Occupational Health Sciences, School of Public Health, University of Illinois, Chicago, Illinois

10. Project/Task/Work Unit No.

11. Contract (C) or Grant(G) No.
(C)
(G) K01-OH-00078

12. Sponsoring Organization Name and Address

13. Type of Report & Period Covered

14.

15. Supplementary Notes

16. Abstract (Limit: 200 words) A field study was performed to determine the performance of slot hoods used to exhaust vapor degreasers. Sixteen degreasers were used in the study. The objectives were to measure capture efficiency of local exhaust hoods used to control vapor degreasing tanks during normal operations, to measure crossdrafts in the vicinity of the vapor degreasing tanks, to use the measured crossdrafts and hood and source parameters to predict capture efficiency using a particular model, to compare predicted and measured capture efficiency, and to compare measured capture efficiencies and crossdrafts with observed degreaser activities. Local exhaust and general ventilation flow rates along with the physical dimensions of the work space and the degreaser were measured. There appeared to be reasonably good agreement between predicted and measured capture efficiency. However, poor agreement was obtained between predicted and measured efficiency for the interval efficiencies for each degreaser which could be due to turbulence, the effects of the cooling condenser on the degreaser, solvent being carried out of the degreaser to areas where the hood could not be expected to capture contaminants, and the variability in emission rate due to degreaser activity being inadequately taken into account in the predictive capture efficiency model.

17. Document Analysis a. Descriptors

b. Identifiers/Open-Ended Terms NIOSH-Publication, NIOSH-Grant, Grant-Number-K01-OH-00078, End-Date-09-29-1993, Grant-Number-R03-OH-02680, End-Date-07-31-1991, Control-technology, Solvent-vapors, Grant-Number-T15-OH-07104, End-Date-06-30-1993, Training, Ventilation-systems, Solvent-vapor-degreasing, Organic-solvents

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages 205
	22. Security Class (This Page)	22. Price

(See ANSI-Z39.18) *See Instructions on Reverse* **OPTIONAL FORM 272(4-77)**
(Formerly NTIS-35)
Department of Commerce

LIST OF ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
CMS	completely mixed space model
D	eddy diffusivity
hr	hour
LEV	local exhaust ventilation
mg	milligrams
min	minute
ml	milliliters
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
ppm	parts per million
RR	rotameter reading
S	emission rate
SF_6	sulfur hexafluoride
2PT	two-point diffusion model
TIME	Number of minutes in interval
ERCMSK3	Workspace emission rate using CMS model with k=0.3 (g/min)
ER2PTC	Workspace emission rate using 2PT model and closest 2 points (g/min)
ERUSED	Workspace emission rate used in analysis (g/min)
ERLEV	Local exhaust ventilation emission rate (g/min)
CEMEAS	Measured capture efficiency
CEPRED	Predicted capture efficiency
TANKL	Degreasing tank length (cm)
TANKW	Degreasing tank length (cm)
TANKA	Degreasing tank area (m^2)
HOODL	Local exhaust hood length (cm)
HOODW	Local exhaust hood width (cm)
QHM3S	Measured hood flow rate (m^3/s)
QDM3S	Design hood flow rate (m^3/s)
QHQD	Measured hood flow as percent of design hood flow (%)
VFACE	Hood face velocity (m/s)
START	Number of parts or baskets started per minute (#/min)
LIQ	Number of part/basket minutes in liquid phase per minute (#-min/min)
VAP	Number of part/basket minutes in vapor phase per minute (#-min/min)

SHAKE	Number of parts or baskets shaken per minute (#/min)
SPRAY	Number of parts or baskets sprayed with liquid solvent per minute (#/min)
DRY	Number of parts or baskets raised above condenser for drying per minute (#/min)
CO	Number of parts or baskets removed from degreaser with liquid solvent on parts or dripping from parts per minute (#/min)
END	Number of parts or baskets ended per minute (#/min)
PLAT	Number of baskets removed to degreaser platform per minute (site 1a) (#/min)
SHELF	Number of baskets removed to degreaser shelf per minute (site 1a) (#/min)
WIPE	Number of parts sprayed with WD40 and wiped dry after degreasing per minute (site 2a) (#/min)
DRYCA	Number of parts or baskets dryed with compressed air per minute (site 11a) (#/min)
COVER	Number of minutes degreaser cover was closed per minute
POUR	Number of parts where liquid solvent was poured onto parts using a ladle per minute (site 14a) (#/min)
INOUT	Number of parts or baskets entering or exiting degreaser per minute (#/min)
VZ	z-component of crossdraft velocity (m/s)
VX	x-component of crossdraft velocity (m/s)
V	crossdraft velocity vector magnitude (m/s)
THETA	crossdraft velocity vector angle (rad)
TI	crossdraft velocity turbulence intensity (% of mean)

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1 Significant Findings

Workspace emission rates averaged 10.1 g/min (9.68 g/m2/min). The site average emission rates are in excellent agreement with other studies.

Crossdrafts can be quantified under operating conditions. Measured crossdraft magnitude ranged from 27 to 127 fpm. The range of crossdrafts observed in industrial settings are consistent with those used in laboratory experiments to develop predictive capture efficiency models.

The current hood design method(1), which recommends eliminating crossdrafts or other disturbances to air flow, is unrealistic. This research demonstrated that the effect of crossdrafts cannot be disregarded.

The predicted capture efficiencies did not agree well with those measured under operating conditions. This could be due to several factors: 1) turbulence was inadequately accounted for in the model; 2) the effects of the cooling condenser were not considered; 3) solvent was carried out of the degreaser to areas where the hood could not be expected to capture contaminants; and 4) the variability in emission rate due to degreaser activity is not adequately taken into account in the predictive capture efficiency model.

Emissions to the workspace were only slightly correlated with local exhaust emissions, suggesting that workspace emission rates are related to factors other than hood flow rate. These factors are probably more related to work practices. Solvent carryout was found to be an important factor in predicting workspace emission rate but less important for local exhaust emission rate.

The ACGIH recommended flow of 50 cfm/ft^2 of tank surface appears to be adequate for some conditions but inadequate for other conditions. An increase in flow, above design recommendations, did not necessarily improve hood performance.

A predictive model which includes turbulence intensity has been developed and is being validated in the laboratory. The data collected in this study could be compared to the improved predictive model.

Little data on emission rates of industrial processes and no data on industrial crossdrafts is available in the literature. The collection of this data is difficult and expensive. Although the predictive model tested in this study did not agree well with the measured capture efficiencies, future models developed by the authors, or models developed by other researchers could be validated using the data collected in this study.

2 Abstract

A field study was performed to determine the performance of slot hoods used to exhaust vapor degreasers. The study was performed on sixteen degreasers. The measurements were conducted under normal operating conditions. The objectives of the study were: 1) to measure capture efficiency of local exhaust hoods used to control vapor degreasing tanks during normal operations; 2) to measure crossdrafts in the vicinity of the vapor degreasing tanks; 3) to use the measured crossdrafts and hood and source parameters to predict capture efficiency using the model developed by Conroy and Ellenbecker; 4) to compare predicted and measured capture efficiency; and 5) to compare measured capture efficiencies and crossdrafts with observed degreaser activities.

Measurements were conducted over two days at each location. Local exhaust and general ventilation flow rates as well as the physical dimensions of the workspace and the degreaser were measured. Solvent concentrations at several locations in the workspace and in the local exhaust duct were measured in one-hour intervals. Crossdraft velocity was measured simultaneously with concentration in two-minute intervals. The concentration results and the ventilation characteristics of the space were used to determine the rate of solvent emission into the workspace using two mass balance models. The local exhaust emission rate was calculated from the duct flow rate and concentration. The ratio of duct emission rate to total emission rate is the hood capture efficiency. The measured crossdrafts, local exhaust hood flow rate, and the area of the tank surface were used in the predictive capture efficiency model for each sampling interval. These were compared with the measured capture efficiencies.

Measured crossdrafts ranged from near 27.3 to 127 fpm (0.139-0.643 m/s). Measured workspace emission rates averaged 10.1 g/min (9.68 $g/m^2/min$) and ranged from 0.09 to 58.3 g/min (0.058-64.5 $g/m^2/min$). Measured duct emission rates averaged 23.2 g/min (15.5 $g/m^2/min$) and ranged from 1.00 to 109 g/min (1.80-50.2 $g/m^2/min$). Measured capture efficiencies averaged 0.67 and ranged from 0.09 to 0.99. Predicted capture efficiencies ranged from 0.52 to 0.86.

Using overall averages, there appears to be reasonably good agreement between predicted and measured capture efficiency (0.74 and 0.74, respectively, sites 1a-9a). However, examining the interval efficiencies for each degreaser showed poor agreement between predicted and measured efficiency. This could be due to several factors: 1) turbulence was inadequately accounted for in the predictive model; 2) the effects of the cooling condenser on the degreaser were not considered; 3) solvent was carried out of the degreaser to areas

where the hood could not be expected to capture contaminants; and 4) the variability in emission rate due to degreaser activity is not adequately taken into account in the predictive capture efficiency model.

Emissions to the workspace were only slightly correlated with local exhaust emissions, suggesting that workspace emission rates are related to factors other than hood flow rate. These factors are probably more related to work practices. Solvent carryout was found to be an important factor in predicting workspace emission rate but less important for local exhaust emission rate.

The ACGIH recommended flow rate for vapor degreasers is 50 cfm/ft^2 of tank surface. The measured hood flow rates ranged from 36% to 349% of the recommended flow rate. The recommended flow rate appears to be adequate for some conditions but inadequate for other conditions. An increase in flow, above design recommendations, did not necessarily improve hood performance.

3 Body of Report

3.1 Background and Significance

Vapor degreasers are used in many industries to remove surface grease and oils from metal parts prior to use or further surface treatment, such as plating. A vapor phase degreaser is a tank containing a solvent which is heated to its boiling point. Boiling the liquid solvent creates a vapor phase above the liquid. Parts are cleaned by lowering them into the vapor phase. The vapor condenses on the surface of the cooler parts and washes the oil from the surface. Heavily soiled parts can be lowered into the boiling liquid and/or sprayed with warm solvent.(2) Several different solvents are commonly used in vapor degreasing. These include trichloroethylene, perchloroethylene, methyl chloroform, ethylene dichloride, and certain Freons.(2) Without adequate control, the solvent is emitted into the workplace creating a potential exposure of employees in the area. Also without adequate control the solvent is eventually released into the atmosphere with no recovery. The solvent loss can create health and safety problems and is a considerable operating expense.

Adequate local exhaust ventilation serves two purposes: 1) it removes the contaminant at the source preventing exposure to workers, and 2) it concentrates the solvent into a smaller volume of air which allows for possible solvent recovery and reuse.

Slot hoods are commonly used to exhaust area sources of contaminant release. Typical uses include metal finishing, electroplating, and degreasing operations where slot hoods are used to control emissions from open surface tanks.

The current design technique[1] for open surface tanks relies on qualitative terms such as "adequate," "high hazard or low hazard material," and "still air or disturbing air currents." A design based on such qualitative parameters gives the designer no indication of the hood performance and in turn no way to know if the contaminant is being controlled to a safe level before the hood is constructed and tested.

Current design techniques, as given in the Industrial Ventilation Manual,[1] require the hazard potential and the contaminant evolution rate to be estimated. These are combined to give the "class" of contaminant, which in turn is used to determine the necessary air flow, Q (cfm/ft^2 source area). The maximum air flow specified is 250 cfm/ft^2 source area.[1] The recommendation for vapor degreasers is 50 cfm/ft^2. The design method does not account quantitatively for crossdrafts, but instead recommends eliminating crossdrafts.

The widespread availability and ease of use of small, fast, personal computers allows the use of advanced techniques for local exhaust ventilation design. Centerline velocity estimates used currently as the primary design parameter for exterior hoods can now be replaced by more complicated velocity models. Garrison and Wang,[3] Esman et al.,[4] Flynn and Ellenbecker,[5,6] and Conroy, et al.[7] have all developed models to predict velocity at any point in the flow field, not just the centerline velocity. Any such estimate of capture velocity, however, has an uncertain relationship with the true variable of interest, capture efficiency. Capture efficiency is defined as the fraction of contaminant generated which is captured directly by the hood.

Empirical studies of capture efficiency have been conducted. Ellenbecker, et al.[8] developed a field method to measure capture efficiency of local exhaust hoods which used an oil mist release and a light scattering photometer. NIOSH[9] examined the ventilation requirements for grinding, buffing, and polishing operations and Jansson[10] looked at capture efficiency of hand grinding, drilling, and welding operations.

Roach,[11] Fletcher and Johnson,[12] Flynn and Ellenbecker,[13] and Conroy and Ellenbecker[14,15] have studied capture efficiency of local exhaust hoods. The models of Conroy and Ellenbecker[14,15] predict capture efficiency of flanged slot hoods and point or area sources under the influence of a uniform crossdraft. The models were validated in the laboratory but no field validation has been done to determine if the parameters studied in the laboratory were representative of industrial conditions.

One major shortcoming of designs based on capture efficiency is a lack of knowledge of what capture efficiency is "high enough" (analogous to the question of what capture velocity is "high enough"). The variable of interest, of course, is air concentration of the contaminant being emitted. Research must be done to relate hood capture efficiency with air concentrations for a variety of hood, worker, and extraneous air flow conditions.

An important component of any such research must be a better understanding of the nature of industrial crossdrafts which affect exterior hood performance and subsequent transport of contaminant away from the source and into the workplace. Capture efficiency model development and validation used a uniform crossdraft, uniform in direction and magnitude. Industrial crossdrafts are not expected to be uniform in direction or magnitude for extended lengths of time. The model allows for a distributions of crossdrafts and in turn will predict a capture efficiency distribution. Therefore, to the extent that crossdrafts can be quantified, capture efficiency can be predicted. However, the model has not been validated for crossdrafts other than those with uniform direction and magnitude.

3.2 Objectives

The broad, long term objective of this research is to determine if exterior hood design can be improved to adequately control emissions from open surface tanks. The specific aims are: 1) to measure capture efficiency of local exhaust hoods used to control vapor degreasing tanks during normal operations; 2) to measure crossdrafts in the vicinity of the vapor degreasing tanks; 3) to use the measured crossdrafts and hood and source parameters to predict capture efficiency using the model developed by Conroy and Ellenbecker;(15) 4) to compare predicted and measured capture efficiency; and 5) to compare measured capture efficiencies and crossdrafts with observed degreaser activities.

3.3 Predicted Capture Efficiency

Semi-empirical models for both point sources and area sources of contaminant release have been developed.(14,15) The point source model uses potential flow theory to describe the flow field in front of a flanged slot hood and an empirical factor to describe the turbulent diffusion of contaminant around streamlines.

Potential flow theory can be used to predict the velocity components (V_x,V_y,V_z) at any point (x,y,z) in front of an elliptical opening. Modelling a flanged slot hood as an inscribed ellipse, the velocity at any point in front of the hood can be determined using the following equations:

$$V_x = \frac{dx}{dt} = \frac{\partial\phi}{\partial x} = \frac{Qx(a^2+\lambda)^{1/2}(b^2+\lambda)^{3/2}\lambda^{3/2}}{2\pi E} \tag{1}$$

$$V_y = \frac{dy}{dt} = \frac{\partial\phi}{\partial y} = \frac{Qy(a^2+\lambda)^{3/2}(b^2+\lambda)^{1/2}\lambda^{3/2}}{2\pi E} \tag{2}$$

$$V_z = \frac{dz}{dt} = \frac{\partial\phi}{\partial z} = \frac{Qz(a^2+\lambda)^{3/2}(b^2+\lambda)^{3/2}\lambda^{1/2}}{2\pi E} x \frac{\ln\lambda - 11.8}{-10.7} \tag{3}$$

where

$$E = x^2\lambda^2(b^2+\lambda)^2 + y^2\lambda^2(a^2+\lambda)^2 + z^2(a^2+\lambda)^2(b^2+\lambda)^2 \tag{4}$$

and x is parallel to the hood length, y is parallel to the hood width, and z is perpendicular to the hood face. The hood air flow is Q; a is the length of the major axis and b is the minor axis of the modelled ellipse; and λ is the positive root of

$$\frac{x^2}{a^2+\lambda} + \frac{y^2}{b^2+\lambda} + \frac{z^2}{\lambda} = 1 \tag{5}$$

A crossdraft can be added to the velocity components given in Equations (1-3) through simple vector addition of the velocity generated by the hood and the crossdraft velocity. This model has been validated in the laboratory.(7)

A model for capture efficiency for a point source of contaminant release has been developed and validated in the laboratory.(14) The model utilizes the velocity field model for the xz-plane, (i.e., y=0), together with an empirical term to account for turbulent dispersion of contaminant around streamlines. Capture efficiency is given by:

$$\eta = \frac{\exp\left(\frac{Z-\mu}{\omega}\right)}{1+\exp\left(\frac{Z-\mu}{\omega}\right)} \tag{6}$$

where η = capture efficiency; Z = distance, in the z-direction, from the hood face to the point of interest; μ = empirically corrected distance, in the z-direction to the dividing streamline; and ω = parameter to account for the spread of contaminant around streamlines. The dividing streamline is the streamline which just enters the hood.

The spread parameter, ω, is calculated from

$$\omega = -0.15 Z_c + 0.004 \qquad \text{for } Z_c \text{ in m} \tag{7a}$$

$$\omega = -0.15 Z_c + 0.18 \qquad \text{for } Z_c \text{ in inches} \tag{7b}$$

The empirically corrected dividing distance, μ, is calculated from

$$\mu = 0.83 Z_c \tag{8}$$

The theoretical distance to the dividing streamline, Z_C, is a function of hood dimensions, hood face velocity, distance parallel to the hood face, and crossdraft velocity.

$$Z_c = f(L, W, X, V_0, V_c) \tag{9}$$

In the laboratory experiments the crossdraft velocity was held constant for each experimental condition. The location of each release point could be described by its x- and z-coordinates. For a constant hood face velocity and crossdraft velocity, Z_C could be determined using a computer program and capture efficiency calculated using Equations (6-9).

The capture efficiency of area sources of contaminant release, such as open surface tanks, can be calculated by integrating the point predictions over the surface of the source.[15] For open surface tanks with liquid level very close to the bottom of the slot hood, the source in front of the hood prevents air from being drawn from below the slot, causing more air to be drawn from in front of the slot. The effect is to increase the distance to the dividing streamline. The velocity field, modified by the presence of the contaminant source, is modelled by an image source of suction below the slot. This would be the case for plating tanks or pickling or cleaning tanks. With vapor degreasers, the liquid level is much lower than the bottom of the slot and does not interfere with air flow from below the slot. The assumption of an image source of suction is not necessary for predicting capture efficiency of hoods on vapor degreasers.

The integration is performed numerically. The geometry of the area source is specified, and capture efficiencies for a large number of points evenly spaced on the surface of the area source are calculated using Equations (6-9). The average of this large number of point source efficiencies is the overall efficiency. A computer program written in BASIC was developed to compute the capture efficiency of flanged slot hoods used to exhaust vapor degreasers.

3.4 Methods

This study looked specifically at vapor degreaser slot hoods. This type of hood was chosen because of the similarity of design from one hood to another. Solvent emission rates, crossdrafts, and local exhaust hood capture efficiencies were measured at sixteen vapor degreasers. The degreasers were located in private industrial settings and studied under normal operating conditions. Where possible, data was collected over two eight hour shifts for each degreaser. Table I shows the type of facility, facility size, solvent used, and general ventilation for each degreaser. The industrial operations using degreasing included metal fabrication, metal finishing, electronics manufacturing, and electroplating. Thirteen degreasers used trichloroethylene. Methyl chloroform, perchloroethylene, and methylene chloride were used in the other three degreasers, respectively.

Sites 1a, 2a, 3a, 7a, 8a&b, and 9a were metal fabrication facilities. Parts were produced on large stamping mills. Degreasing was performed to remove cutting oils and other grease from the parts prior to shipping. Sites 4a and 10a&b were metal finishing shops where grinding and polishing of metal parts were performed. The parts were degreased to remove residual polish prior to shipping. Site 13a was also a metal finishing shop where grinding and polishing were performed. In addition, there was a large paint line at this facility. Parts were degreased prior to painting. Sites 6a&b and 14a were electroplating shops. The primary plating operation was chrome plating. Metal parts were degreased prior to electroplating. Sites 11a and 12a were electronics manufacturing shops. Site 11a was a prototype printed circuit board development shop. Circuit boards were degreased following soldering to remove excess solder flux. At site 12a, electronic chips were soldered in a reflow oven. The chips were degreased following the soldering operation to remove excess solder flux.

3.4.1 Solvent Concentration Measurements

One-hour solvent concentrations were simultaneously measured in the duct and at measured distances from the degreaser during working conditions. During idling conditions (when objects were not being degreased, i.e., lunch, end of shift), thirty-minute concentrations were determined in the duct and at specified distances from the degreaser. Concentrations were measured during three to sixteen sampling periods at each degreaser. Samples were collected on charcoal tubes connected by Tygon tubing to portable sampling pumps. Air flows were controlled to 100-300 ml/min using each pump's internal needle valve. Flow rates were checked using a calibrated rotameter.

Samples were solvent extracted and analyzed by gas chromatograph/flame ionization detection following NIOSH Method 1022.[16] Included in Table I is the average concentration of degreaser solvent vapor measured at each test site. Sampling locations for each site are shown in Figures 5-23 in Appendix A.

3.4.2 Ventilation Measurements

Mechanical ventilation at each facility consisted of local exhaust ventilation on the degreaser and at other operations such as plating tanks and grinding wheels. Only sites 11a and 12a were provided with mechanical make-up air and general ventilation. All of the other sites relied on infiltration for make-up air and general ventilation. Local exhaust hood flow rates were measured in the duct using a standard Pitot tube and manometer. In cases where the air velocity was too low to accurately measure with a Pitot tube, the slot hood area was determined and the slot velocity was measured using a calibrated TSI Model 8350 Velocicalc hot-film anemometer. Air velocity through as many building or room openings as possible was also measured using the anemometer. In sites with mechanical supply and return systems, general ventilation supply and exhaust air flows were measured using an Alnor Balometer. Schematics of each site are shown in Figures 5-23 in Appendix A.

3.4.3 Workspace Emission Rates

Workplace emission rates are calculated from the measured contaminant concentration profile in the space and the ventilation characteristics of the space using a mass balance model. Several mass balance model forms can be used. In this project two models were used, the completely mixed space at steady state and the two point diffusion models.

3.4.3.1 Completely Mixed Space (CMS)

The steady state mass balance on a completely mixed space is expressed mathematically as follows:

$$S_w = k C_{ss} Q \qquad (10)$$

where S_W = workspace mass emission rate (mass/time), k = factor to account for incomplete mixing (dimensionless), C_{SS} = mass concentration at steady state (mass/volume), and Q = volumetric air flow through space (volume/time).[17]

Assumptions inherent to this model are given by Burgess, et al.[18] as follows:

1) There is perfect mixing in the area, both spatially and temporally.
2) The emission rate is constant.
3) The contaminant concentration in the dilution air is zero.
4) The contaminant is introduced to the space only through process emissions.
5) The contaminant is removed from the space only through general ventilation.

This model has been described in several publications and is the currently accepted model for dilution ventilation design.[1] The first assumption results in the mathematical form of Equation (10), however, complete and instantaneous mixing is only theoretically possible. In real workplaces it is rarely, if ever, achieved and a mixing factor, k, is introduced to account for incomplete mixing.

The completely mixed space model has been used successfully to predict workspace emission rates for ozone,[19,20] welding emissions, [21] chrome plating,[22] ethyl alcohol from candy glazing,[23] offset printing solvents,[24-25] lead and other metals during abrasive blasting of steel structures,[26] and for a limited number of degreasing operations.[22,27,28] Measured values of the mixing factor range from 0.1 to 0.8.[22,27,28]

3.4.3.2 Two Point Diffusion (2PT)

Emission rates were determined from the observed variation in time of the solvent concentration gradient near the degreaser. This method assumes a point source emitting at a steady rate into an infinite hemispherical space. The model also assumes the contaminant diffusion follows Fick's Law and neglects deposition. A solution for the mass balance on a system of this type is given in Carslaw and Jaeger[29] as:

$$C = \left(\frac{S_w}{2\pi D r} \right) erfc\left(\frac{r}{(4Dt)^{0.5}} \right) \tag{11}$$

where C = concentration (mass/volume), r = distance from the point source (length), t = time, S_W = workspace emission rate (mass/time), D = eddy diffusivity (area/time), and erfc stands for the error function complement and is available in reference tables.[30]

The integral of Equation (11) is the appropriate form to characterize area concentrations, C_{av}, collected over averaging time, t_{av}. With simultaneous measurement of concentration at two different distances, r_1 and r_2 the integral form of Equation (11) give two independent equations:

$$C_{av,r_1} = \frac{\left(\frac{S_w}{2\pi D r_1}\right)\int_0^{t_{av}} erfc\left(\frac{r_1}{(4Dt)^{0.5}}\right)dt}{t_{av}} \qquad (12a)$$

$$C_{av,r_2} = \frac{\left(\frac{S_w}{2\pi D r_2}\right)\int_0^{t_{av}} erfc\left(\frac{r_2}{(4Dt)^{0.5}}\right)dt}{t_{av}} \qquad (12b)$$

Equations (12a) and (12b) can be solved simultaneously for eddy diffusivity, D, and emission rate, S.

This approach has been used to estimate emissions from two vapor-phase degreasers, an open top manually loaded type and an enclosed conveyor type,(22) chromium plating,(22,31) wave soldering,(32) and copper plating.(32)

3.4.4 Measured Capture Efficiency

Measured capture efficiency is the ratio of duct emission rate to total emission rate (workspace plus duct emission rate). This is expressed mathematically as:

$$\eta = \frac{S_d}{S_w + S_d} \qquad (13)$$

where η is capture efficiency (dimensionless), S_w is the workspace emission rate (g/min), and S_d is the local exhaust duct emission rate (g/min). Workspace emission rates are calculated using either Equation (10) or (12). Duct emission rates are calculated by multiplying the duct concentration (mass/volume) by the duct flow rate (volume/time).

3.4.5 Tracer Gas Measurements

Tracer gas was released through a series of copper tubes, with holes drilled in them. The tubes were configured to distribute an equal release of the tracer gas over the degreaser. Sulfur hexafluoride (SF_6) was released at a measured rate and the concentration of SF_6 was measured in the duct downstream of the hood using a Foxboro/Wilks Miran 1A General Purpose Gas Analyzer connected to a Rustrak Ranger data logger and a chart recorder. SF_6 release was limited to idling conditions (when objects were not being degreased, i.e., lunch, end of shift) to avoid interfering with the operation of the degreaser. SF_6 was released for approximately 30 minutes, twice a day, site permitting.

3.4.6 Crossdraft Measurements

Crossdraft velocity (magnitude and direction) near the local exhaust hood was measured simultaneously with measurements of solvent concentration. Measurements were made using a TSI, Inc. IFA100 hot-wire anemometer with fast response suitable for turbulence measurements. Measured values were recorded through an analo-g-to-digital converter on a Toshiba T-5200 portable computer. A two-wire mutually perpendicular probe (model 1240-T15, TSI Corporation, St. Paul, Minn.), determined the direction as well as the magnitude of the crossdraft. The probe was used in the horizontal centerline plane (the xz-plane). Five measurements were made in each two-minute interval and the measurements were repeated approximately six times per hour.

3.4.7 Degreaser Activities

Observed degreaser activities were recorded in two-minute intervals throughout the measurement period at each site. Recorded activities at each site included: part type, part or basket start time, time part or basket entered and was removed from the vapor phase, time part or basket entered and was removed from the liquid phase, time a part or basket was shaken, sprayed with warm solvent, or lifted out for drying, if a part or basket was removed with liquid solvent dripping from part or basket, part or basket end time, and time when the degreaser cover was opened or closed. Additionally, some activities were only recorded at some sites. These activities included: placing baskets on the degreaser platform or shelf (site 1a), spraying degreased parts with WD40 and wiping parts (site 2a), drying parts with compressed air (site 11a), and pouring liquid solvent onto parts with a ladle (site 14a).

3.4.8 Other Measurements

The location, along with the hood and tank dimensions of the degreaser were measured. Room dimensions, including doorways, windows, garage doors, and other openings in the room of the degreaser were measured.

3.5 Results and Discussion

Table II shows the hood and tank dimensions, the measured hood air flow, and the air flow recommended by the ACGIH[1] for each degreaser. The degreasers were operated at an average of 120% of design, with a range of 36% of design at site 13a to 349% of design at site 11a.

3.5.1 Workspace Emission Rates

Average workspace concentrations of trichloroethylene ranged from 3.35 ppm (site 6a) to 103 ppm (site 6b). Average concentration for other solvents were 34.9 ppm, 1.89 ppm, and 12.8 ppm for methyl chloroform, perchloroethylene, and methylene chloride, respectively. For comparison, the OSHA Permissible Exposure Limits (PEL) are 100 ppm, 350 ppm, 100 ppm, and 500 ppm for trichloroethylene, methyl chloroform, perchloroethylene, and methylene chloride, respectively.[33] It should also be noted that NIOSH considers trichloroethylene, perchloroethylene, and methylene chloride as potential human carcinogens and recommends occupational exposures be limited to the lowest feasible concentration.[34] The air samples were collected as area samples and direct comparison for compliance purposes is not valid. However, personal exposure monitoring is recommended, particularly at site 6b.

Two mass balance models were used at each site, the completely mixed space model (CMS), Equation (10), and the two point diffusion model (2PT), Equation (12). A measured mixing factor for each space was not available. Commonly, mixing factors for industrial spaces range between 0.1 and 0.3. The CMS model was used with assumed mixing values of $k = 1.0$, 0.3, and 0.1. The two point diffusion model was applied to the two points closest to the degreaser and to all pairs of measurement locations. The interval results for each model are shown in Appendix B.

Figure 1 shows a plot of workspace emission rates using the two point diffusion model for the closest two points versus workspace emission rates using the completely mixed space model with $k = 0.3$. The correlation coefficient was 0.767. (Note that all correlations reported are nonparametric Spearman rank order correlation coefficients. Nonparametric correlations are used because the data are not normally distributed.) The two point diffusion model gives emissions rates that are nearly four times those estimated by the completely mixed space model.

For further analysis (capture efficiency and activity correlation), emission rates were estimated using the completely mixed space model with $k=0.3$ at most of the sites. Sites 8a&b and 10a&b had two degreasers in the same space. The CMS model could not be used to distinguish emissions from each degreaser. The 2PT model was applied to the two points closest to each degreaser at these sites. At site 11a, the degreaser was in a very large space with a mechanical heating/cooling system. It was not possible to quantify the dilution ventilation rate in this space. The 2PT model was also used at this site. Average workspace emission rates for each site are shown in Table III. Table IV gives the interval workspace emission rates for each site.

Workspace emission rates ranged from 0.090 g/min to 297 g/min. The overall average emission rate was 10.1 g/min. Expressed in terms of tank area the average emission rate was 9.68 $g/m^2/min$ with a range of 0.058 - 64.5 $g/m^2/min$. These emission rates are in excellent agreement with previously reported emission tests for vapor degreasers under automated operating conditions but without local exhaust. The range of the automated degreaser test emissions was 5.16 - 63.0 g/m2/min.[35,36]

3.5.2 Local Exhaust Emission Rates

The local exhaust ventilation system emissions are shown in the "LEV" column of Tables III and IV. Local exhaust emission rate was calculated by multiplying the measured duct concentration (g/m^3) by the duct flow rate (m^3/min).

Average duct emission rates ranged from 1.00 g/min at site 13a to 109 g/min at site 8b. None of the LEV systems were equipped with solvent recovery systems. The duct emissions were released directly to the outside environment. The highest duct emissions were at site 8(a+b). Yearly emissions calculated using the two day average duct emission for this site were 67,700 lb/yr. This is approximately twice the reported emissions for this site.

3.5.3 Crossdrafts

A summary of the crossdraft measurement results is given in Table V. Results of crossdraft measurements for each sampling interval for each site are given in Table

VI. The x-component of velocity is parallel to the hood face and the z-component is perpendicular to the hood face. The locations of the crossdraft measurements at each site are shown in Figures 5-23 (Appendix A). Anemometer problems prevented measurements at Sites 10a through 14a. Detailed crossdraft measurement data are given in Appendix D.

The average velocities for all sites measured were 19.0 fpm (0.097 m/s) and 6.0 fpm (0.031 m/s) for the z- and x-components, respectively. These averages include the direction (positive or negative) as well as the magnitude. The average magnitude of the velocity components were 21.6 fpm (0.110 m/s) and 31.4 fpm (0.160 m/s) for the z- and x- components, respectively. Crossdraft velocities ranged from -53.5 fpm to 125 fpm (-0.272 to 0.638 m/s) for the z-component and from -46.2 fpm to 111 fpm (-0.235 to 0.565 m/s) for the x-component. If only the magnitude of the crossdraft is considered, the range of the z-component is from 0.060 to 125 fpm (0.000 to 0.638 m/s) and the range of the x-component is from 0.060 to 111 fpm (0.000 to 0.565 m/s).

The distribution of crossdraft velocity (magnitude of the vector) for each site and for all sites is shown in Figure 2. Figure 3 shows the distribution of turbulence intensity for each site and for all sites. The heavy line is the median with the box showing the 25th and 75th percentiles of the distribution. The whisker length is equal to 1.5 times the difference between the 25th and 75th percentile. The center of the diamond is the mean and the ends of the diamond are located ± 1 standard deviation from the mean.

Site 2a had the largest variability in velocity magnitude with site 9a showing the lowest variability. The largest variability in turbulence intensity was seen at site 1a with the lowest observed at site 9a. The highest velocities were seen at site 8a. The lowest were observed at site 7a. The highest turbulence intensities were observed at site 1a and the lowest were observed at site 9a.

The magnitudes of the crossdrafts observed in these workspaces are consistent with crossdrafts used in laboratory experiments to develop predictive models.[5-7,11-15] The observed turbulence intensities, in many cases, were higher than in the wind tunnel studies.

The typical degreaser in this study was 4 ft x 2.5 ft (1.22 m x 0.76 m). The recommended hood flow rate for a degreaser of this size is 500 cfm (0.241 m^3/s). This results in a capture velocity of 13.5 fpm (0.069 m/s) at the tank edge. The average x-component of crossdraft velocity was 6.00 fpm (0.030 m/s) or nearly 45% of the capture velocity. The effects of crossdrafts on capture efficiency cannot be disregarded.

3.5.4 Measured Capture Efficiency and Predicted Capture Efficiency

Measured capture efficiency was calculated from local exhaust ventilation system emission rates and the workspace emission rates using Equation (13).

The experiments involving the release of SF_6 were unsuccessful. The Miran is an infrared (IR) analyzer which is non-specific. The preferred wavelength for absorbance of IR by SF_6 is 10.6 μm. This is also the preferred wavelength for absorbance by trichloroethylene (TCE) and other chlorinated solvents. Attempts were made to scan for other wavelengths where IR would be absorbed by SF6, however, TCE interfered at all wavelengths identified. The measurements made in the duct represent the absorbance of SF_6 and TCE (or other chlorinated solvents).

An attempt was made to use the simultaneously measured charcoal tube sample concentration to correct the Miran measurements for TCE concentration. However, the Miran response is not always linear with concentration or with different chemicals and the correction gave unrealistic capture efficiencies. In some cases corrected efficiency was less than zero and in others it was greater than one.

Other tracer gases, such as carbon monoxide or nitrous oxide, were not used because of their higher toxicity. In addition, many of these sites used propane powered fork trucks which were sources of carbon monoxide. Sources of carbon monoxide in the plant made carbon monoxide an unacceptable tracer gas for this study.

Predicted capture efficiency was calculated using the measured crossdrafts and Equations (1-9). Details of the calculations are given in Table LV in Appendix E. An example of the computer program output for one set of measurements is shown in Figure 2. The degreaser at Site 2A is shown. The crossdraft measurement occurred at 10:02 on the first day of sampling. Similar analyses were performed for each crossdraft measurement.

Using overall averages (Table III), there appears to be reasonably good agreement between predicted and measured capture efficiency (0.741 and 0.737, respectively). However, examining the interval averages for each degreaser showed poor agreement (Figure 5). The correlation between predicted and measured capture efficiency is -0.007.

The poor agreement could be due to several factors. Turbulence was inadequately accounted for in the predictive model. The model was developed from experimental data collected in wind tunnel experiments at one turbulence condition.

This turbulence condition was different from those measured in the field. The effects of the cooling condensers on the degreasers were not considered in the predictive model.

Table VII shows summary statistics for all variables evaluated in this study. Table VIII is a summary of Spearman rank order correlation coefficients for significant variables. The bold numbers in Table VIII are statistically significant at the $p=0.01$ level. The underlined numbers are discussed below and are plotted in Figures 6-8. The shaded areas show variables that are expected to be highly correlated, e.g., tank length and hood length.

Figure 6 shows measured capture efficiency plotted against several variables that were statistically significant in the correlation analysis. Hood face velocity was the variable that correlated best with measured capture efficiency, although there is considerable scatter in the data (Figure 6c). Conventional design procedures specify hood flow rate as the most important parameter. Slot velocity is not normally thought of as an important factor in predicting capture velocity. The slot velocity is considered important for maintaining a uniform distribution of air flow over the source. The observed slot velocities were all less than 1000 fpm (5.08 m/s) maximum specification in the recommended design.[1]

Crossdraft angle and tank area are both variables which are accounted for in the predictive model and which also were significantly correlated with measured capture efficiency. Although statistically significant ($p<0.01$), the correlation for these variables was low and there is considerable scatter in the data (Figures 6b and 6d).

In many cases, solvent was carried out of the degreaser on parts to other areas of the workspace. The solvent was released too far from the local exhaust hood to reasonably expect capture, but this released solvent would have been detected during workspace air sampling. The predictive model is not estimating variability in observed solvent release with activity. Several studies have shown workplace emission rates to be a function of throughput (number of parts, number of baskets) and part shape.[27,28] These activities are not taken into account in the predictive capture efficiency model.

Figure 7 shows workspace emission rates vs. local exhaust ventilation emission rates. If the factors affecting workspace emissions and local exhaust emissions were the same, we would expect a high correlation. The figure suggests that there may be some factors in common, but that there are other factors that are acting independently to produce workspace emissions.

Figure 8 shows workspace emission rates and local exhaust ventilation emission rates versus two activity variables. INOUT is the number of parts or baskets entering or exiting the degreaser per minute. CO is the number of parts or baskets exiting the degreaser with visible solvent carryout per minute. INOUT was correlated with both workspace and local exhaust ventilation emission rates, r = 0.377 and 0.231, respectively (Figures 8a and 8b). CO was only significantly correlated with workspace emission rate (Figures 8c and 8d). Although the data are very scattered, this analysis indicates that solvent carryout is an important predictor of workspace emission rates, but has much less affect on local exhaust emission rates. The predicted model does not include the effect of degreaser activities and therefore would not be expected to predict well during high activity times.

Measured capture efficiency vs. hood flow, expressed as a percentage of design flow, is shown in Figure 6a. There was no relationship between increasing hood flow and measured hood capture efficiency. Degreaser 9a had the highest measured capture efficiency and was operated as recommended by the ACGIH (97% of design). However, degreaser 3a was also operated near design and had a lower efficiency. Degreaser 13a had the lowest flow and the lowest efficiency, while degreaser 6a was operated at 163% of design and also had a low capture efficiency.

3.6 Tables and Figures

TABLE I: GENERAL VENTILATION RATES AND CONCENTRATIONS

Site	Type of Facility	Solvent	Floor Area		Average Concentration	Dilution Ventilation		Air Changes
			(m^2)	(ft^2)	(ppm)	(m^3/s)	(cfm)	(hr^{-1})
1a	Metal Fabrication	Methyl Chloroform	248.2	2,672	34.9	3.64	7,718	8.1
2a	Metal Fabrication	Trichloroethylene	88.9	957	3.49	9.62	20,377	>50
3a	Metal Fabrication	Trichloroethylene	597.6	6,433	6.29	7.32	15,517	10.3
4a	Metal Finishing	Trichloroethylene	102.2	1,100	8.03	6.48	13,724	70.2
6a	Electroplating	Trichloroethylene	558.7	6,014	3.35	6.36	13,483	9.0
6b	Electroplating	Trichloroethylene	296.0	3,186	103	5.90	12,509	15.7
7a	Metal Fabrication	Trichloroethylene	27.2	293	53.3	0.41	864	12.6
8a	Metal Fabrication	Trichloroethylene	81.6	878	34.5	7.97	16,865	60.7
8b	Metal Fabrication	Trichloroethylene	81.6	878	34.5	7.97	16,865	60.7
9a	Metal Fabrication	Perchloroethylene	5168	55,631	1.89	0.38	810	0.1[a]
10a	Metal Finishing	Trichloroethylene	454.4	4,891	26.1	15.28	32,378	26.5
10b	Metal Finishing	Trichloroethylene	454.4	4,891	18.4	8.48	17,978	14.7
11a	Electronics	Trichloroethylene						
12a	Electronics	Methylene Chloride	161.3	1,736	12.8	3.65[b] (0.34)[c]	7,743[b] (723)[c]	2.2[d]
13a	Metal Finishing	Trichloroethylene	579.6	6,239	9.48	12.75	27,020	19.0
14a	Electroplating	Trichloroethylene	155.6	1,675	12.3	2.52	5,339	15.9

[a] based only on the duct flow rate for a 834,465 ft3 space. There may well have been other exit flows through inaccessible openings which we were not able to measure.

[b] total flow including recycle.

[c] make-up flow only.

[d] based on make-up flow.

TABLE II. HOOD AND TANK DIMENSIONS AND HOOD AIR FLOWS FOR EACH SITE.

	Hood		Tank		Measured	Design	Percentage
Site	Length in (m)	Width in (m)	Length in (m)	Width in (m)	Hood Flow cfm (m^3/s)	Hood Flow cfm (m^3/s)	of Design[a] %
1a	55 (1.40)	1.75 (0.04)	55 (1.40)	36.5 (0.93)	499 (0.24)	697 (0.33)	72
2a	48 (1.22)	1.75 (0.04)	48 (1.22)	28 (0.71)	757 (0.36)	467 (0.30)	162
3a	62 (1.57)	1.75 (0.04)	60.5 (1.54)	30 (0.76)	646 (0.30)	630 (0.30)	103
4a	44 (1.12)	2 (0.05)	44 (1.12)	34 (0.86)	838 (0.40)	519 (0.25)	161
6a	49 (1.24)	1.78 (0.05)	48 (1.22)	32 (0.81)	869 (0.41)	533 (0.25)	163
6b	48 (1.22)	1 (0.03)	47 (1.19)	30 (0.76)	416 (0.20)	490 (0.23)	85
7a	48 (1.22)	1.5 (0.04)	48 (1.22)	30 (0.76)	231 (0.11)	500 (0.24)	46
8a	124 (3.15)	2.5 (0.06)	124 (3.15)	48.5 (1.23)	2024 (0.96)	2088 (0.99)	97
8b	120 (3.05)	1 (0.03)	120 (3.05)	48 (1.22)	1556 (0.73)	2000 (0.94)	78
9a	62 (1.57)	1 (0.03)	60 (1.52)	40 (1.02)	810 (0.38)	833 (0.39)	97
10a	48 (1.22)	3 (0.08)	48 (1.22)	30 (0.76)	385 (0.18)	500 (0.24)	77
10b	48 (1.22)	3 (0.08)	48 (1.22)	30 (0.76)	743 (0.35)	500 (0.24)	149
11a	33 (0.84)	1.375 (0.03)	30 (0.76)	9.875 (0.25)	359 (0.17)	103 (0.05)	349
12a	78 (1.98)	1 (0.03)	78 (1.98)	14 (0.36)	526 (0.25)	379 (0.18)	139
13a	36 (0.91)	1.75 (0.04)	36 (0.91)	24 (0.61)	108 (0.05)	300 (0.14)	36
14a	69 (1.75)	1.625 (0.04)	69 (1.75)	26 (0.66)	595 (0.28)	623 (0.29)	96

[a]ACGIH, 1988.

TABLE III. AVERAGE EMISSION RATES AND CAPTURE EFFICIENCIES.

		Emission Rates (g/min)		Emission Rates ($g/m^2/min$)		Tank Area	Capture Efficiency	
Site	Model	Workspace	LEV	Workspace	LEV	(m^2)	Measured	Predicted
1a	CMS	12.4	20.8	9.52	16.0	1.302	0.47	0.67
2a	CMS	3.15	22.6	3.64	26.1	0.866	0.86	0.69
3a	CMS	4.39	11.2	3.75	9.57	1.170	0.71	0.83
4a	CMS	4.96	18.1	5.15	18.8	0.963	0.81	0.82
6a	CMS	2.03	3.29	2.06	3.33	0.988	0.33	0.86
6b	CMS	58.3	19.9	64.5	22.0	0.904	0.57	0.67
7a	CMS	2.07	9.53	2.23	10.3	0.927	0.81	0.54
8a	2PT	1.69	98.5	0.436	25.4	3.875	0.98	0.86
8b	2PT	2.34	109	0.629	29.3	3.721	0.97	0.84
9a	CMS	0.090	17.5	0.058	11.3	1.550	0.99	0.83
10a	2PT	39.5	4.36	42.6	4.70	0.927	0.76	na
10b	2PT	297	3.52	3.20	3.80	0.927	0.56	na
11a	2PT	0.93	9.53	4.89	50.2	0.190	0.95	na
12a	CMS	2.90	2.55	4.07	3.58	0.713	0.40	na
13a	CMS	11.5	1.00	20.8	1.80	0.555	0.09	na
14a	CMS	2.97	16.3	2.57	14.1	1.155	0.84	na
Overall		10.1	23.2	9.68	15.5	1.30	0.67[b]	
Average[a]							0.74[c]	0.74[c]

[a]The overall average is the average of all interval emission rates or capture efficiencies. It is not the average of the site averages

[b]Average of all sites

[c]Average of sites 1a through 9a

TABLE IV. INTERVAL EMISSION RATES AND CAPTURE EFFICIENCIES

		Emission Rate (g/min)		Capture Efficiency	
Site	Interval	Workspace	LEV	Measured	Predicted
1a	1	24.0	na	na	na
	2	8.52	na	na	na
	3	19.7	117	0.856	na
	4	6.84	37.4	0.845	na
	5	17.5	16.7	0.489	na
	6	4.23	na	na	na
	7	3.24	4.70	0.592	0.669
	8	1.17	1.60	0.578	0.651
	9	23.9	8.30	0.258	0.747
	10	6.78	2.90	0.300	0.725
	11	27.6	13.8	0.334	0.600
	12	10.7	2.80	0.208	na
	13	7.35	2.30	0.238	0.633
2a	1	3.57	17.7	0.832	0.564
	2	3.33	16.1	0.829	0.604
	3	0.798	14.6	0.948	0.623
	4	2.89	13.6	0.825	na
	5	4.92	21.0	0.810	0.647
	6	3.12	31.9	0.911	na
	7	5.67	32.4	0.851	0.736
	8	4.11	16.2	0.798	0.715
	9	2.25	5.20	0.698	0.679
	10	1.83	22.3	0.924	0.815
	11	1.51	11.0	0.879	0.711
	12	4.17	20.9	0.834	0.710
	13	3.48	70.6	0.953	0.773
	14	2.52	22.2	0.898	0.729
3a	1	4.92	6.60	0.573	na
	2	4.44	13.7	0.755	0.837
	3	7.53	18.1	0.706	0.822
	4	4.11	5.90	0.589	0.832
	5	5.49	15.5	0.738	0.824
	6	2.42	8.30	0.774	0.810
	7	3.48	12.7	0.785	0.822
	8	4.35	10.5	0.707	0.829
	9	4.44	10.7	0.707	0.829
	10	4.14	8.20	0.665	0.826
	11	4.02	13.5	0.771	na
	12	5.19	14.1	0.731	0.857
	13	2.60	7.70	0.748	0.851

a: model did not converge to a physically realistic diffusivity

na: not available

TABLE IV. INTERVAL EMISSION RATES AND CAPTURE EFFICIENCIES (continued)

Site	Interval	Emission Rate (g/min)		Capture Efficiency	
		Workspace	LEV	Measured	Predicted
4a	1	4.83	17.7	0.786	0.813
	2	9.12	28.1	0.755	0.821
	3	0.936	8.40	0.900	0.819
6a	1	2.40	0.700	0.226	0.842
	2	3.30	0.700	0.175	0.844
	3	1.78	1.50	0.458	na
	4	3.42	1.50	0.305	0.848
	5	1.27	1.30	0.507	na
	6	0.381	0.300	0.441	na
	7	0.459	3.70	0.890	0.847
	8	1.96	2.50	0.561	0.854
	9	6.93	6.50	0.484	0.846
	10	3.15	5.50	0.636	na
	11	0.438	na	na	na
	12	1.16	2.10	0.644	0.841
	13	1.69	na	na	0.850
	14	1.61	1.10	0.406	na
	15	0.546	15.3	0.966	0.851
6b	1	3.51	15.6	0.816	0.651
	2	4.11	21.1	0.837	0.655
	3	8.52	31.2	0.785	0.663
	4	0.100	13.5	0.993	0.650
	5	2.11	14.6	0.874	na
	6	2.97	24.4	0.891	0.652
	7	4.92	22.5	0.821	na
	8	143	15.1	0.095	0.674
	9	183	18.4	0.091	0.681
	10	211	21.2	0.091	0.680
	11	99.6	na	na	na
	12	50.4	18.9	0.273	0.714
	13	46.5	na	na	na
	14	55.5	22.4	0.288	na
7a	1	1.68	12.1	0.878	na
	2	2.46	14.4	0.854	0.546
	3	2.41	12.4	0.837	0.542
	4	0.795	5.30	0.870	0.556
	5	2.79	10.6	0.792	0.558
	6	2.29	6.80	0.748	0.526
	7	2.16	12.2	0.849	na
	8	1.43	4.20	0.746	0.544

a: model did not converge to a physically realistic diffusivity

na: not available

TABLE IV. INTERVAL EMISSION RATES AND CAPTURE EFFICIENCIES (continued)

		Emission Rate (g/min)		Capture Efficiency	
Site	Interval	Workspace	LEV	Measured	Predicted
7a	9	0.666	6.10	0.90	0.544
	10	1.93	9.60	0.83	0.522
	11	3.33	15.3	0.82	0.545
	12	1.84	2.80	0.60	na
	13	3.15	12.0	0.79	0.563
8a	1	0.487	103	0.995	na
	2	0.520	7.26	0.933	0.899
	3	a	11.3	a	0.819
	4	0.494	68.1	0.993	na
	5	0.160	2.20	0.932	na
	6	0.356	104	0.997	na
	7	0.398	119	0.997	na
	8	0.387	108	0.996	na
	9	0.468	167	0.997	na
	10	1.16	164	0.993	na
	11	0.325	112	0.997	na
	12	0.290	167	0.998	na
	13	15.2	117	0.885	na
8b	1	a	108	a	na
	2	a	129	a	na
	3	a	164	a	na
	4	a	170	a	0.847
	5	a	75.4	a	0.841
	6	2.62	129	0.980	0.855
	7	233	97.0	0.294	0.845
	8	a	103	a	0.835
	9	1.74	94.8	0.982	na
	10	4.21	60.0	0.934	0.834
	11	0.790	146	0.995	na
	12	123	78.5	0.390	na
	13	a	65.3	a	na
9a	1	0.203	28.8	0.993	na
	2	0.0810	26.2	0.997	0.837
	3	0.0540	1.40	0.963	0.834
	4	0.0470	6.60	0.993	0.837
	5	0.0390	9.10	0.996	na
	6	0.148	39.3	0.996	0.831
	7	0.0390	2.20	0.983	0.834
	8	0.0860	26.6	0.997	0.833

a: model did not converge to a physically realistic diffusivity

na: not available

TABLE IV. INTERVAL EMISSION RATES AND CAPTURE EFFICIENCIES (continued)

		Emission Rate (g/min)		Capture Efficiency	
Site	Interval	Workspace	LEV	Measured	Predicted
10a	1	a	3.30	a	na
	2	0.376	1.30	0.776	na
	3	0.581	1.60	0.734	na
	4	a	8.10	a	na
	5	a	7.40	a	na
	6	3.13	5.00	0.615	na
	7	na	na	na	na
	8	a	2.80	a	na
	9	0.485	5.70	0.922	na
	10	a	5.90	a	na
	11	a	5.40	a	na
	12	a	1.10	a	na
	13	a	8.00	a	na
	14	0.119	5.20	0.978	na
	15	a	0.500	a	na
10b	1	0.592	0.000	0.000	na
	2	0.403	4.20	0.912	na
	3	0.0930	1.90	0.953	na
	4	2.71	2.30	0.459	na
	5	0.830	1.70	0.672	na
	6	0.445	1.70	0.793	na
	7	0.675	0.800	0.542	na
	8	5.88	2.90	0.330	na
	9	5.49	1.80	0.247	na
	10	1.53	1.30	0.459	na
	11	6.38	1.20	0.158	na
	12	0.916	1.50	0.621	na
	13	0.0690	na	na	na
	14	0.230	3.20	0.933	na
	15	21.1	24.7	0.539	na
11a	1	0.0140	4.70	0.997	na
	2	0.0040	9.70	1.000	na
	3	0.0230	8.70	0.997	na
	4	0.0020	9.60	1.000	na
	5	8.02	13.9	0.634	na
	6	0.0040	16.2	1.000	na
	7	a	11.3	a	na
	8	0.120	2.60	0.956	na
	9	a	1.20	a	na
	10	0.140	5.30	0.974	na

a: model did not converge to a physically realistic diffusivity

na: not available

TABLE IV. INTERVAL EMISSION RATES AND CAPTURE EFFICIENCIES (continued)

		Emission Rate (g/min)		Capture Efficiency	
Site	Interval	Workspace	LEV	Measured	Predicted
11a	11	a	19.6	a	na
	12	0.329	9.00	0.965	na
	13	0.629	12.1	0.951	na
12a	1	1.43	0.300	0.174	na
	2	0.903	0.200	0.181	na
	3	1.90	1.40	0.424	na
	4	3.12	10.3	0.768	na
	5	6.12	3.80	0.383	na
	6	3.72	0.800	0.177	na
	7	13.3	3.90	0.227	na
	8	1.31	0.400	0.235	na
	9	0.753	0.300	0.2685	na
	10	0.702	0.200	0.222	na
	11	0.693	1.80	0.722	na
	12	0.867	7.20	0.893	na
13a	1	7.50	0.800	0.096	na
	2	10.2	0.800	0.073	na
	3	12.1	1.30	0.097	na
	4	14.2	1.30	0.084	na
	5	10.0	1.10	0.099	na
	6	24.1	1.30	0.051	na
	7	14.3	0.700	0.047	na
	8	14.4	0.900	0.059	na
	9	21.7	1.10	0.048	na
	10	3.24	0.300	0.085	na
	11	4.47	0.400	0.082	na
	12	6.30	1.10	0.149	na
	13	7.50	1.70	0.185	na
14a	1	2.37	14.7	0.861	na
	2	2.82	17.0	0.858	na
	3	4.50	23.1	0.837	na
	4	1.06	24.5	0.959	na
	5	3.78	17.4	0.822	na
	6	3.93	18.2	0.822	na
	7	4.29	22.9	0.842	na

a: model did not converge to a physically realistic diffusivity

na: not available

TABLE IV. INTERVAL EMISSION RATES AND CAPTURE EFFICIENCIES
(continued)

Site	Interval	Emission Rate (g/min)		Capture Efficiency	
		Workspace	LEV	Measured	Predicted
14a	8	2.74	19.7	0.878	na
	9	2.52	10.8	0.811	na
	10	2.98	15.8	0.841	na
	11	3.36	15.3	0.820	na
	12	3.69	13.8	0.789	na
	13	3.18	16.6	0.839	na
	14	0.969	9.70	0.909	na
	15	3.15	13.0	0.805	na
	16	2.13	8.60	0.801	na

a: model did not converge to a physically realistic diffusivity
na: not available

TABLE V. CROSSDRAFT VELOCITIES FOR EACH SITE.

		z-component		x-component		velocity magnitude		turbulence intensity
Site		fpm	m/s	fpm	m/s	fpm	m/s	% of mean
1a	average	19.3	0.098	39.9	0.203	52.3	0.266	40.6
	minimum	1.70	0.009	30.9	0.157	49.2	0.250	31.5
	maximum	31.7	0.161	46.8	0.238	59.1	0.301	56.7
2a	average	3.50	0.018	62.1	0.316	63.3	0.322	40.4
	minimum	-0.30	-0.001	28.2	0.143	28.4	0.144	26.4
	maximum	12.8	0.065	111	0.565	116	0.589	53.2
3a	average	21.1	0.107	-25.8	-0.131	33.4	0.170	20.8
	minimum	19.1	0.097	-28.9	-0.147	27.5	0.140	14.4
	maximum	25.4	0.129	-18.4	-0.094	37.4	0.190	43.3
4a	average	37.3	0.190	35.8	0.182	51.9	0.264	35.8
	minimum	36.4	0.185	35.3	0.179	51.0	0.259	35.0
	maximum	39.1	0.198	36.4	0.185	53.4	0.272	37.3
6a	average	21.3	0.108	27.6	0.140	35.0	0.178	23.8
	minimum	18.5	0.094	22.4	0.114	31.1	0.158	14.1
	maximum	24.0	0.122	30.7	0.156	38.2	0.194	34.9
6b	average	1.90	0.010	-33.7	-0.171	34.2	0.174	22.6
	minimum	-1.40	-0.007	-37.7	-0.191	30.2	0.153	9.66
	maximum	4.00	0.020	-27.9	-0.142	38.2	0.194	36.1
7a	average	2.40	0.012	-32.7	-0.166	33.9	0.172	18.2
	minimum	-1.70	-0.009	-46.2	-0.235	27.3	0.139	9.05
	maximum	15.8	0.080	-29.1	-0.148	53.7	0.273	31.0
8a	average	74.4	0.378	4.80	0.024	114	0.578	31.1
	minimum	97.5	0.495	-4.00	-0.020	101	0.513	30.1
	maximum	126	0.638	18.4	0.093	127	0.643	32.1
8b	average	21.4	0.109	0.100	0.000	53.9	0.274	36.6
	minimum	-53.5	-0.272	-11.1	-0.053	38.1	0.194	30.2
	maximum	120	0.611	14.1	0.072	70.4	0.358	41.7
9a	average	62.4	0.317	0.400	0.002	62.4	0.317	0.922
	minimum	61.9	0.315	0.100	0.000	62.0	0.315	0.572
	maximum	62.8	0.319	1.20	0.006	62.8	0.319	1.36
All Sites	average[a]	19.0	0.097	6.00	0.031	47.1	0.239	26.1
	minimum	-53.5	-0.272	-46.2	-0.235	27.3	0.139	0.572
	maximum	125	0.638	111	0.565	127	0.643	56.7

[a]The average of all sites is the average of all interval velocities. It is not the average of the site averages.

TABLE VI. INTERVAL CROSSDRAFT VELOCITIES FOR EACH SITE.

		z-component		x-component		velocity magnitude		turbulence intensity
Site	Interval	fpm	m/s	fpm	m/s	fpm	m/s	%
1a	1	na	na	na	na	na	na	na
	2	na	na	na	na	na	na	na
	3	na	na	na	na	na	na	na
	4	na	na	na	na	na	na	na
	5	na	na	na	na	na	na	na
	6	na	na	na	na	na	na	na
	7	1.73	0.009	30.9	0.157	49.5	0.252	32.8
	8	19.9	0.101	41.1	0.209	50.4	0.256	39.5
	9	31.7	0.161	41.1	0.209	59.1	0.300	46.6
	10	31.3	0.159	36.0	0.183	54.6	0.277	56.7
	11	15.0	0.076	46.8	0.238	50.9	0.259	31.5
	12	na	na	na	na	na	na	na
	13	16.0	0.082	43.7	0.222	49.2	0.250	36.8
2a	1	12.8	0.065	111	0.565	116	0.588	43.8
	2	5.26	0.027	90.9	0.462	93.1	0.473	45.6
	3	-0.060	-0.0003	84.2	0.428	86.2	0.438	44.2
	4	na	na	na	na	na	na	na
	5	3.82	0.019	72.9	0.370	73.3	0.372	53.2
	6	na	na	na	na	na	na	na
	7	0.360	0.002	46.2	0.235	46.3	0.235	39.6
	8	3.22	0.016	53.2	0.270	53.4	0.271	36.5
	9	3.40	0.017	62.6	0.318	63.5	0.323	42.6
	10	2.26	0.012	28.2	0.143	28.4	0.144	26.4
	11	3.36	0.017	53.1	0.270	53.3	0.271	42.1
	12	-0.258	-0.001	54.5	0.277	56.8	0.289	42.1
	13	2.17	0.011	38.0	0.193	38.4	0.195	27.6
	14	5.62	0.029	50.3	0.256	51.3	0.261	40.7
3a	1	na	na	na	na	na	na	na
	2	19.8	0.101	-25.9	-0.132	32.7	0.166	18.5
	3	19.2	0.098	-27.6	-0.140	33.7	0.177	22.9
	4	19.5	0.099	-26.6	-0.135	33.0	0.168	15.8
	5	19.1	0.097	-27.0	-0.137	33.1	0.168	14.8
	6	19.5	0.099	-28.9	-0.147	34.8	0.177	21.6
	7	25.4	0.129	-27.4	-0.139	37.4	0.190	20.7
	8	22.8	0.116	-27.6	-0.140	35.8	0.182	21.1
	9	21.1	0.107	-27.0	-0.137	34.3	0.174	17.9
	10	22.1	0.112	-27.0	-0.137	34.9	0.177	18.5
	11	na	na	na	na	na	na	na
	12	23.1	0.117	-20.2	-0.103	30.7	0.156	21.0
	13	20.4	0.103	-18.4	-0.094	27.5	0.140	14.4
4a	1	36.4	0.185	35.6	0.181	51.1	0.260	37.3
	2	36.5	0.186	35.3	0.179	51.0	0.259	35.0
	3	39.1	0.198	36.4	0.185	53.4	0.272	35.1

na: not available

TABLE VI. INTERVAL CROSSDRAFT VELOCITIES FOR EACH SITE.
(continued)

Site	Interval	z-component fpm	z-component m/s	x-component fpm	x-component m/s	velocity magnitude fpm	velocity magnitude m/s	turbulence intensity %
6a	1	24.0	0.122	29.6	0.150	38.2	0.194	34.9
	2	22.5	0.114	29.8	0.151	37.3	0.190	30.9
	3	na	na	na	na	na	na	na
	4	23.1	0.117	28.7	0.146	36.9	0.188	22.0
	5	na	na	na	na	na	na	na
	6	na	na	na	na	na	na	na
	7	23.2	0.118	22.4	0.114	32.4	0.165	19.2
	8	20.6	0.104	28.7	0.146	35.4	0.180	27.2
	9	20.0	0.102	28.2	0.143	34.6	0.176	23.8
	10	na	na	na	na	na	na	na
	11	na	na	na	na	na	na	na
	12	19.7	0.100	30.7	0.156	36.6	0.186	23.4
	13	20.0	0.102	25.3	0.129	32.3	0.164	18.9
	14	na	na	na	na	na	na	na
	15	18.5	0.094	24.9	0.126	31.1	0.158	14.1
6b	1	2.24	0.011	-36.4	-0.185	36.6	0.186	22.6
	2	0.948	0.005	-35.3	-0.180	35.5	0.181	23.8
	3	3.99	0.020	-34.7	-0.176	35.0	0.178	26.2
	4	2.27	0.012	-36.5	-0.185	36.7	0.187	26.1
	5	na	na	na	na	na	na	na
	6	-1.40	-0.007	-37.7	-0.191	38.2	0.194	24.7
	7	na	na	na	na	na	na	na
	8	2.92	0.015	-32.5	-0.165	32.8	0.166	36.1
	9	2.99	0.015	-31.4	-0.160	31.7	0.161	17.7
	10	0.132	0.001	-31.3	-0.159	31.4	0.159	16.6
	11	na	na	na	na	na	na	na
	12	3.34	0.017	-27.9	-0.142	30.2	0.153	9.66
	13	na	na	na	na	na	na	na
	14	na	na	na	na	na	na	na
7a	1	na	na	na	na	na	na	na
	2	0.534	0.003	-30.6	-0.156	31.1	0.158	13.7
	3	2.14	0.011	-31.8	-0.162	33.5	0.170	14.4
	4	-0.522	-0.003	-29.2	-0.148	28.6	0.145	9.23
	5	-1.68	-0.009	-29.1	-0.148	27.3	0.139	9.05
	6	15.8	0.080	-46.2	-0.235	53.7	0.273	31.0
	7	na	na	na	na	na	na	na
	8	3.55	0.018	-33.7	-0.171	35.4	0.180	18.7
	9	0.396	0.002	-31.2	-0.159	31.3	0.159	27.2
	10	1.28	0.007	-34.6	-0.176	35.7	0.181	22.5
	11	1.32	0.007	-31.1	-0.158	32.2	0.164	16.7
	12	na	na	na	na	na	na	na

na: not available

TABLE VI. INTERVAL CROSSDRAFT VELOCITIES FOR EACH SITE.
(continued)

Site	Interval	z-component fpm	z-component m/s	x-component fpm	x-component m/s	velocity magnitude fpm	velocity magnitude m/s	turbulence intensity %
7a	13	1.05	0.0053	-29.5	-0.150	30.2	0.153	19.1
8a	1	na	na	na	na	na	na	na
	2	97.5	0.495	18.4	0.093	101	0.513	30.1
	3	126	0.638	-3.98	-0.020	127	0.643	32.1
	4	na	na	na	na	na	na	na
	5	na	na	na	na	na	na	na
	6	na	na	na	na	na	na	na
	7	na	na	na	na	na	na	na
	8	na	na	na	na	na	na	na
	9	na	na	na	na	na	na	na
	10	na	na	na	na	na	na	na
	11	na	na	na	na	na	na	na
	12	na	na	na	na	na	na	na
	13	na	na	na	na	na	na	na
8b	1	na	na	na	na	na	na	na
	2	na	na	na	na	na	na	na
	3	na	na	na	na	na	na	na
	4	2.75	0.014	1.37	0.007	41.0	0.208	32.2
	5	50.5	0.257	-7.47	-0.038	51.9	0.263	37.2
	6	44.8	0.228	-5.42	-0.028	66.0	0.335	41.7
	7	-36.7	-0.186	8.81	0.045	38.1	0.194	41.6
	8	-53.5	-0.272	14.1	0.072	55.7	0.283	30.2
	9	na	na	na	na	na	na	na
	10	69.3	0.611	-9.56	-0.049	70.4	0.358	36.6
	11	na	na	na	na	na	na	na
	12	na	na	na	na	na	na	na
	13	na	na	na	na	na	na	na
9a	1	na	na	na	na	na	na	na
	2	62.4	0.317	0.240	0.001	62.4	0.317	0.850
	3	62.3	0.317	0.060	0.0003	62.4	0.317	0.930
	4	62.8	0.319	0.210	0.001	62.8	0.319	1.19
	5	na	na	na	na	na	na	na
	6	62.8	0.319	0.138	0.001	62.8	0.319	1.36
	7	62.0	0.315	0.372	0.002	62.0	0.315	0.572
	8	61.9	0.315	1.19	0.006	62.2	0.316	0.626

na: not available

TABLE VII. SUMMARY STATISTICS FOR PROCESS AND ACTIVITY VARIABLES.

Variable	Variable Description	Number	Mean	Standard Deviation	Minimum	Maximum
TIME	Number of minutes in interval	200	53.4	13.0	18.0	92.0
ERCMSK3	Workspace emission rate using CMS model with k=0.3 (g/min)	134	10.3	28.6	0.039	211
ER2PTC	Workspace emission rate using 2PT model and closest 2 points (g/min)	134	52.5	201	0	1780
ERUSED	Workspace emission rate used in analysis (g/min)	182	10.1	31.1	0.002	233
ERLEV	Local exhaust ventilation emission rate (g/min)	193	23.2	37.8	0	170
CEMEAS	Measured capture efficiency	174	0.673	0.305	0	0.9998
CEPRED	Predicted capture efficiency	74	0.740	0.113	0.522	0.899
TANKL	Degreasing tank length (cm)	202	154	66.6	76.0	315
TANKW	Degreasing tank length (cm)	202	76.9	24.8	25.0	123
TANKA	Degreasing tank area (m^2)	202	1.30	1.01	0.190	3.88
HOODL	Local exhaust hood length (cm)	202	156	65.8	84.0	315
HOODW	Local exhaust hood width (cm)	202	4.46	1.62	2.54	7.62
QHM3S	Measured hood flow rate (m^3/s)	202	0.331	0.225	0.050	0.960
QDM3S	Design hood flow rate (m^3/s)	202	0.329	0.255	0.050	0.990
QHQD	Measured hood flow as percent of design hood flow (%)	202	118	71.9	36.0	349
VFACE	Hood face velocity (m/s)	202	5.00	2.30	1.20	9.50
START	Number of parts or baskets started per minute (#/min)	186	0.188	0.445	0	2.88

TABLE VII. SUMMARY STATISTICS FOR PROCESS AND ACTIVITY VARIABLES (continued)

Variable	Variable Description	Number	Mean	Standard Deviation	Minimum	Maximum
LIQ	Number of part/basket minutes in liquid phase per minute (#-min/min)	186	0.064	0.142	0	0.946
VAP	Number of part/basket minutes in vapor phase per minute (#-min/min)	187	3.74	12.8	0	90.3
SHAKE	Number of parts or baskets shaken per minute (#/min)	187	0.025	0.070	0	0.583
SPRAY	Number of parts or baskets sprayed with liquid solvent per minute (#/min)	187	0.055	0.112	0	0.617
DRY	Number of parts or baskets raised above condenser for drying per minute (#/min)	173	0.039	0.067	0	0.333
CO	Number of parts or baskets removed from degreaser with liquid solvent on parts or dripping from parts per minute (#/min)	187	0.081	0.205	0	1.13
END	Number of parts or baskets ended per minute (#/min)	186	0.172	0.432	0	3.53
PLAT	Number of baskets removed to degreaser platform per minute (site 1a) (#/min)	13	0.022	0.043	0	0.125
SHELF	Number of baskets removed to degreaser shelf per minute (site 1a) (#/min)	13	0.040	0.098	0	0.345
WIPE	Number of parts sprayed with WD40 and wiped dry after degreasing per minute (site 2a) (#/min)	14	0.100	0.076	0	0.210

TABLE VII. SUMMARY STATISTICS FOR PROCESS AND ACTIVITY VARIABLES (continued)

Variable	Variable Description	Number	Mean	Standard Deviation	Minimum	Maximum
DRYCA	Number of parts or baskets dryed with compressed air per minute (site 11a) (#/min)	13	0.047	0.064	0	0.163
COVER	Number of minutes degreaser cover was closed per minute	192	0.111	0.303	0	1.26
POUR	Number of parts where liquid solvent was poured onto parts using a ladle per minute (site 14a) (#/min)	16	0.060	0.083	0	0.220
INOUT	Number of parts or baskets entering or exiting degreaser per minute (#/min)	186	0.360	0.865	0	6.42
VZ	z-component of crossdraft velocity (m/s)	74	0.317	0.445	-0.892	2.09
VX	x-component of crossdraft velocity (m/s)	74	0.100	0.616	-0.770	1.85
V	crossdraft velocity vector magnitude (m/s)	74	0.785	0.334	0.455	2.11
THETA	crossdraft velocity vector angle (rad)	74	-0.004	0.140	-0.484	0.255
TI	crossdraft velocity turbulence intensity (% of mean)	74	26.4	13.2	0.572	56.7

TABLE VIII. SPEARMAN RANK ORDER CORRELATION COEFFICIENTS.

	erused	erlev	ceused	cepred	ti	vz	vx	theta
erused	1.000							
erlev	0.086	1.000						
ceused	-0.669	0.590	1.000					
cepred	-0.081	0.003	-0.007	1.000				
ti	0.290	0.125	-0.189	-0.133	1.000			
vz	-0.200	-0.235	0.080	0.607	-0.079	1.000		
vx	0.001	-0.051	-0.007	0.215	0.569	0.194	1.000	
theta	-0.046	0.374	0.311	0.078	0.048	0.009	-0.124	1.000
qh	-0.270	0.404	0.327	0.791	0.233	0.540	0.553	0.160
qd	-0.079	0.453	0.298	0.577	-0.187	0.615	-0.047	0.077
qhqd	-0.380	-0.030	0.210	0.511	0.166	0.269	0.562	-0.029
vface	-0.194	0.415	0.325	0.647	0.055	0.389	0.399	0.054
tankl	-0.124	0.362	0.212	0.485	-0.050	0.414	0.055	0.402
tankw	-0.085	0.374	0.228	0.511	-0.112	0.572	0.012	-0.135
tanka	-0.079	0.453	0.298	0.577	-0.187	0.615	-0.047	0.077
hoodl	-0.098	0.370	0.187	0.658	-0.147	0.528	-0.013	0.215
hoodw	-0.021	-0.246	-0.099	0.148	0.372	0.252	0.583	-0.035
start	0.383	0.203	-0.133	-0.149	0.210	-0.326	-0.078	-0.120
end	0.359	0.204	-0.114	-0.202	0.258	-0.352	-0.067	-0.068
inout	0.377	0.213	-0.130	-0.169	0.225	-0.340	-0.073	-0.116
co	0.247	0.048	-0.122	-0.276	-0.042	-0.362	-0.445	-0.080
shake	0.190	-0.086	-0.141	0.145	0.027	0.324	0.052	0.026
spray	-0.091	-0.121	-0.066	0.428	-0.016	0.276	0.014	0.027
dry	0.128	0.209	0.026	0.245	0.189	0.164	0.280	0.089
vap	0.206	0.386	0.065	-0.194	0.050	-0.330	-0.263	-0.066
liq	0.083	-0.236	-0.146	-0.103	0.333	0.131	0.258	-0.167
cover	-0.146	-0.370	-0.257	0.373	-0.089	0.112	0.141	-0.344

	qh	qd	qhqd	vface	tankl	tankw	tanka	hoodl	hoodw
qh	1.000								
qd	0.654	1.000							
qhqd	0.460	-0.181	1.000						
vface	0.644	0.219	1.000	1.000					
tankl	0.607	0.743	-0.075	0.188	1.000				
tankw	0.631	0.842	-0.177	0.317	0.446	1.000			
tanka	0.654	1.000	-0.181	0.219	0.743	0.842	1.000		
hoodl	0.646	0.761	-0.038	0.310	0.973	0.491	0.761	1.000	
hoodw	0.130	0.121	0.054	-0.503	-0.081	0.179	0.121	-0.174	1.000
start	-0.091	-0.168	-0.077	-0.074	-0.306	-0.075	-0.168	-0.277	0.122
end	-0.091	-0.156	-0.090	-0.109	-0.271	-0.080	-0.156	-0.258	0.148
inout	-0.088	-0.164	-0.085	-0.081	-0.295	-0.072	-0.164	-0.269	0.127
co	-0.266	-0.024	-0.400	-0.380	-0.190	0.095	-0.024	-0.214	0.180
shake	-0.130	0.111	-0.170	-0.414	0.002	-0.066	0.111	0.056	0.360
spray	0.133	0.051	0.136	-0.155	-0.127	0.164	0.051	-0.166	0.440
dry	0.276	0.356	-0.088	-0.166	0.229	0.169	0.356	0.180	0.393
vap	0.229	0.107	-0.164	0.212	-0.001	0.302	0.107	0.063	-0.085
liq	-0.207	0.028	-0.173	-0.545	0.046	-0.185	-0.028	-0.040	0.381
cover	0.105	-0.239	0.409	0.273	0.132	-0.217	-0.239	0.218	-0.224

	start	end	inout	co	shake	spray	dry	vap	liq	cover
start	1.000									
end	0.935	1.000								
inout	0.989	0.971	1.000							
co	0.606	0.629	0.616	1.000						
shake	0.672	0.460	0.447	0.432	1.000					
spray	0.319	0.437	0.446	0.391	0.358	1.000				
dry	0.486	0.539	0.517	0.324	0.580	0.501	1.000			
vap	-0.151	0.531	0.574	0.273	-0.022	0.179	0.242	1.000		
liq	1.000	0.399	0.402	0.451	0.572	0.319	0.476	-0.151	1.000	
cover	-0.201	-0.197	-0.195	-0.305	-0.221	-0.023	-0.166	-0.125	-0.070	1.000

Bold numbers are significant at the p=o.01 level.
Underlined numbers are discussed in text and shown graphically in Figures 5-8.
Shaded areas are variables expected to be highly correlated.

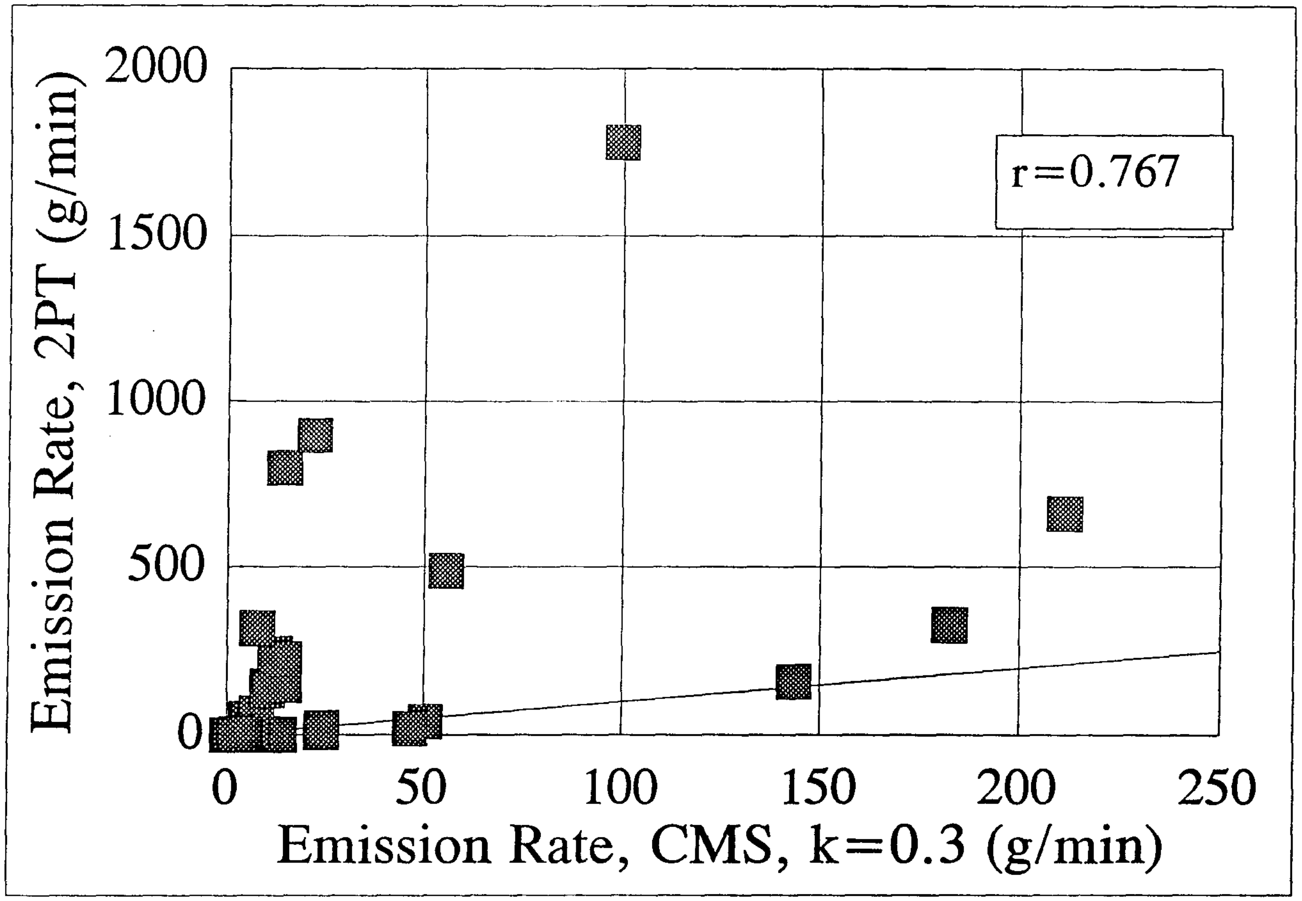

Figure 1. Emission rate using two point diffusion model vs. emission rate using completely mixed space model with k=0.3.

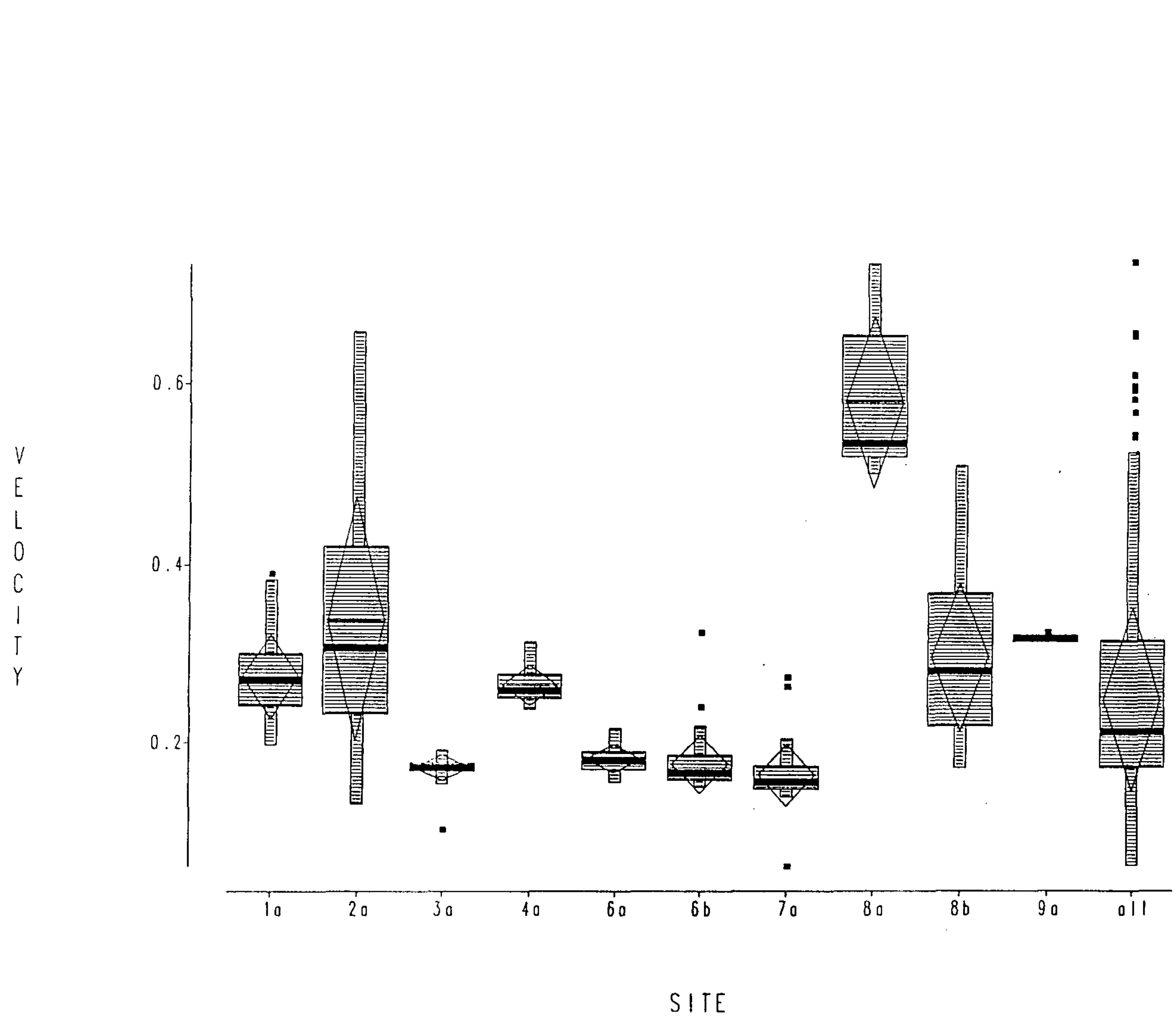

Figure 2. Velocity vector magnitude distribution for each site and all sites.

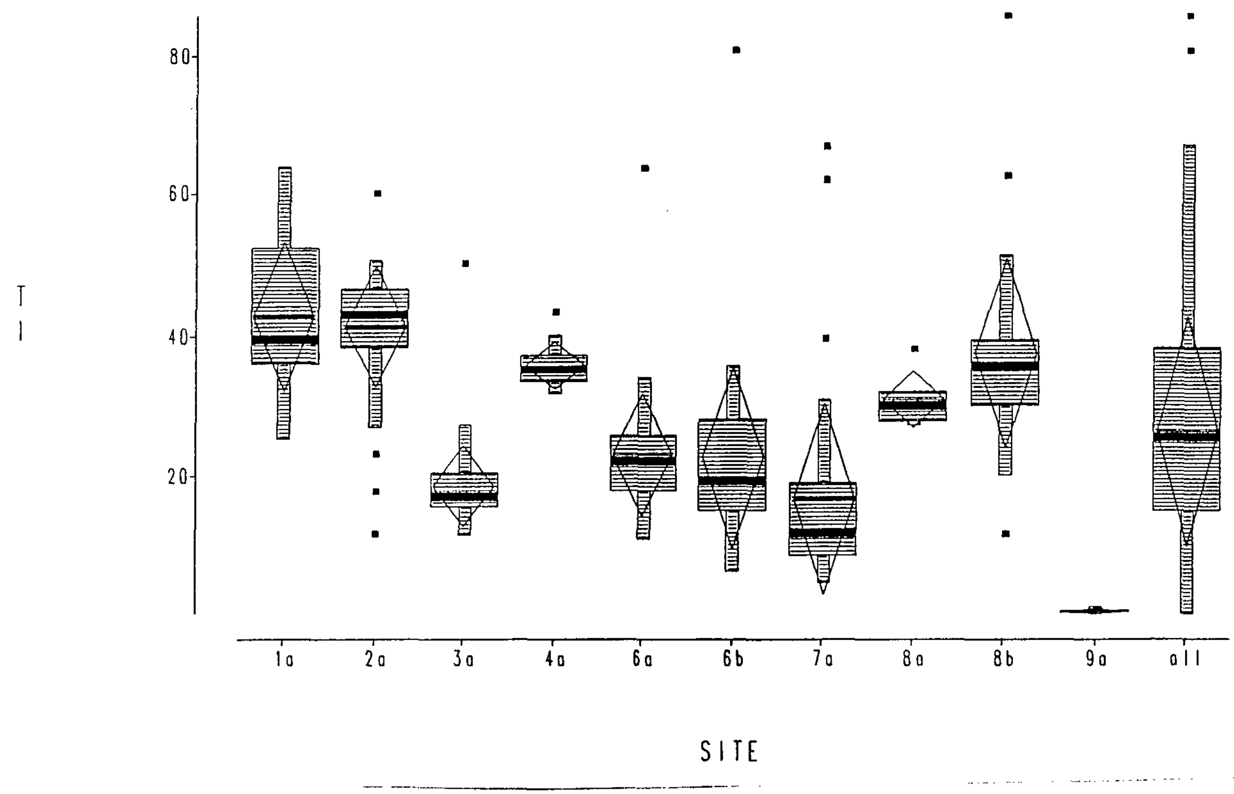

Figure 3. Turbulence intensity distribution for each site and all sites.

Site 2A
Interval 1
Crossdraft Velocity
x-component = 106 fpm
z-component = 9.9 fpm
Capture Efficiency = 0.57
Hood
Length = 48 inches
Width = 1.75 inches
Source
Length = 48 inches
Width = 28 inches
Hood Flow = 757 cfm

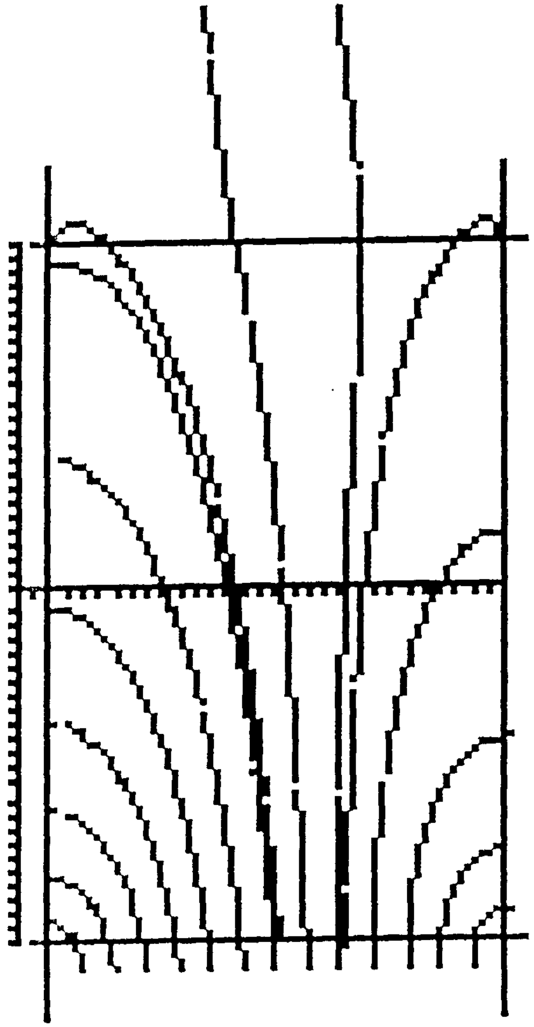

Figure 4. Example of BASIC computer program output.

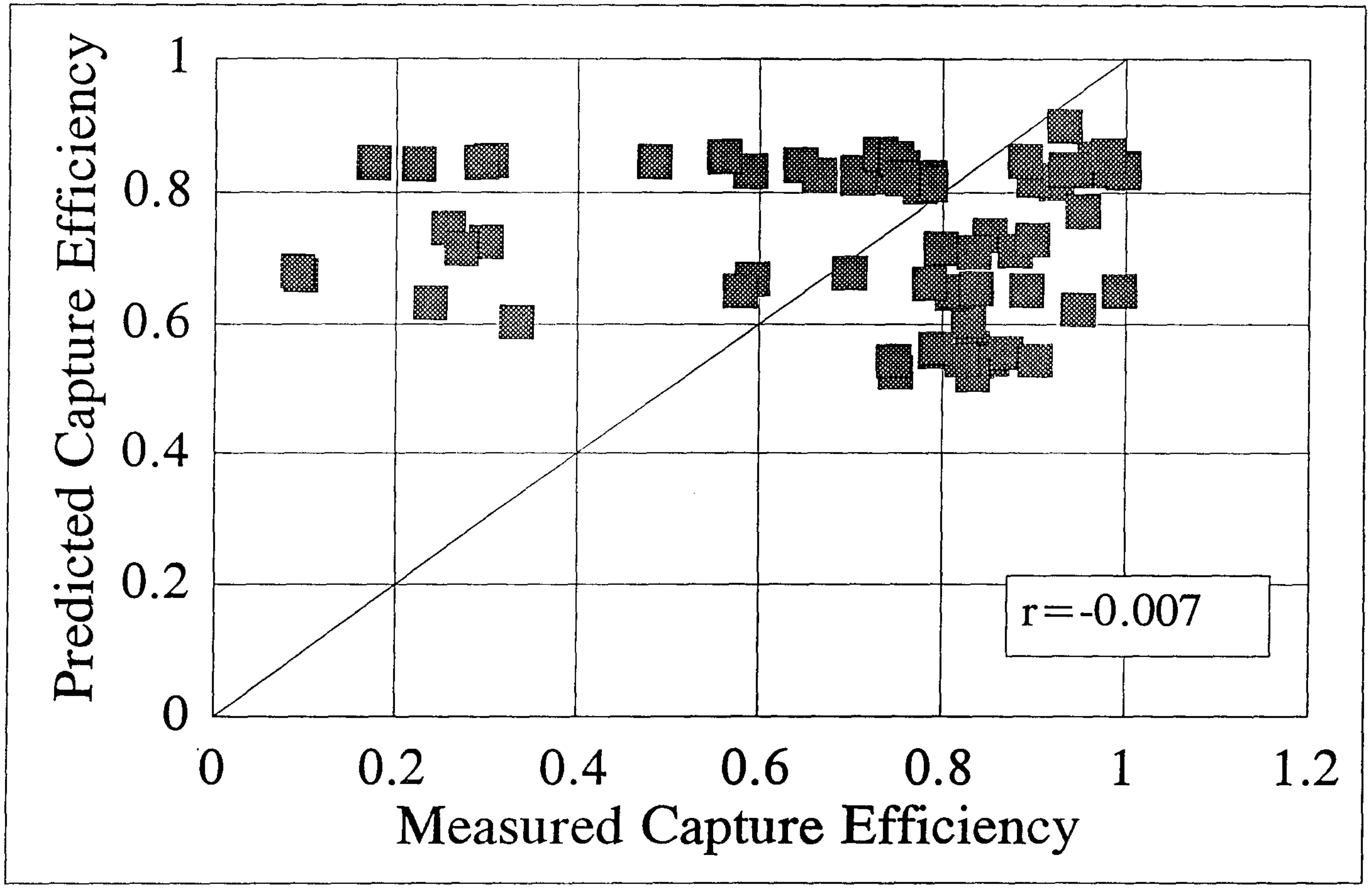

Figure 5. Predicted vs. measured local exhaust hood capture efficiency.

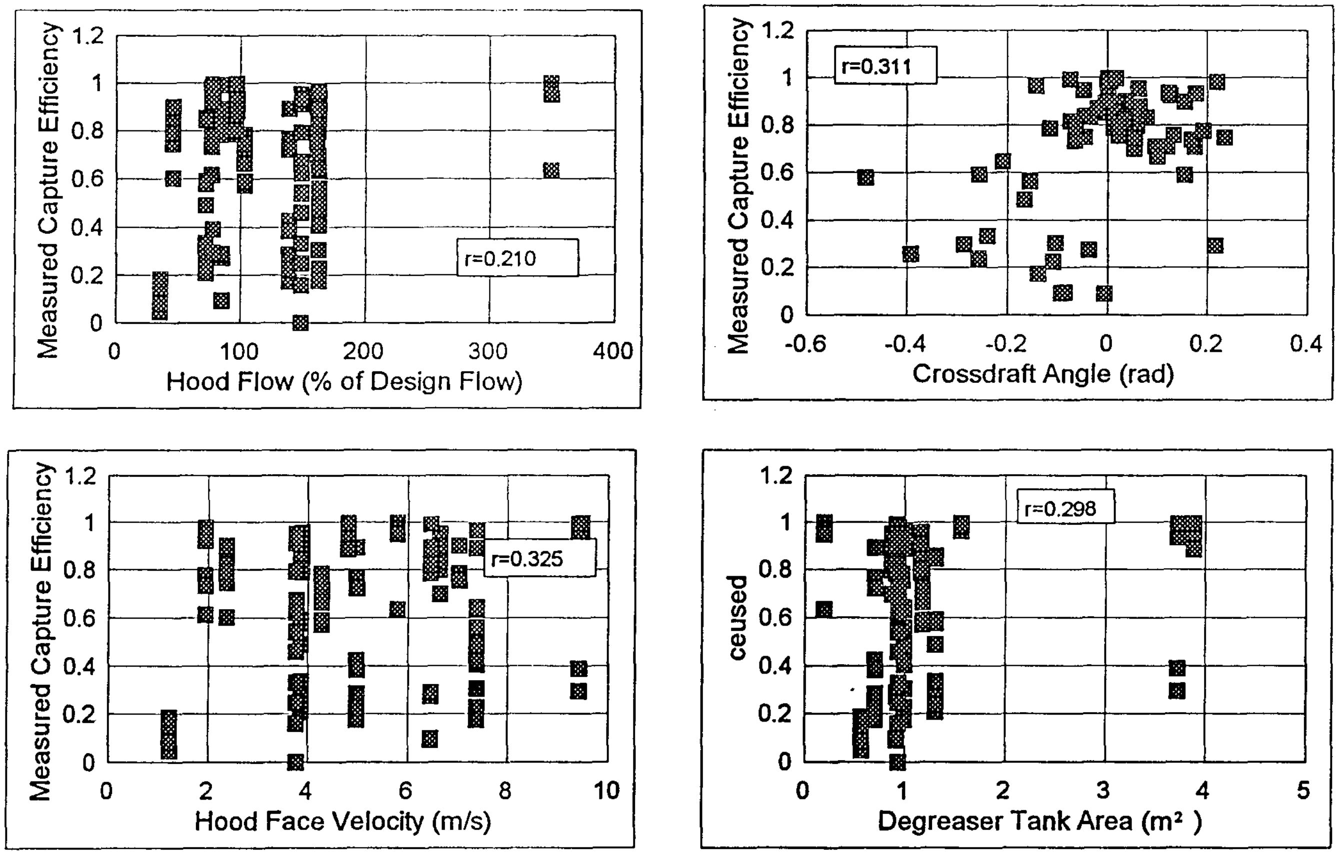

Figure 6. Measured capture efficiency vs. significant variables. a: hood flow rate expressed as percent of design flow rate; b: crossdraft angle; c: hood face velocity; d: degreaser tank area.

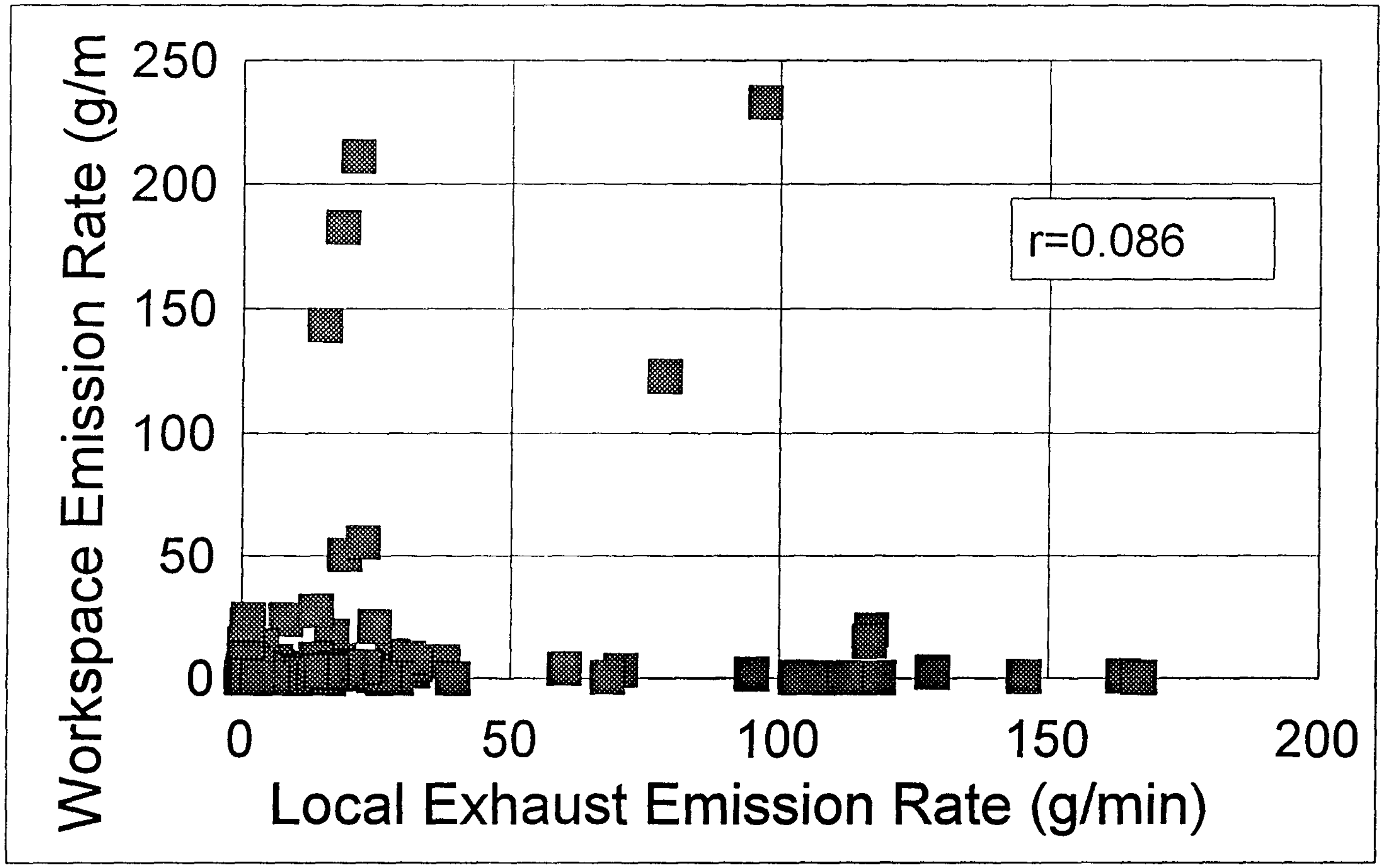

Figure 7. Workspace emission rate vs. local exhaust emission rate.

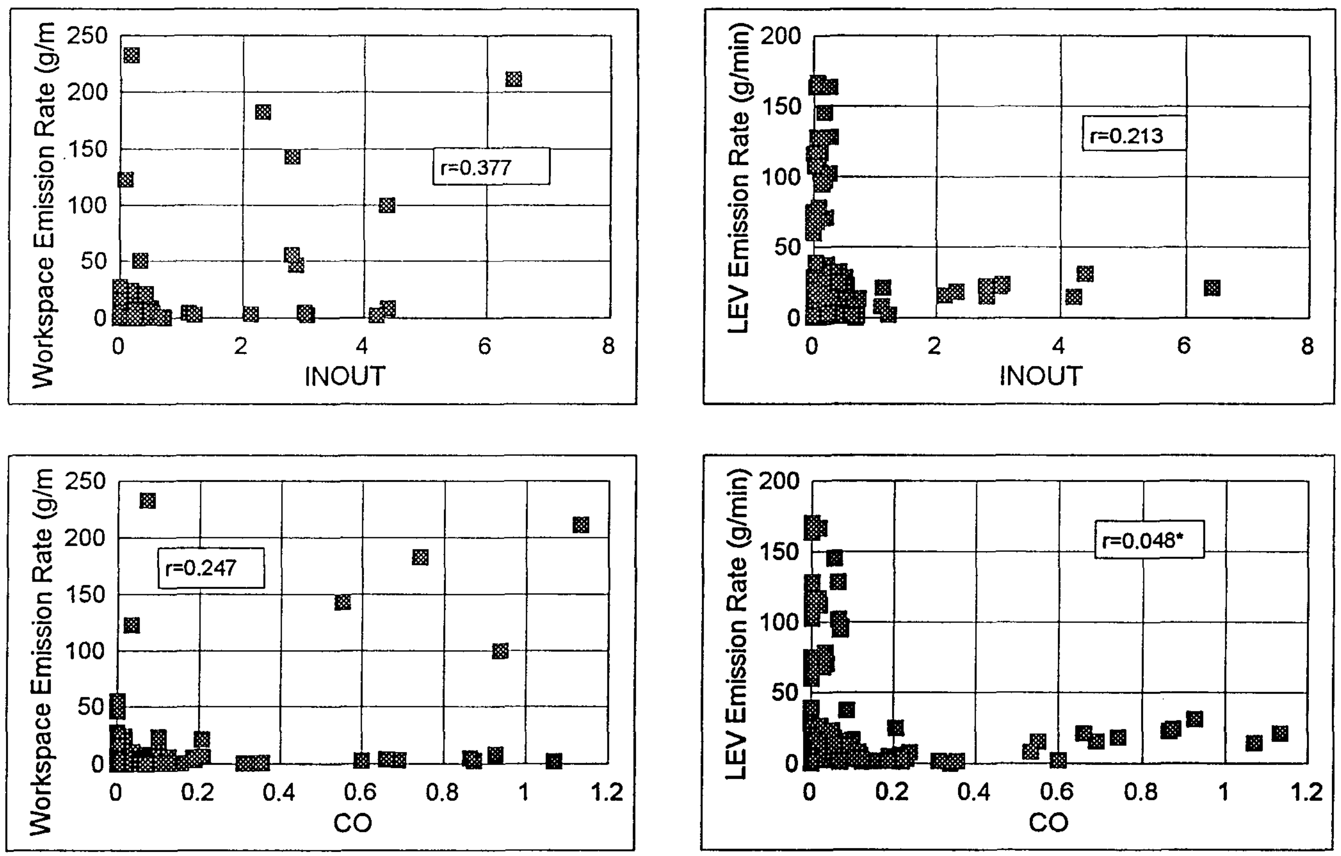

Figure 8. Emission rate vs. significant activity variables. **a: workspace emission rate vs. INOUT; b: local exhaust emission** rate vs. INOUT; c: workspace emission rate vs. CO; d: **local exhaust emission rate vs. CO.**
*not significant at p=0.01 level.

3.7 Conclusions

Workspace emission rates averaged 10.1 g/min (9.68 g/m2/min). The site average emission rates are in excellent agreement with other studies.[35,36]

Crossdrafts can be quantified under operating conditions. Measured crossdraft magnitude ranged from 27 to 127 fpm. The range of crossdrafts observed in industrial settings are consistent with those used in laboratory experiments to develop predictive capture efficiency models.

The current hood design method[1], which recommends eliminating crossdrafts or other disturbances to air flow, is unrealistic. This research demonstrated that the effect of crossdrafts cannot be disregarded.

The predicted capture efficiencies did not agree well with those measured under operating conditions. This could be due to several factors: 1) turbulence was inadequately accounted for in the model; 2) the effects of the cooling condenser were not considered; 3) solvent was carried out of the degreaser to areas where the hood could not be expected to capture contaminants; and 4) the variability in emission rate due to degreaser activity is not adequately taken into account in the predictive capture efficiency model.

Emissions to the workspace were only slightly correlated with local exhaust emissions, suggesting that workspace emission rates are related to factors other than hood flow rate. These factors are probably more related to work practices. Solvent carryout was found to be an important factor in predicting workspace emission rate but less important for local exhaust emission rate.

The ACGIH recommended flow of 50 cfm/ft^2 of tank surface appears to be adequate for some conditions but inadequate for other conditions. An increase in flow, above design recommendations, did not necessarily improve hood performance.

3.8 Recommendations

A predictive model which includes turbulence intensity has been developed and is being validated in the laboratory. The data collected in this study could be compared to the improved predictive model.

Little data on emission rates of industrial processes and no data on industrial crossdrafts is available in the literature. The collection of this data is difficult and expensive.

Although the predictive model tested in this study did not agree well with the measured capture efficiencies, future models developed by the authors, or models developed by other researchers could be validated using the data collected in this study.

3.9 References

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4 Acknowledgements

The research was supported by the National Institute for Occupational Safety and Health (NIOSH) grant 5 K01 OH00078. The researchers were supported in part by NIOSH grants 5 K01 OH00078, 5 T1 OH07104, 5 R03 OH02680, and an American Industrial Hygiene Foundation Fellowship. Although they wish to remain anonymous, we would like to thank the private companies for allowing us to perform this study in their plants. The following individuals were instrumental in the collection and preliminary analysis of the data: Scott Fergon, Jennifer Darrow, Rosanne Menezes Lindsay, Stephen Perez, Martha Barbiaux, Jamie White, and Larry Joswiak.

5 Appendices

5.1 Appendix A

Site Drawings for Each Site

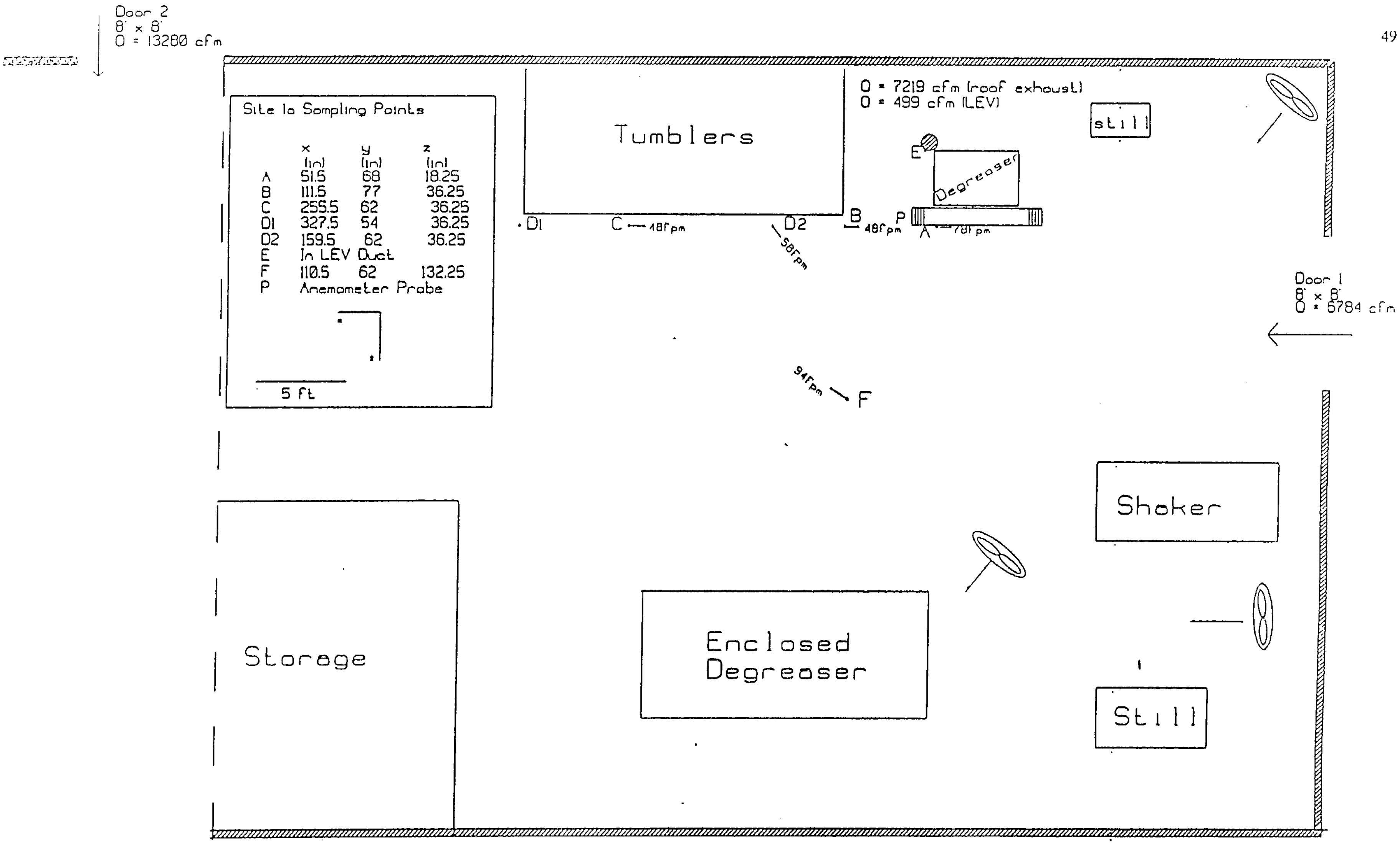

Figure 9. Plan view of site 1a.

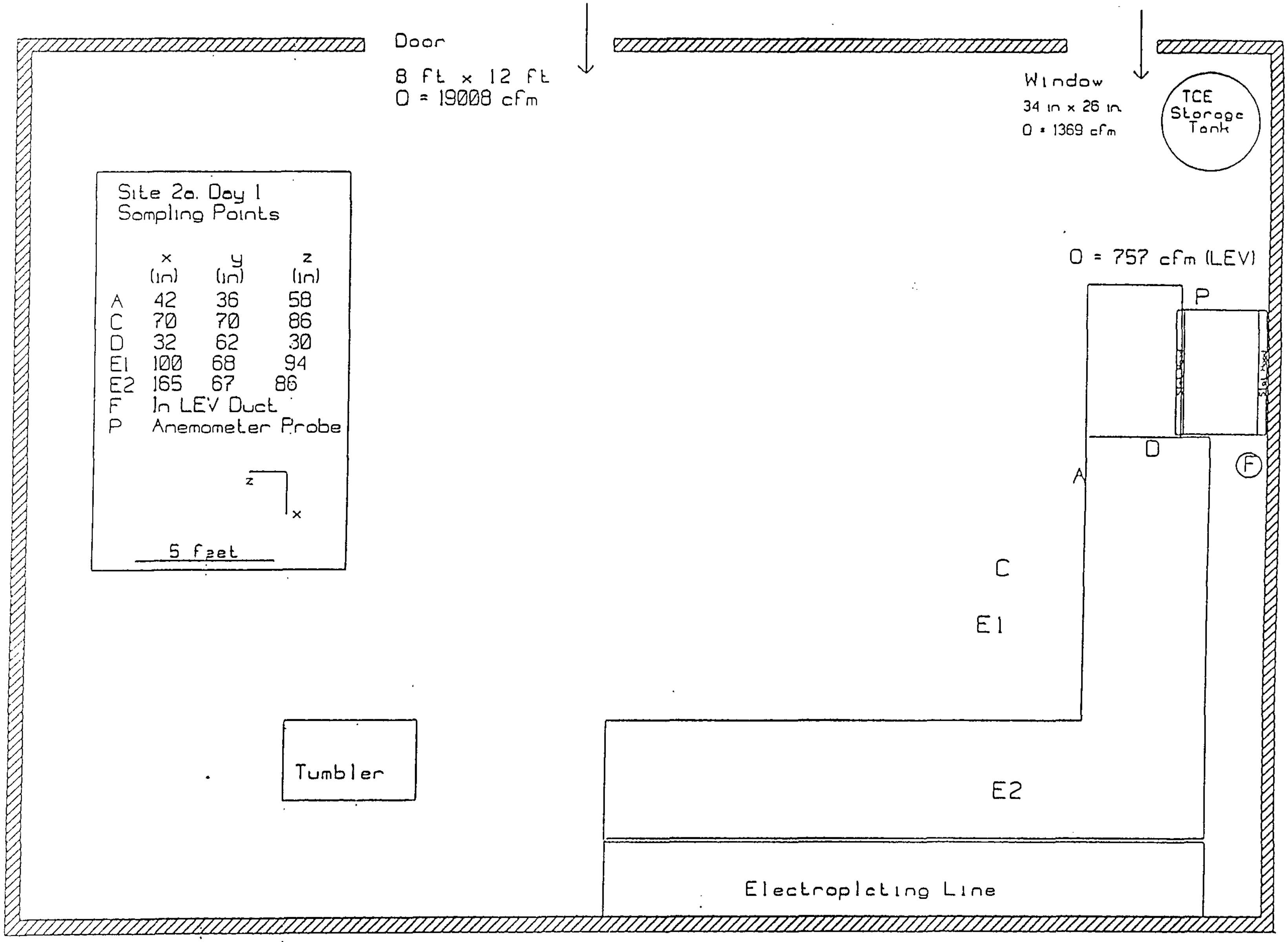

Figure 10. Plan view of site 2a, day 1.

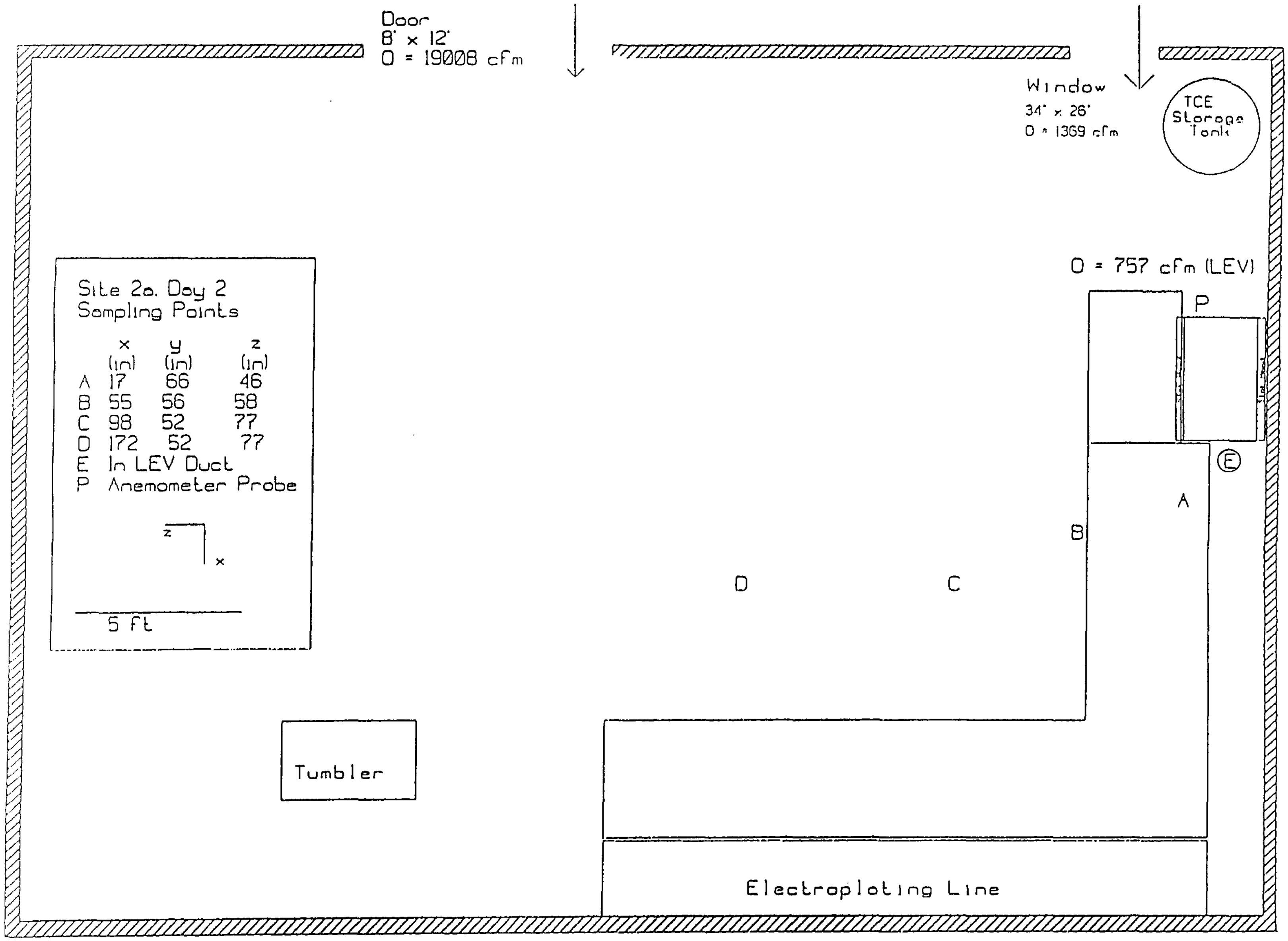

Figure 11. Plan view of site 2a, day 2.

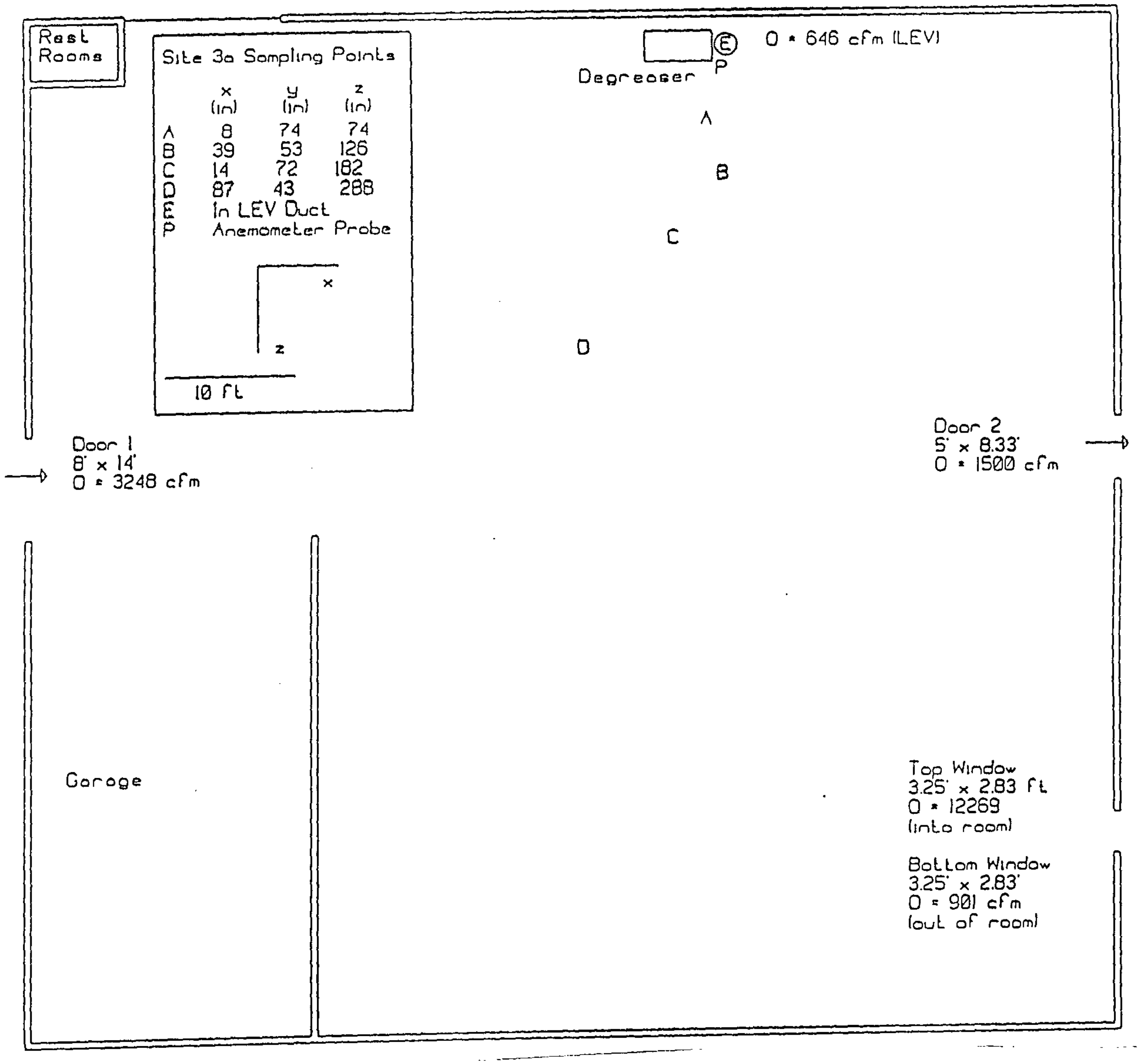

Figure 12. Plan view of site 3a.

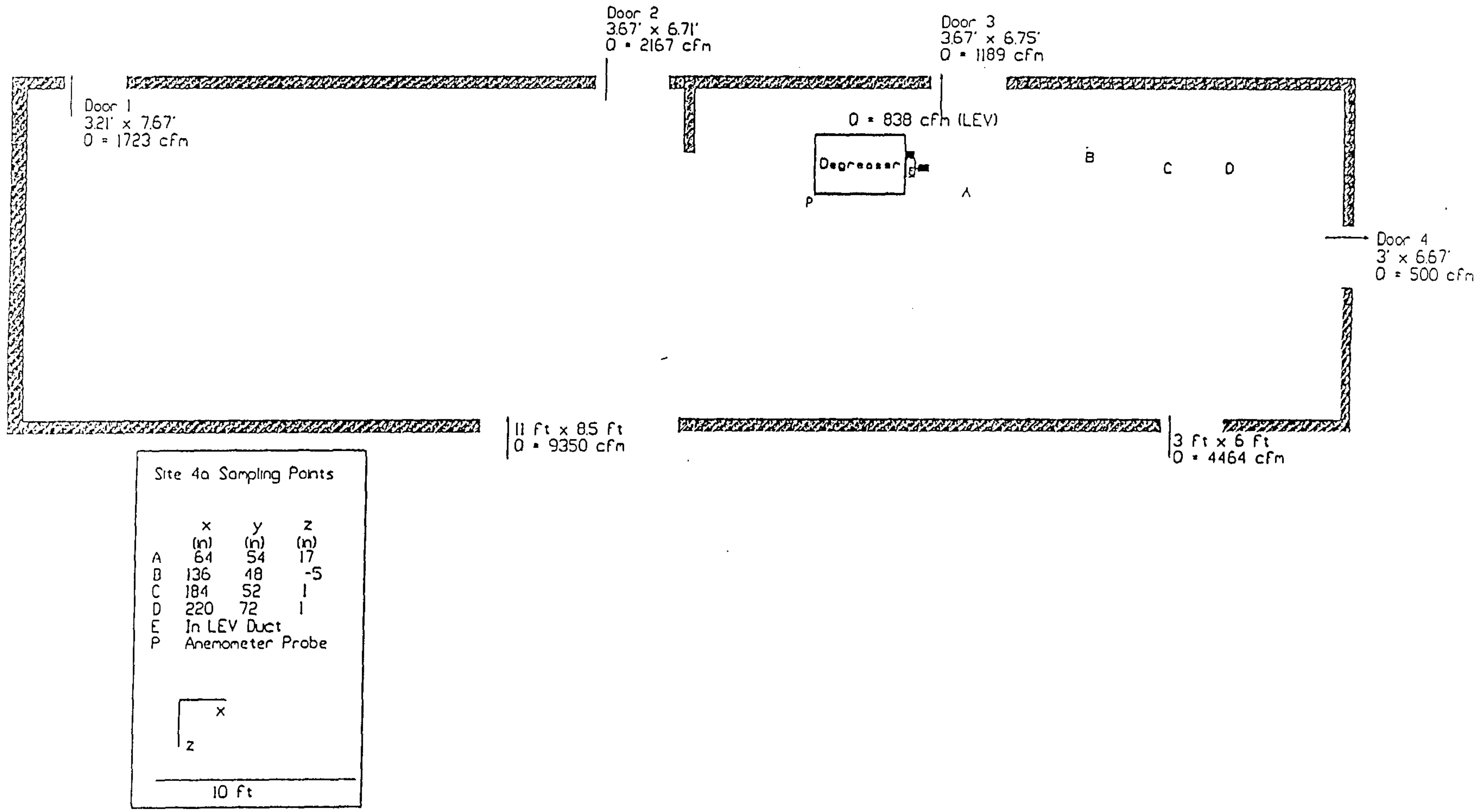

Figure 13. Plan view of site 4a.

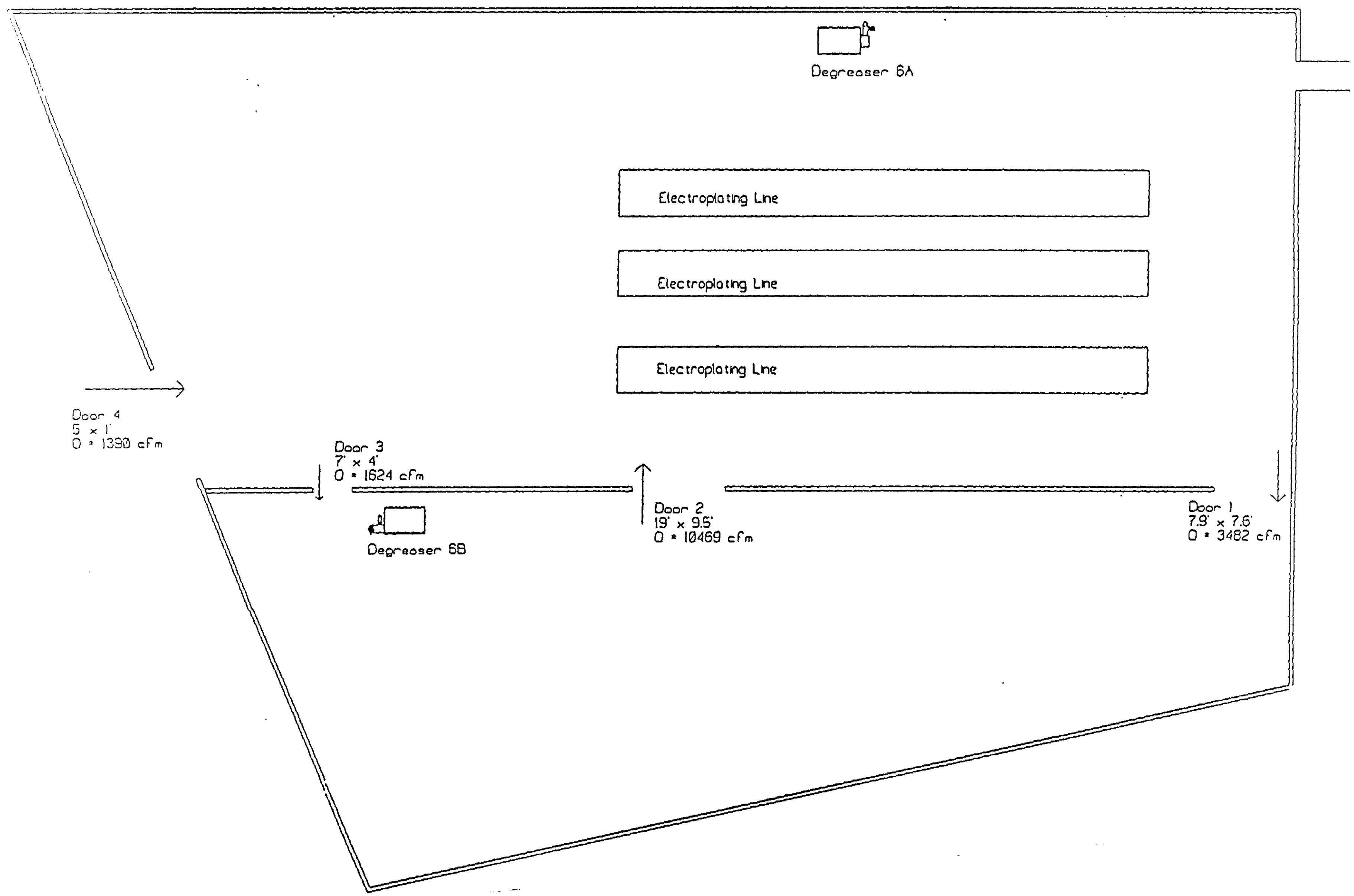

Figure 14. Plan view of site 6a and 6b.

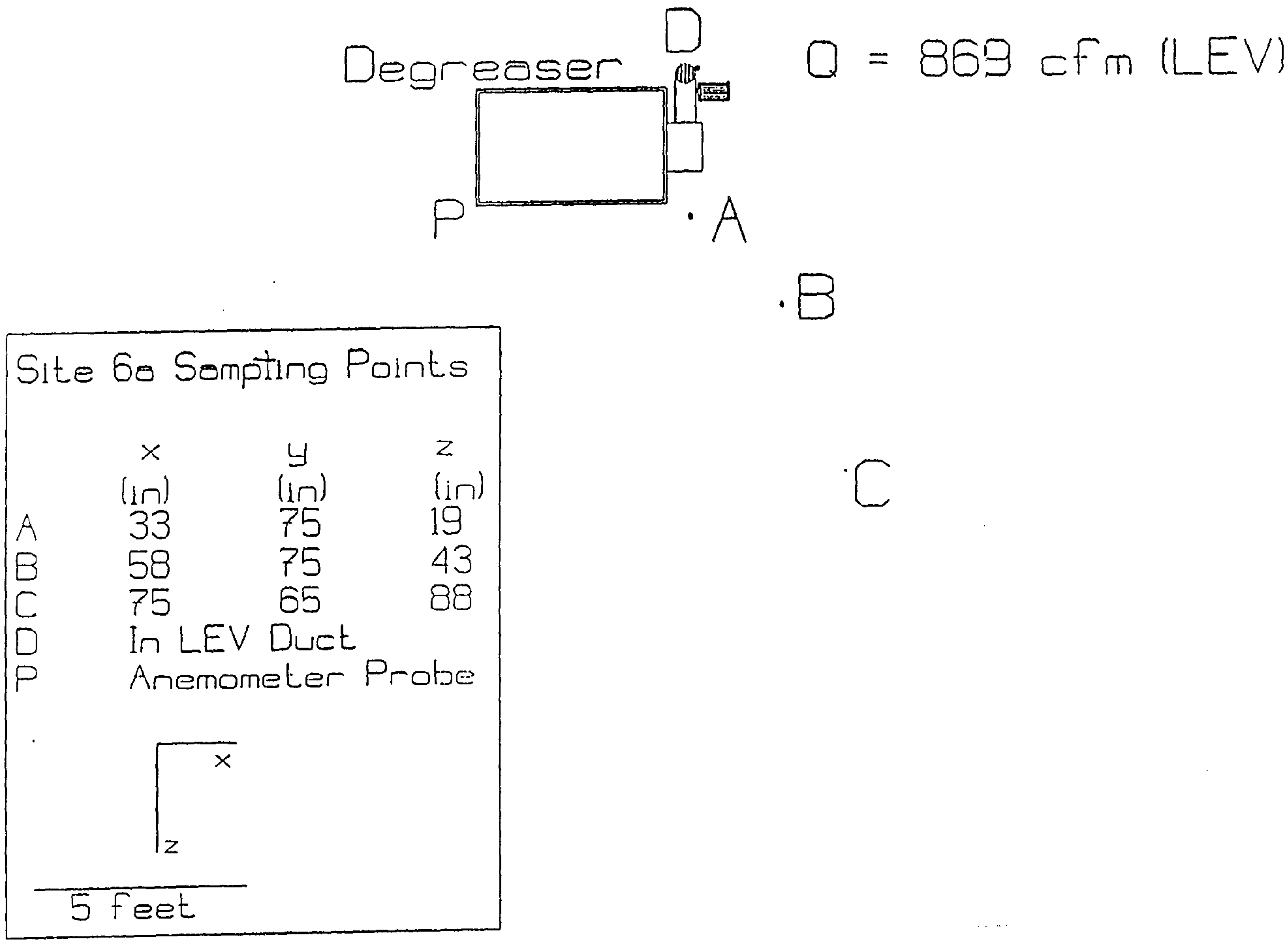

Figure 15. Plan view of site 6a degreaser.

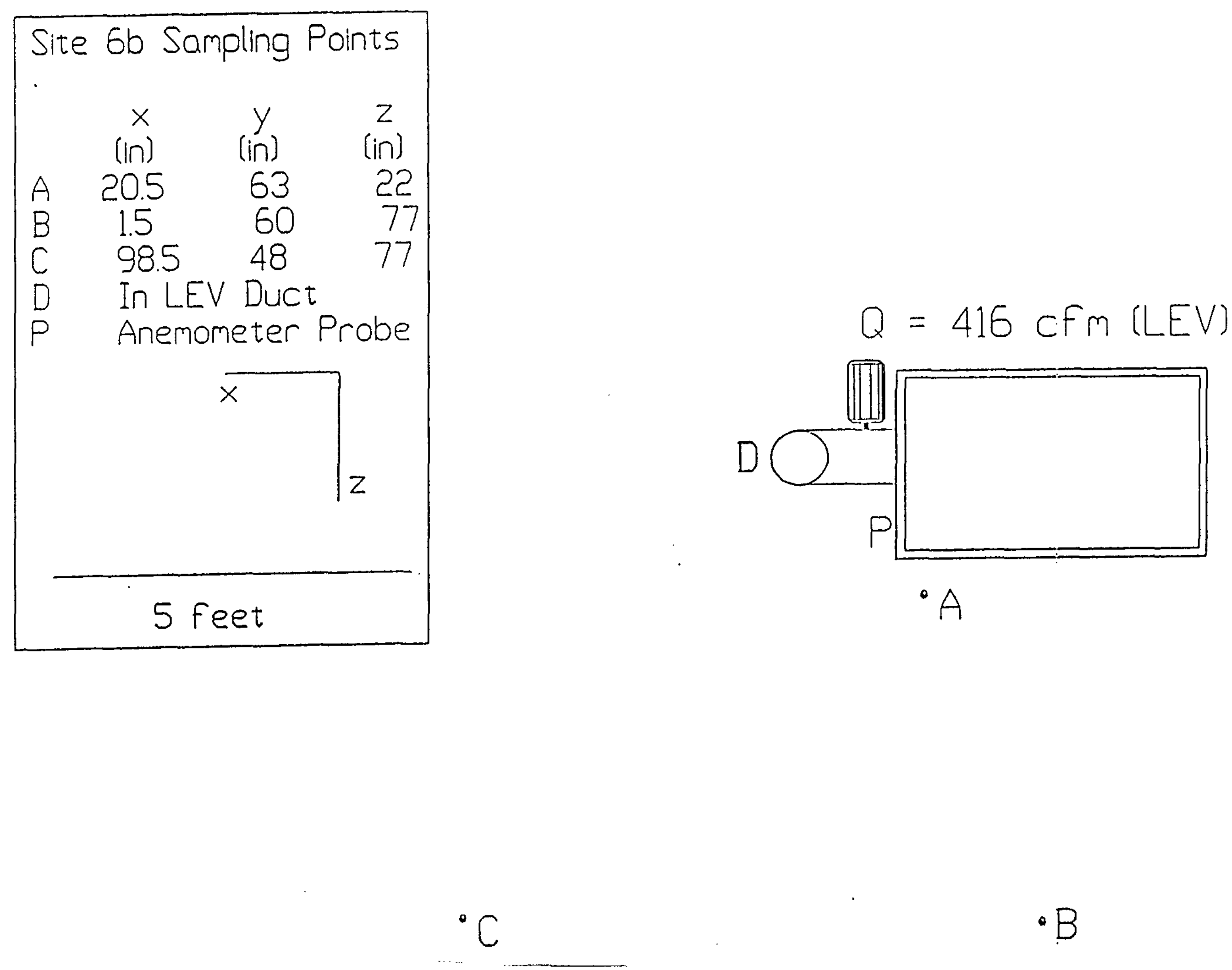

Figure 16. Plan view of site 6b degreaser.

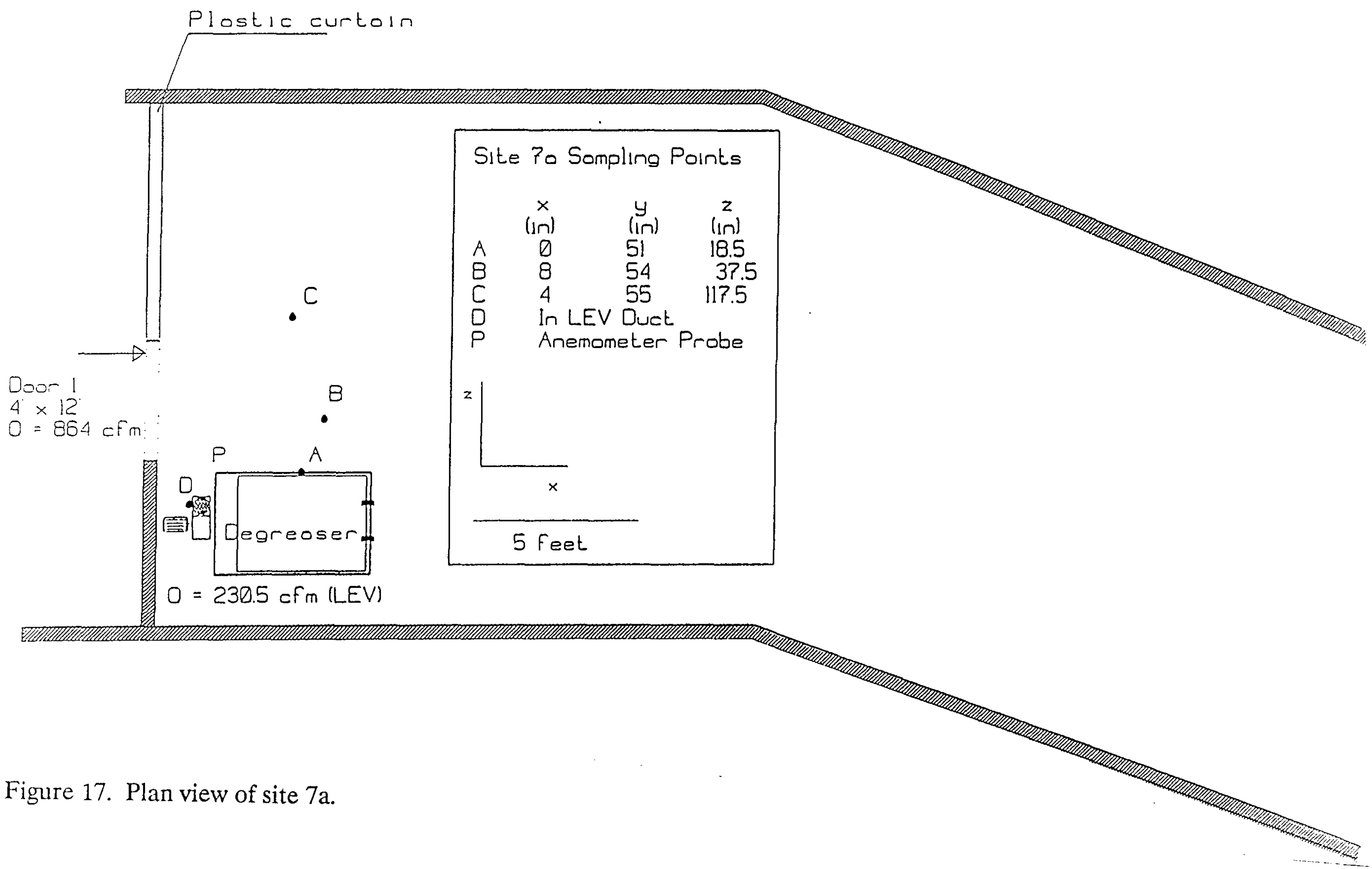

Figure 17. Plan view of site 7a.

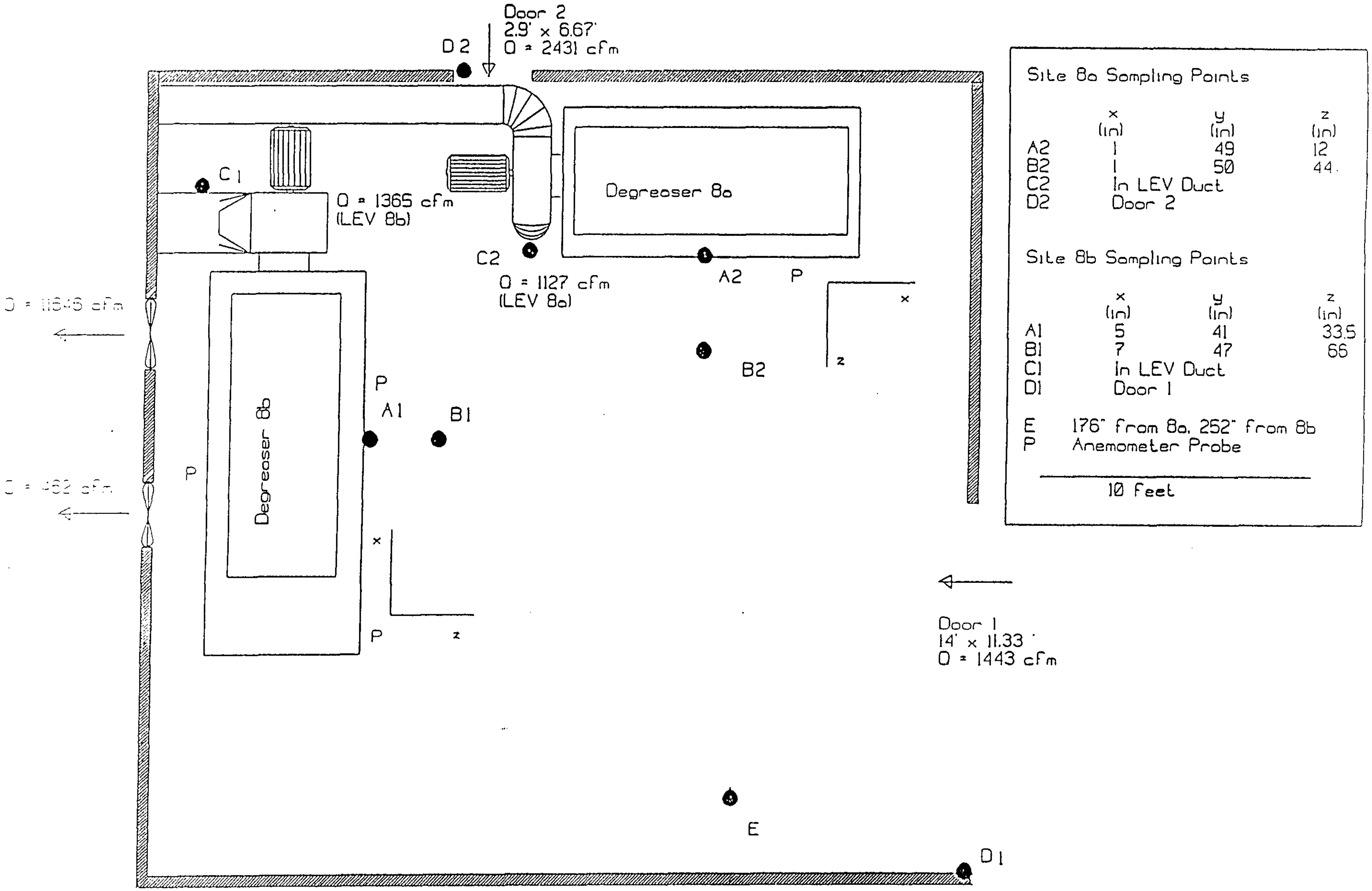

Figure 18. Plan view of site 8a and 8b.

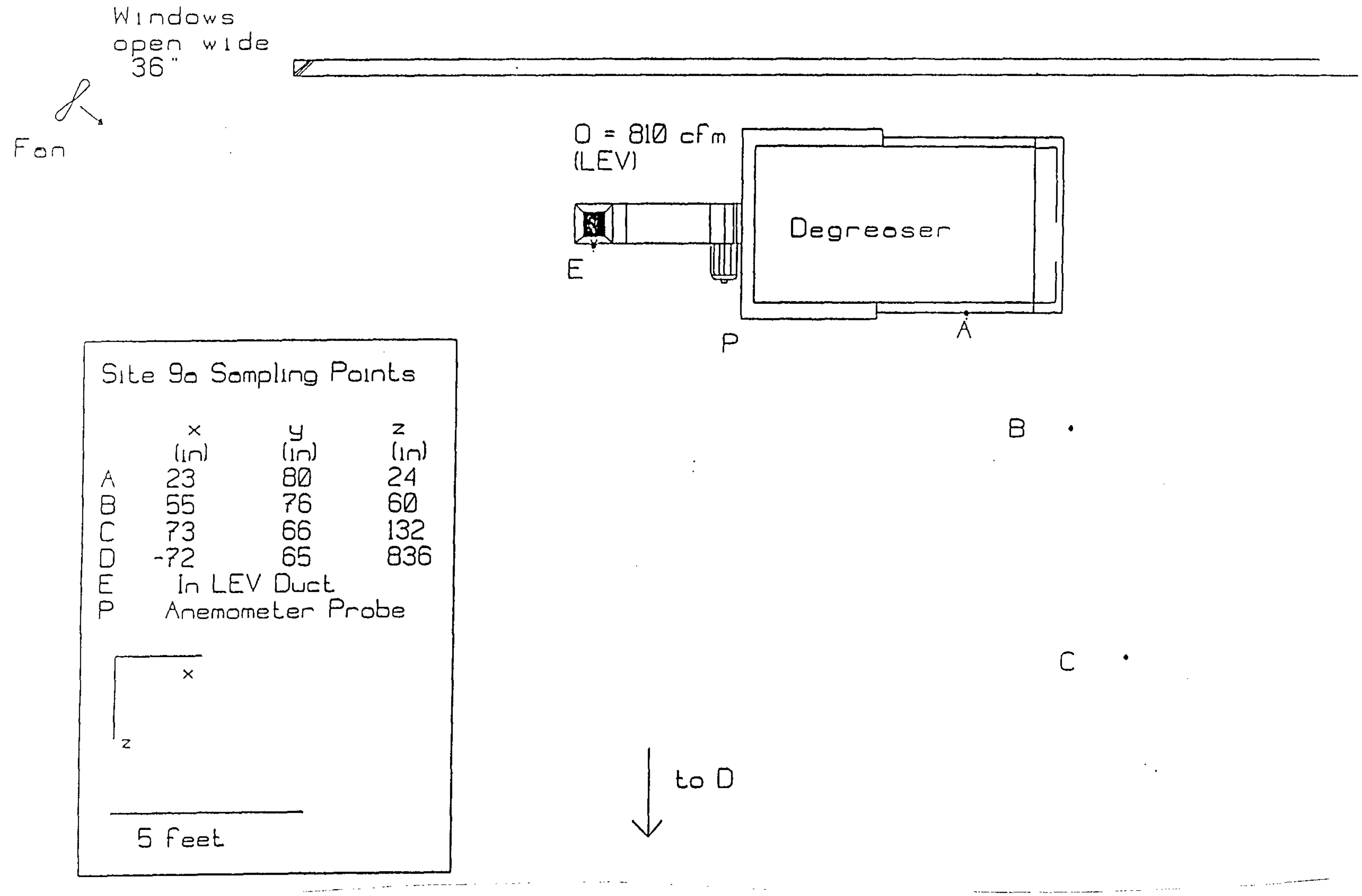

Figure 19. Plan view of site 9a.

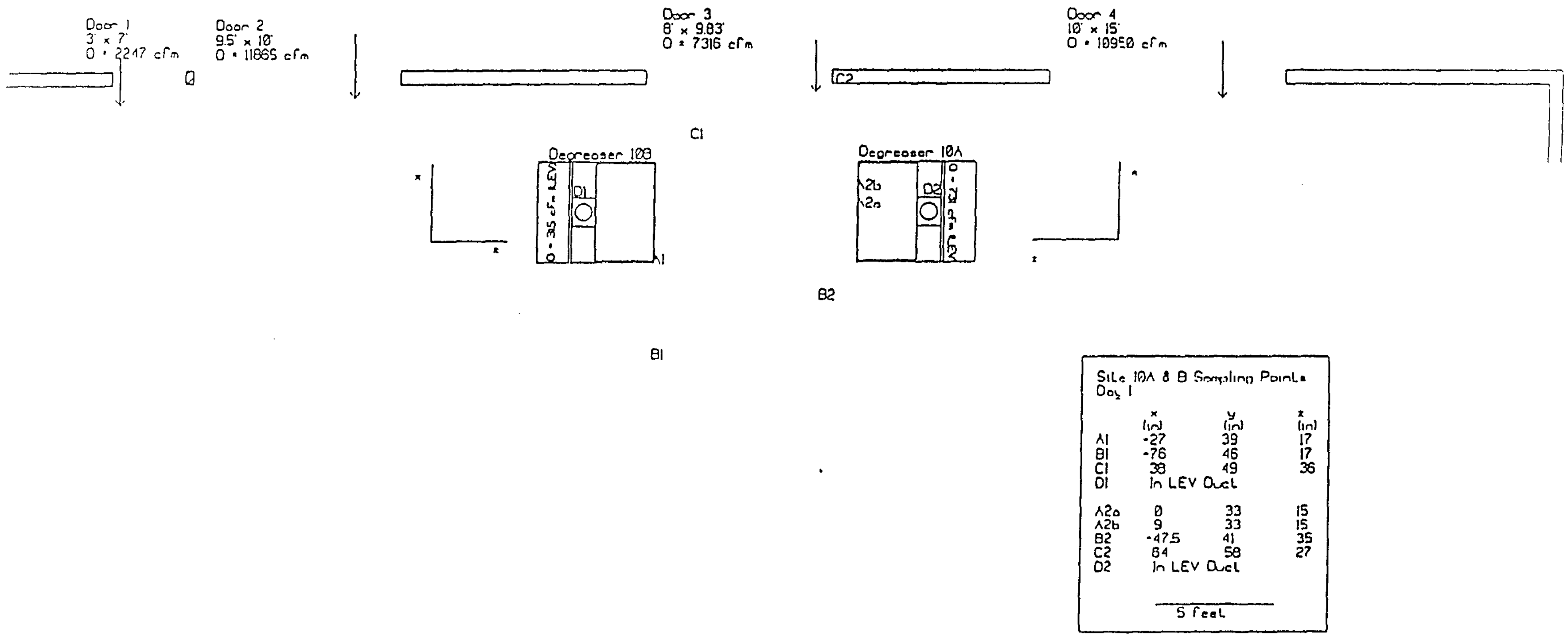

Figure 20. Plan view of site 10a and 10b, day 1.

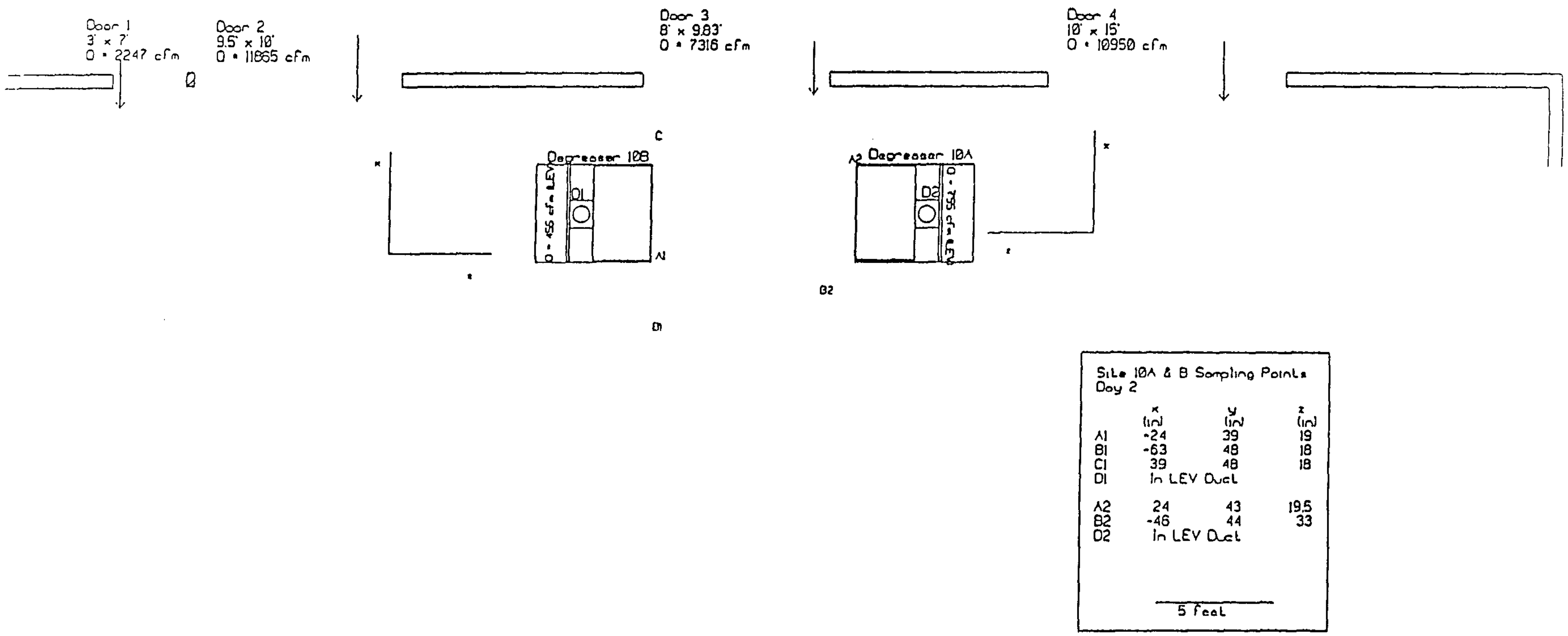

Figure 21. Plan view of site 10a and 10b degreasers, day 2.

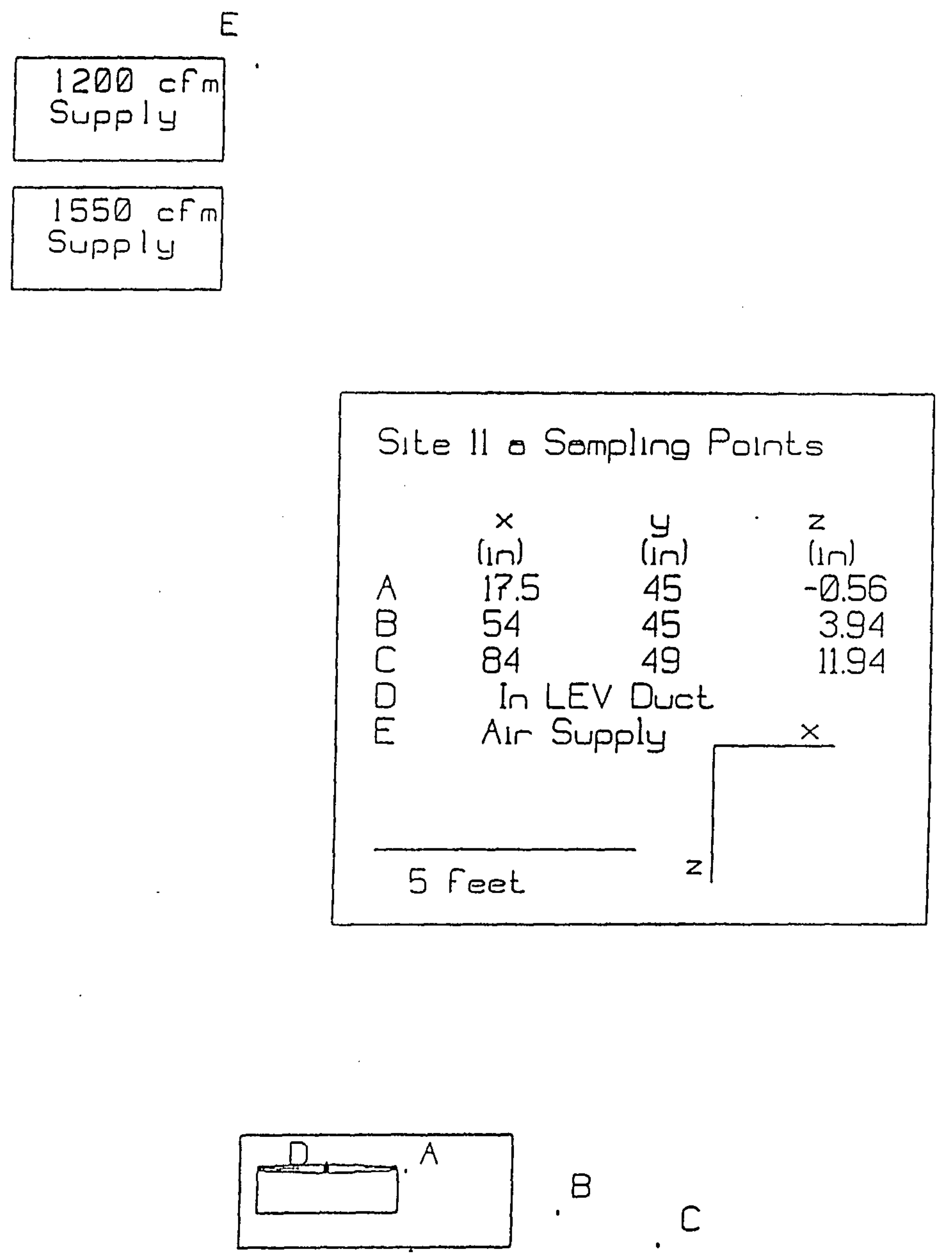

Figure 22. Plan view of site 11a degreaser.

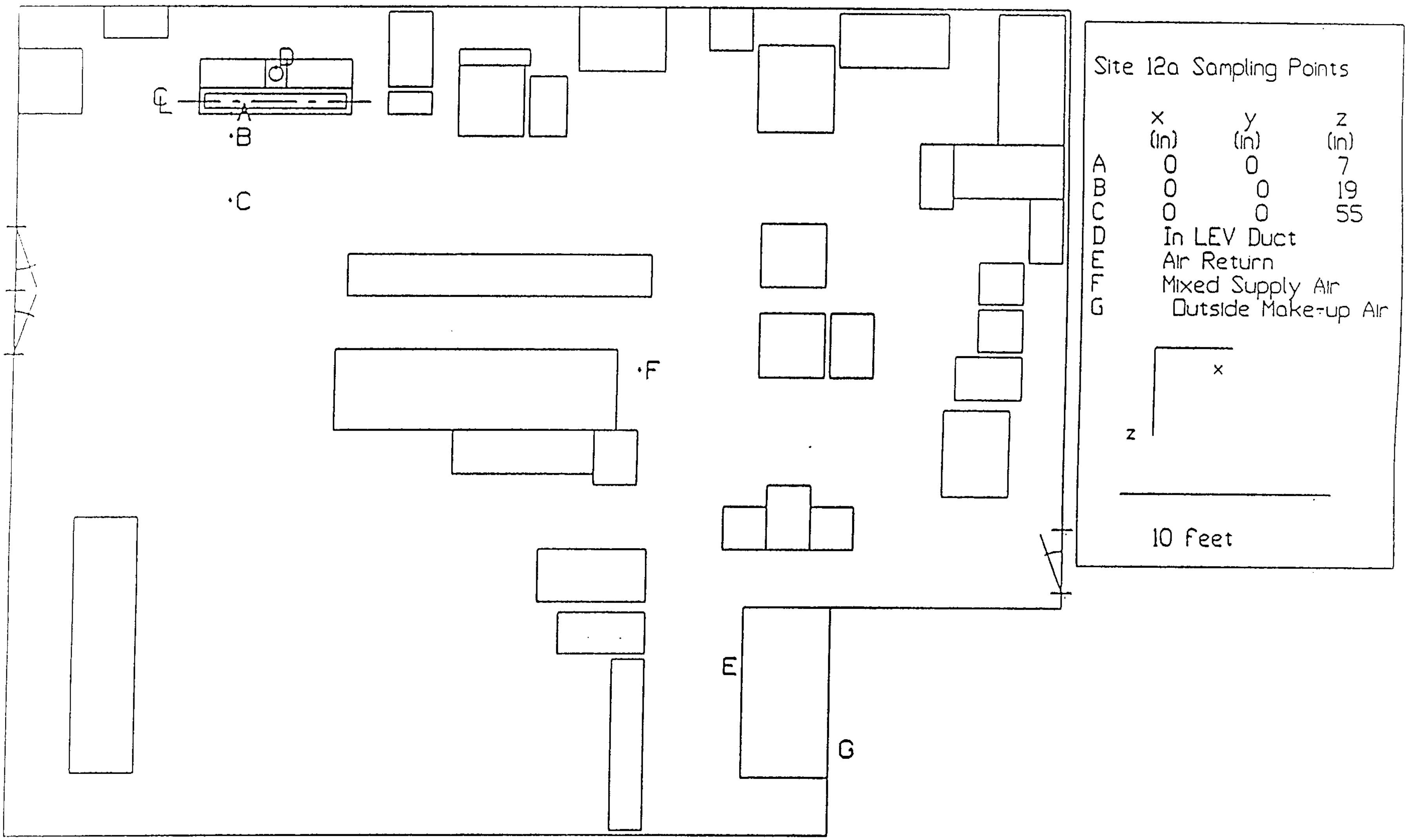

Figure 23. Plan view of site 12a.

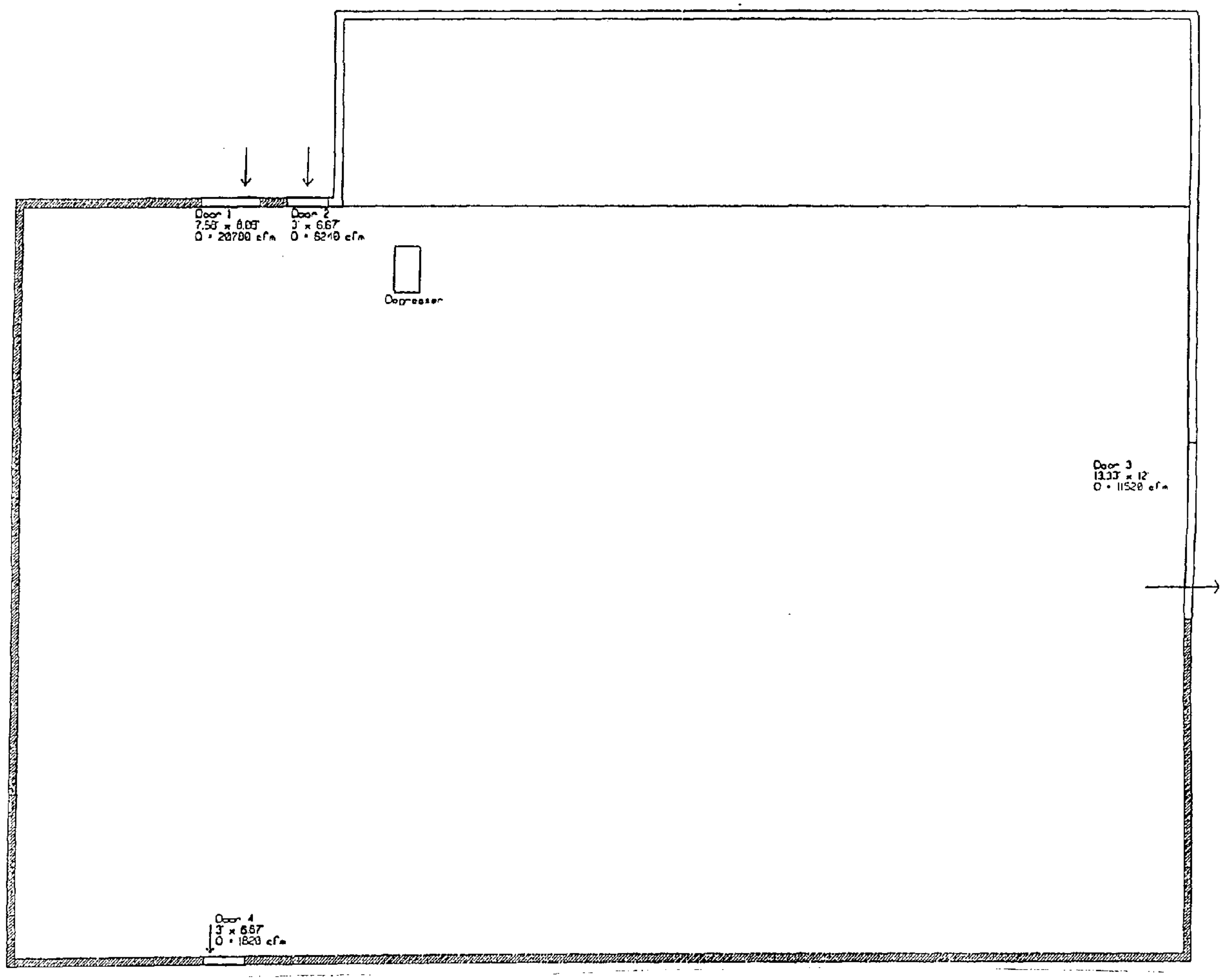

Figure 24. Plan view of site 13a.

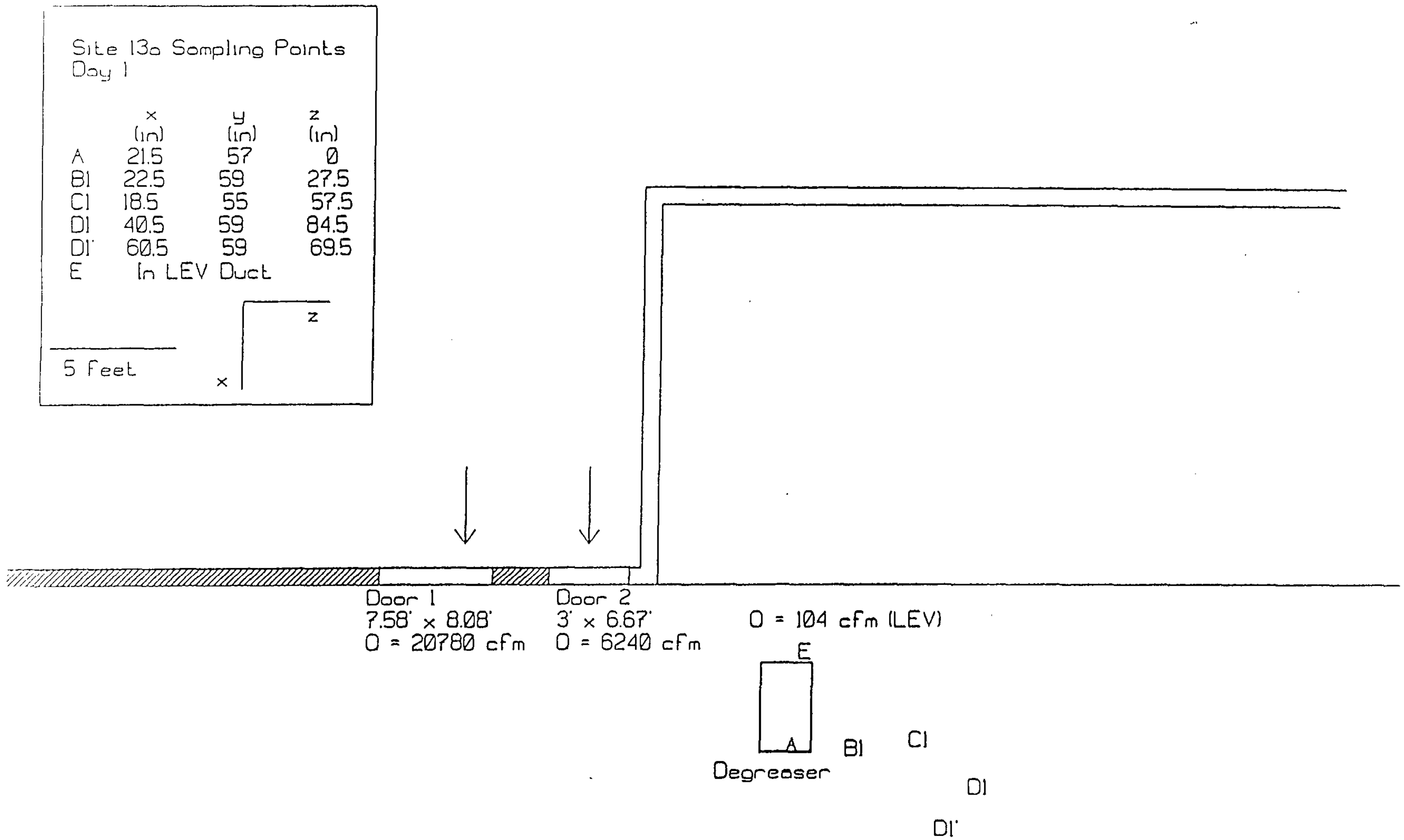

Figure 25. Plan view of site 13a degreaser, day 1.

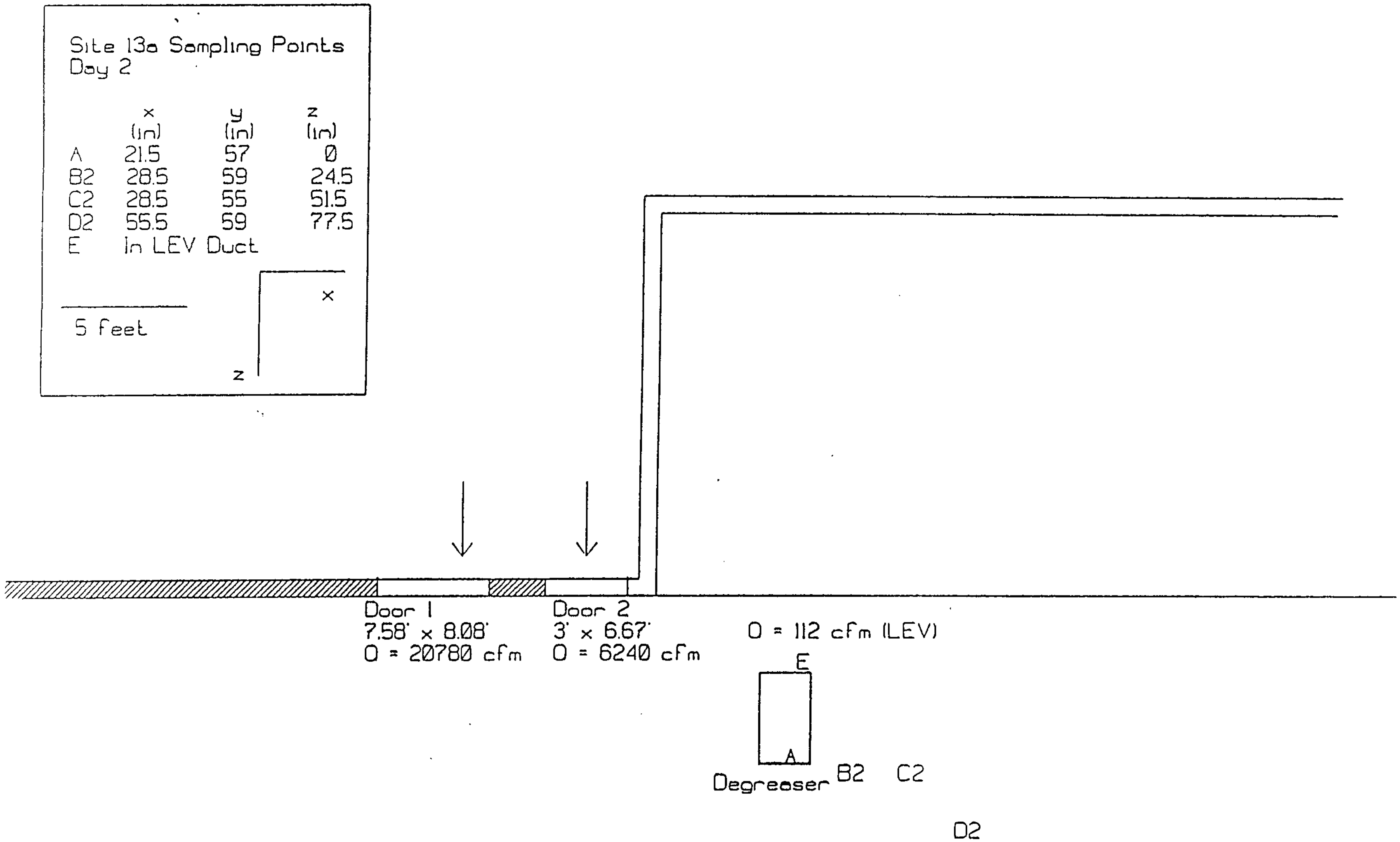

Figure 26. Plan view of site 13a degreaser, day 2.

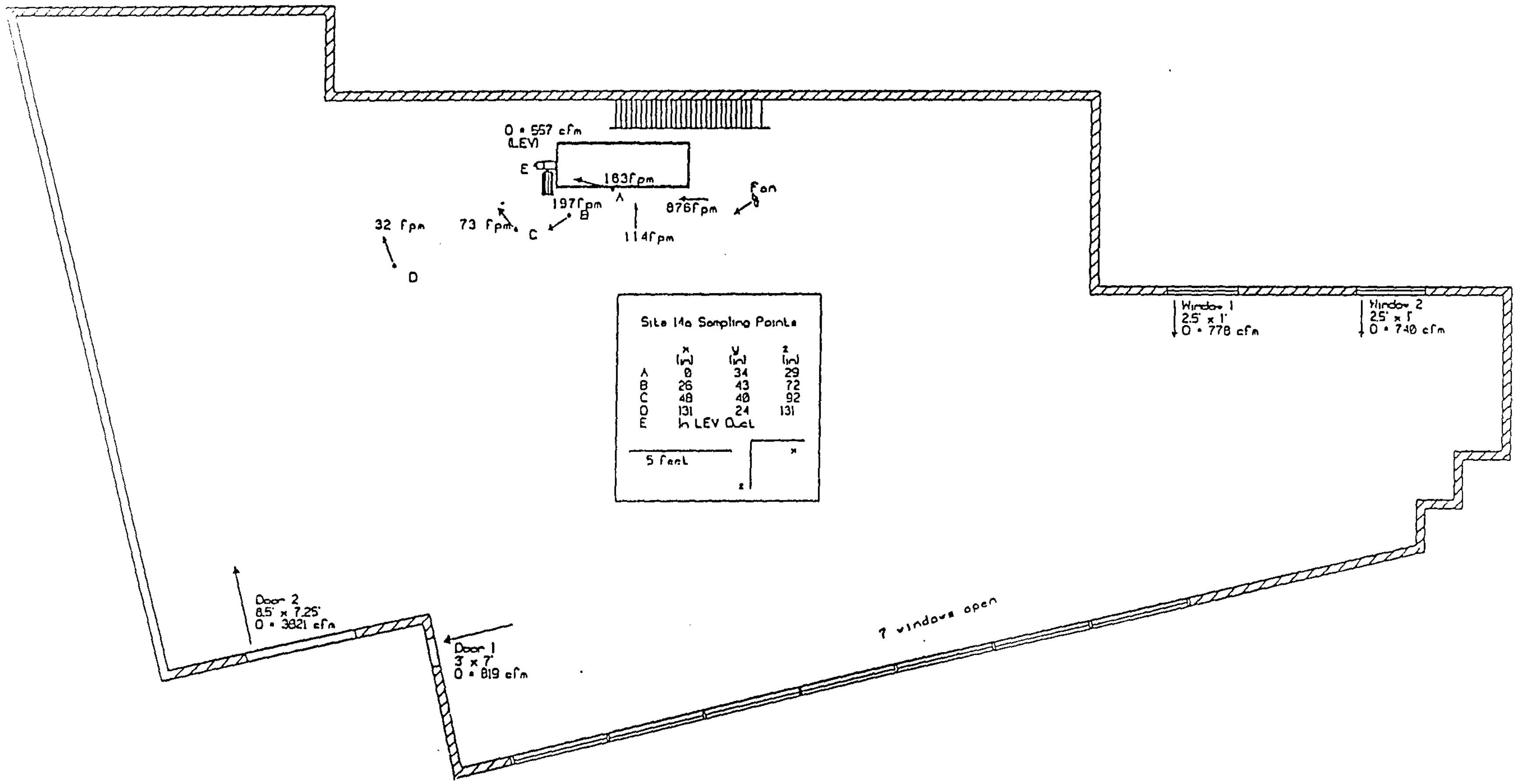

Figure 27. Plan view of site 14a.

5.2 Appendix B

Intermediate Data for Emission Rate Calculations

TABLE IX: EMISSION RATES USING THE COMPLETELY MIXED SPACE MODEL

Site	Interval	Workspace Concentration (ppm)	Workspace Flow Rate (cfm)	Mixing Factor k	Emission Rate (g/min)
1a	1	67.43	7718	1	79.9
	2	23.98	7718	1	28.4
	3	55.35	7718	1	65.6
	4	19.25	7718	1	22.8
	5	49.10	7718	1	58.2
	6	11.88	7718	1	14.1
	7	9.08	7718	1	10.8
	8	3.28	7718	1	3.89
	9	67.28	7718	1	79.7
	10	19.08	7718	1	22.6
	11	77.55	7718	1	91.9
	12	30.08	7718	1	35.6
	13	20.68	7718	1	24.5
2a	1	3.88	20377	1	11.9
	2	3.63	20377	1	11.1
	3	0.87	20377	1	2.66
	4	3.15	20377	1	9.64
	5	5.35	20377	1	16.4
	6	3.39	20377	1	10.4
	7	6.19	20377	1	18.9
	8	4.49	20377	1	13.7
	9	2.45	20377	1	7.50
	10	2.00	20377	1	6.11
	11	1.65	20377	1	5.04
	12	4.55	20377	1	13.9
	13	3.79	20377	1	11.6
	14	2.74	20377	1	8.39
3a	1	7.04	15517	1	16.4
	2	6.35	15517	1	14.8
	3	10.76	15517	1	25.1
	4	5.88	15517	1	13.7
	5	7.85	15517	1	18.3
	6	3.46	15517	1	8.06
	7	5.00	15517	1	11.6
	8	6.21	15517	1	14.5
	9	6.35	15517	1	14.8
	10	5.94	15517	1	13.8

TABLE IX: EMISSION RATES USING THE COMPLETELY MIXED SPACE MODEL (CONTINUED)

Site	Interval	Workspace Concentration (ppm)	Workspace Flow Rate (cfm)	Mixing Factor k	Emission Rate (g/min)
3a	11	5.76	15517	1	13.4
	12	7.41	15517	1	17.3
	13	3.71	15517	1	8.65
4a	1	7.81	13724	1	16.1
	2	14.76	13724	1	30.4
	3	1.51	13724	1	3.12
6a	1	3.96	13483	1	8.01
	2	5.44	13483	1	11.0
	3	2.93	13483	1	5.92
	4	5.65	13483	1	11.4
	5	2.09	13483	1	4.22
	6	0.63	13483	1	1.27
	7	0.76	13483	1	1.53
	8	3.23	13483	1	6.53
	9	11.39	13483	1	23.1
	10	5.17	13483	1	10.5
	11	0.72	13483	1	1.46
	12	1.91	13483	1	3.87
	13	2.79	13483	1	5.64
	14	2.65	13483	1	5.36
	15	0.90	13483	1	1.82
6b	1	6.25	12509	1	11.7
	2	7.28	12509	1	13.7
	3	15.11	12509	1	28.4
	4	0.18	12509	1	0.332
	5	3.75	12509	1	7.04
	6	5.28	12509	1	9.91
	7	8.72	12509	1	16.4
	8	254.58	12509	1	478
	9	324.45	12509	1	609
	10	374.69	12509	1	704
	11	176.78	12509	1	332
	12	89.49	12509	1	168
	13	82.55	12509	1	155
	14	98.33	12509	1	185
7a	1	43.26	864	1	5.61
	2	63.32	864	1	8.21

TABLE IX: EMISSION RATES USING THE COMPLETELY MIXED SPACE MODEL (CONTINUED)

Site	Interval	Workspace Concentration (ppm)	Workspace Flow Rate (cfm)	Mixing Factor k	Emission Rate (g/min)
7a	3	61.93	864	1	8.03
	4	20.39	864	1	2.65
	5	71.61	864	1	9.29
	6	58.73	864	1	7.62
	7	55.57	864	1	7.21
	8	36.71	864	1	4.76
	9	17.14	864	1	2.22
	10	49.47	864	1	6.42
	11	85.64	864	1	11.1
	12	47.33	864	1	6.14
	13	81.30	864	1	10.5
8a&b	1	9.52	16865	1	24.1
	2	12.27	16865	1	31.1
	3	26.29	16865	1	66.6
	4	41.42	16865	1	105
	5	33.22	16865	1	84.1
	6	37.87	16865	1	95.9
	7	42.72	16865	1	108
	8	47.56	16865	1	120
	9	52.66	16865	1	133
	10	42.35	16865	1	107
	11	37.89	16865	1	95.9
	12	38.76	16865	1	98.1
	13	26.16	16865	1	66.2
8b	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				

TABLE IX: EMISSION RATES USING THE COMPLETELY MIXED SPACE MODEL (CONTINUED)

Site	Interval	Workspace Concentration (ppm)	Workspace Flow Rate (cfm)	Mixing Factor k	Emission Rate (g/min)
9a	1	4.41	810	1	0.678
	2	1.75	810	1	0.269
	3	1.18	810	1	0.181
	4	1.03	810	1	0.158
	5	0.84	810	1	0.129
	6	3.21	810	1	0.493
	7	0.84	810	1	0.130
	8	1.85	810	1	0.285
10a&b	1	23.90	32378	1	116
	2	48.70	32378	1	237
	3	5.57	32378	1	27.1
	4	40.91	32378	1	199
	5	24.05	32378	1	117
	6	21.97	32378	1	107
	7	17.86	32378	1	86.8
	8	35.92	17978	1	97.0
	9	24.57	17978	1	66.3
	10	17.98	17978	1	48.5
	11	15.82	17978	1	42.7
	12	11.67	17978	1	31.5
	13	18.19	17978	1	49.1
	14	8.97	17978	1	24.2
	15	14.01	17978	1	37.8
10b	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				

TABLE IX: EMISSION RATES USING THE COMPLETELY MIXED SPACE MODEL (CONTINUED)

Site	Interval	Workspace Concentration (ppm)	Workspace Flow Rate (cfm)	Mixing Factor k	Emission Rate (g/min)
10b	15				
11a	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
12a	1	6.30	7743	1	4.75
	2	4.00	7743	1	3.01
	3	8.40	7743	1	6.33
	4	13.80	7743	1	10.4
	5	27.00	7743	1	20.4
	6	16.50	7743	1	12.4
	7	58.60	7743	1	44.2
	8	5.77	7743	1	4.35
	9	3.33	7743	1	2.51
	10	3.10	7743	1	2.34
	11	3.07	7743	1	2.31
	12	3.83	7743	1	2.89
13a	1	6.16	27020	1	25.0
	2	8.40	27020	1	34.1
	3	9.92	27020	1	40.2
	4	11.62	27020	1	47.2
	5	8.24	27020	1	33.4
	6	19.79	27020	1	80.3
	7	11.78	27020	1	47.8
	8	11.80	27020	1	47.9
	9	17.84	27020	1	72.4
	10	2.65	27020	1	10.8
	11	3.67	27020	1	14.9

TABLE IX: EMISSION RATES USING THE COMPLETELY MIXED SPACE MODEL (CONTINUED)

Site	Interval	Workspace Concentration (ppm)	Workspace Flow Rate (cfm)	Mixing Factor k	Emission Rate (g/min)
13a	12	5.19	27020	1	21.0
	13	6.16	27020	1	25.0
14a	1	9.87	5339	1	7.91
	2	11.73	5339	1	9.40
	3	18.65	5339	1	15.0
	4	4.40	5339	1	3.52
	5	15.73	5339	1	12.6
	6	16.38	5339	1	13.1
	7	17.82	5339	1	14.3
	8	11.37	5339	1	9.12
	9	10.49	5339	1	8.41
	10	12.38	5339	1	9.92
	11	13.98	5339	1	11.2
	12	15.41	5339	1	12.3
	13	13.17	5339	1	10.6
	14	4.03	5339	1	3.23
	15	13.10	5339	1	10.5
	16	8.87	5339	1	7.11

TABLE X: WORKSPACE EMISSION RATES USING THE TWO POINT DIFFUSION MODEL

		Workspace Emission Rate For Each Pair of Concentration Measurements											Average	Average	Average
		a-b	a-c	a-d	a-e	b-c	b-d	b-e	b-f	c-d	c-e	d-e	all pairs[1]	all pairs[2]	closest two points
Site	Interval	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)
1a	1	20.7											20.7	20.7	20.7
	2						40.2						40.2	40.2	
	3						609.6						610		
	4					3.21							3.21	3.21	
	5		3.80	2.30		6.28	48.1						15.1	15.1	
	6	2.96		3.76		1.66	5.59						3.49	3.49	2.96
	7														
	8														
	9	8.35	96.0	17.3			1500						405	40.6	8.35
	10	2.12	29.6	15.3									15.7	15.7	2.12
	11								926				926		
	12														
	13						3960						3960		
2a	1			2.19						0.498		1.34	1.34	1.34	2.19
	2				1.17						0.266	3.61	1.68	1.68	
	3									0.105			0.105	0.105	
	4			0.972	0.067						0.324	0.086	0.362	0.362	0.972
	5				4.83						0.523	8.18	4.51	4.51	
	6		0.231							0.550	0.182	0.169	0.283	0.283	
	7	0.260	0.227		0.170	0.233							0.223	0.223	0.260
	8	0.141		3.77						0.999			1.64	1.64	0.141
	9	0.085											0.085	0.085	0.085
	10														
	11	0.059											0.059	0.059	0.059
	12									0.688			0.688	0.688	
	13														
	14	0.621	0.225	0.567									0.471	0.471	0.621
3a	1	50.0	0.809			0.692							17.2	0.751	50.0
	2	0.567	0.530	8.14		0.557							2.45	2.45	0.567
	3														

[1]Average of all pairs.
[2]Average of all pairs without unreasonably high values.

TABLE X: WORKSPACE EMISSION RATES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

		Workspace Emission Rate For Each Pair of Concentration Measurements											Average	Average	Average
		a-b	a-c	a-d	a-e	b-c	b-d	b-e	b-f	c-d	c-e	d-e	all pairs[1]	all pairs[2]	closest two points
Site	Interval	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)
3a	4	0.520											0.520	0.520	0.520
	5	0.409	648	0.434			0.333			5.02			131	1.55	0.409
	6	0.355		0.508			0.512			0.908			0.571	0.571	0.355
	7					0.863	135						67.9	0.863	
	8														
	9					1.44							1.44	1.44	
	10									18.1			18.1	18.1	
	11	0.924								1170			586	0.924	0.924
	12	0.590	2.37										1.48	1.48	0.590
	13		2.80			1.20							2.00	2.00	
4a	1	1.17											1.17	1.17	1.17
	2	3.00											3.00	3.00	3.00
	3														
6a	1														
	2	0.307	0.244										0.276	0.276	0.307
	3	0.270	0.162										0.216	0.216	0.270
	4	1.06	0.261										0.662	0.662	1.063
	5	0.302	0.107			0.026							0.145	0.145	0.302
	6	0.119	0.046			0.012							0.059	0.059	0.119
	7														
	8	0.115											0.115	0.115	0.115
	9	0.500	0.465			236							79.0	0.483	0.500
	10	0.166	0.262			1.02							0.482	0.482	0.166
	11					0.539							0.539	0.539	
	12														
	13	0.254	0.105			0.263							0.207	0.207	0.254
	14	0.084	0.126										0.105	0.105	0.084
	15	0.112	0.072										0.092	0.092	0.112
6b	1														
	2	1.25											1.25	1.25	1.25

[1]Average of all pairs.
[2]Average of all pairs without unreasonably high values.

TABLE X: WORKSPACE EMISSION RATES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

		Workspace Emission Rate For Each Pair of Concentration Measurements											Average	Average	Average
		a-b	a-c	a-d	a-e	b-c	b-d	b-e	b-f	c-d	c-e	d-e	all pairs[1]	all pairs[2]	closest two points
Site	Interval	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)
6b	3	0.171											0.171	0.171	0.171
	4	0.003											0.003	0.003	0.003
	5	0.684											0.684	0.684	0.684
	6	0.286											0.286	0.286	0.286
	7	0.759											0.759	0.759	0.759
	8	160	13.7										86.9	86.9	160
	9	328	16.8										172	172	328
	10	660	18.1										339	339	660
	11	1780	8.99										894	894	1780
	12	40.9	4.18										22.5	22.5	40.9
	13	17.8	2.44										10.1	10.1	17.8
	14	488	2.87										246	246	488
7a	1														
	2														
	3														
	4		0.427			0.638							0.533	0.533	
	5														
	6														
	7														
	8	0.422											0.422	0.422	0.422
	9														
	10														
	11														
	12														
	13	0.961	1260										629	0.961	0.961
8a	1	0.487											0.487	0.487	0.487
	2	0.520											0.520	0.520	0.520
	3														
	4	0.494											0.494	0.494	0.494
	5	0.160											0.160	0.160	0.160

[1] Average of all pairs.
[2] Average of all pairs without unreasonably high values.

TABLE X: WORKSPACE EMISSION RATES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

		Workspace Emission Rate For Each Pair of Concentration Measurements											Average	Average	Average
Site	Interval	a-b (g/min)	a-c (g/min)	a-d (g/min)	a-e (g/min)	b-c (g/min)	b-d (g/min)	b-e (g/min)	b-f (g/min)	c-d (g/min)	c-e (g/min)	d-e (g/min)	all pairs[1] (g/min)	all pairs[2] (g/min)	closest two points (g/min)
8a	6	0.356											0.356	0.356	0.356
	7	0.398											0.398	0.398	0.398
	8	0.387											0.387	0.387	0.387
	9	0.468											0.468	0.468	0.468
	10	1.16											1.16	1.16	1.16
	11	0.325											0.325	0.325	0.325
	12	0.290											0.290	0.290	0.290
	13	15.2											15.2	15.2	15.2
8b	1														
	2														
	3														
	4														
	5														
	6	2.62											2.62	2.62	2.62
	7	233											233		233
	8														
	9	1.74											1.74	1.74	1.74
	10	4.21											4.21	4.21	4.21
	11	0.790											0.790	0.790	0.790
	12	123											123		123
	13														
9a	1														
	2														
	3														
	4	0.540	0.078										0.309	0.309	0.540
	5	0.082	0.080										0.081	0.081	0.082
	6	0.422	0.550										0.486	0.486	0.422
	7														
	8														
10a	1														

[1]Average of all pairs.
[2]Average of all pairs without unreasonably high values.

TABLE X: WORKSPACE EMISSION RATES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

Site	Interval	Workspace Emission Rate For Each Pair of Concentration Measurements											Average	Average	Average
		a-b (g/min)	a-c (g/min)	a-d (g/min)	a-e (g/min)	b-c (g/min)	b-d (g/min)	b-e (g/min)	b-f (g/min)	c-d (g/min)	c-e (g/min)	d-e (g/min)	all pairs[1] (g/min)	all pairs[2] (g/min)	closest two points (g/min)
10a	2	0.376	0.348			0.059							0.261	0.261	0.376
	3	0.581	0.071			0.127							0.260	0.260	0.581
	4		0.105			1.22							0.665	0.665	
	5		0.064			548							274	274	
	6	3.13	0.069			0.138							1.11	1.11	3.13
	7														
	8														
	9	0.485											0.485	0.485	0.485
	10														
	11														
	12														
	13														
	14	0.119											0.119	0.119	0.119
	15														
10b	1		0.592										0.592	0.592	0.592
	2		0.403										0.403	0.403	0.403
	3		0.093										0.093	0.093	0.093
	4	2.33	2.71										2.52	2.52	2.71
	5	0.764	0.830										0.797	0.797	0.830
	6	0.470	0.445										0.458	0.458	0.445
	7	0.374	0.675										0.525	0.525	0.675
	8	0.954	5.88										3.42	3.42	5.88
	9		5.49										5.49	5.49	5.49
	10		1.53										1.53	1.53	1.53
	11		6.38										6.38	6.38	6.38
	12	0.847	0.916										0.882	0.882	0.916
	13		0.069										0.069	0.069	0.069
	14		0.230										0.230	0.230	0.230
	15		21.1										21.1	21.1	21.1
11a	1	0.014											0.014	0.014	0.014

[1]Average of all pairs.
[2]Average of all pairs without unreasonably high values.

TABLE X: WORKSPACE EMISSION RATES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

		Workspace Emission Rate For Each Pair of Concentration Measurements											Average	Average	Average
Site	Interval	a-b (g/min)	a-c (g/min)	a-d (g/min)	a-e (g/min)	b-c (g/min)	b-d (g/min)	b-e (g/min)	b-f (g/min)	c-d (g/min)	c-e (g/min)	d-e (g/min)	all pairs[1] (g/min)	all pairs[2] (g/min)	closest two points (g/min)
11a	2	0.004											0.004	0.004	0.004
	3	0.000	0.045										0.023	0.023	0.000
	4	0.002											0.002	0.002	0.002
	5	23.4	0.690			0.001							8.02	8.02	23.4
	6	0.005	0.002										0.004	0.004	0.005
	7														
	8					0.120							0.120	0.120	
	9														
	10	0.170	0.109										0.140	0.140	0.170
	11														
	12	0.188	0.137			0.662							0.329	0.329	0.188
	13	0.965	0.293										0.629	0.629	0.965
12a	1	0.002	0.019										0.011	0.011	0.002
	2	0.001	0.016										0.008	0.008	0.001
	3	0.002	0.017										0.010	0.010	0.002
	4	0.004	0.059										0.032	0.032	0.004
	5	0.010	0.215										0.113	0.113	0.010
	6	0.002	0.035										0.019	0.019	0.002
	7	0.490											0.245	0.245	0.490
	8	0.002											0.001	0.001	0.002
	9	5E-04	0.033										0.017	0.017	0.000
	10	4E-04	0.058										0.029	0.029	0.000
	11	5E-04											0.000	0.000	0.000
	12	0.001	0.006										0.003	0.003	0.001
13a	1	65.9	0.345	0.136									22.1	22.1	65.9
	2	146	0.579	0.188									49.0	49.0	146
	3	244	0.963	0.254									81.6	81.6	244
	4	796	1.45	0.291									266	266	796
	5	134	0.672	0.184									44.9	44.9	134
	6	17800	6.08	0.612									5940	3.35	17800

[1]Average of all pairs.
[2]Average of all pairs without unreasonably high values.

TABLE X: WORKSPACE EMISSION RATES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

		Workspace Emission Rate For Each Pair of Concentration Measurements											Average	Average	Average
		a-b	a-c	a-d	a-e	b-c	b-d	b-e	b-f	c-d	c-e	d-e	all pairs[1]	all pairs[2]	closest two points
Site	Interval	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)	(g/min)
13a	7	148	1.15	0.275									49.8	49.8	148
	8	227	1.76	0.307									76.3	76.3	227
	9	895	4.34	0.488									300	300	895
	10	2.81	0.126	0.172									1.04	1.04	2.81
	11	1.95	0.167	0.082									0.732	0.732	1.95
	12	8.85	0.301	0.119									3.09	3.09	8.85
	13	317.61	2.26	0.305									107	107	318
14a	1	2.82	2.79										2.80	2.80	2.82
	2	0.153	0.257	1.12									0.510	0.510	0.153
	3	0.209	0.311	0.843									0.454	0.454	0.209
	4														
	5	0.159	0.231	0.727									0.372	0.372	0.159
	6	0.168	0.249	0.812									0.410	0.410	0.168
	7	0.164	0.230	0.878									0.424	0.424	0.164
	8	0.138	0.193	0.991									0.441	0.441	0.138
	9	0.120	0.365	1.760									0.748	0.748	0.120
	10	0.127	0.175	0.848									0.383	0.383	0.127
	11	0.139	0.229	2.32									0.897	0.897	0.139
	12	0.157	0.234	0.968									0.453	0.453	0.157
	13	0.135	0.216	0.938									0.430	0.430	0.135
	14														
	15	0.138	0.239	1.30									0.558	0.558	0.138
	16	0.125	0.260	6.25									2.21	2.21	0.125

[1]Average of all pairs.
[2]Average of all pairs without unreasonably high values.

TABLE XI: WORKSPACE DIFFUSIVITIES USING THE TWO POINT DIFFUSION MODEL

		Workspace Diffusivities For Each Pair of Concentration Measurements										
		a-b	a-c	a-d	a-e	b-c	b-d	b-e	b-f	c-d	c-e	d-e
Site	Interval	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)
1a	1	1.73										
	2						9.41					
	3						73.8					
	4					0.041						
	5		0.212	0.059		0.126	0.019					
	6	1.12		1.49		0.046	2.54					
	7											
	8											
	9	0.601	9.62	1.47			214					
	10	1.51	28.1	14.0								
	11								0.011			
	12											
	13						2060					
2a	1			0.004						0.681		2.13
	2				3.10						0.125	11.1
	3									0.590		
	4			0.004	0.124						0.038	0.084
	5				9.90						0.288	17.8
	6		0.389							1.27	0.160	0.285
	7	0.142	0.100		0.229	0.090						
	8	0.023		6.56						1.11		
	9	0.179										
	10											
	11	0.116										
	12									0.134		
	13											
	14	0.017	0.145	0.760								
3a	1	47.3	0.456			0.210						
	2	0.183	0.155	5.83		0.142						
	3											
	4	0.170										
	5	0.059	528	0.098			0.105			0.052		
	6	0.336		0.578			0.661			0.174		
	7					0.355	135					
	8											
	9					0.684						
	10									12.0		
	11	0.795										
	12	0.263	1.60									
	13		5.08			1.32						
4a	1	0.989										
	2	1.17										
	3											
6a	1											
	2	0.017	0.119									
	3	0.022	0.090									
	4	0.010	0.057									
	5	0.008	0.016			0.040						
	6	0.010	0.022			0.052						
	7											
	8	0.160										
	9	0.025	0.097			341						
	10	0.062	0.203			1.98						
	11					0.012						

TABLE XI: WORKSPACE DIFFUSIVITIES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

		Workspace Diffusivities For Each Pair of Concentration Measurements										
		a-b	a-c	a-d	a-e	b-c	b-d	b-e	b-f	c-d	c-e	d-e
Site	Interval	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)
6a	12											
	13	0.011	0.036			1.63						
	14	0.037	0.175									
	15	0.033	0.142									
6b	1											
	2	0.005										
	3	0.032										
	4	0.018										
	5	0.005										
	6	0.005										
	7	0.006										
	8	0.004	0.010									
	9	0.003	0.011									
	10	0.003	0.010									
	11	0.003	0.017									
	12	0.006	0.028									
	13	0.004	0.018									
	14	0.002	0.026									
7a	1											
	2											
	3											
	4		0.072			0.056						
	5											
	6											
	7											
	8	0.046										
	9											
	10											
	11											
	12											
	13	0.010	195									
8a	1	0.005										
	2	0.135										
	3											
	4	0.114										
	5	0.019										
	6	0.007										
	7	0.007										
	8	0.015										
	9	0.017										
	10	0.012										
	11	0.016										
	12	0.019										
	13	10.2										
8b	1											
	2											
	3											
	4											
	5											
	6	1.01										
	7	91.7										
	8											
	9	0.484										
	10	2.16										

TABLE XI: WORKSPACE DIFFUSIVITIES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

		Workspace Diffusivities For Each Pair of Concentration Measurements										
		a-b	a-c	a-d	a-e	b-c	b-d	b-e	b-f	c-d	c-e	d-e
Site	Interval	(m_2/min)	(m_2/min)	(m_2/min)	(m_2/min)	(m_2/min)	(m_2/min)	(m_2/min)	(m_2/min)	(m_2/min)	(m_2/min)	(m_2/min)
8b	11	0.203										
	12	52.8										
	13											
9a	1											
	2											
	3											
	4	0.037	0.201									
	5	0.020	0.182									
	6	0.081	0.336									
	7											
	8											
10a	1											
	2	0.006	0.009			0.036						
	3	1.46	0.115			0.032						
	4		0.025			0.007						
	5		0.006			0.002						
	6	5.01	0.064			0.016						
	7											
	8											
	9	0.366										
	10											
	11											
	12											
	13											
	14	0.036										
	15											
10b	1		0.004									
	2		0.004									
	3		0.022									
	4	0.333	0.003									
	5	0.145	0.004									
	6	0.065	0.007									
	7	0.045	0.011									
	8	0.115	0.002									
	9		0.002									
	10		0.002									
	11		0.002									
	12	0.424	0.006									
	13		0.008									
	14		0.005									
	15		0.000									
11a	1	7.25										
	2	2.40										
	3	0.085	31.1									
	4	1.10										
	5	0.001	0.004			0.258						
	6	0.004	0.018									
	7											
	8					0.033						
	9											
	10	0.005	0.026									
	11											
	12	0.006	0.019			2.153						
	13	0.003	0.013									

TABLE XI: WORKSPACE DIFFUSIVITIES USING THE TWO POINT DIFFUSION MODEL (CONTINUED)

		Workspace Diffusivities For Each Pair of Concentration Measurements										
		a-b	a-c	a-d	a-e	b-c	b-d	b-e	b-f	c-d	c-e	d-e
Site	Interval	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)	(m^2/min)
12a	1	0.001	0.018									
	2	0.001	0.065									
	3	0.001	0.016									
	4	0.001	0.053									
	5	0.006	0.195									
	6	0.001	0.029									
	7	0.582										
	8	0.007										
	9	0.002	0.211									
	10	0.002	0.489									
	11	0.006										
	12	2E-04	0.006									
13a	1	0.001	0.006	0.034								
	2	0.001	0.005	0.026								
	3	0.002	0.005	0.022								
	4	0.001	0.004	0.018								
	5	0.001	0.005	0.021								
	6	0.001	0.003	0.012								
	7	0.001	0.005	0.020								
	8	0.001	0.004	0.020								
	9	0.001	0.003	0.015								
	10	0.006	0.031	0.238								
	11	0.003	0.006	0.051								
	12	0.002	0.006	0.034								
	13	0.001	0.003	0.015								
14a	1	3.58	3.53									
	2	0.062	0.132	0.775								
	3	0.027	0.064	0.261								
	4											
	5	0.026	0.058	0.280								
	6	0.024	0.058	0.298								
	7	0.021	0.047	0.300								
	8	0.040	0.075	0.620								
	9	0.052	0.252	1.50								
	10	0.029	0.056	0.459								
	11	0.034	0.082	1.34								
	12	0.029	0.064	0.418								
	13	0.034	0.079	0.509								
	14											
	15	0.034	0.090	0.737								
	16	0.072	0.203	6.95								

TABLE XII: LOCAL EXHAUST VENTILATION EMISSION RATES

Site	Interval	Concentration (ppm)	Flow Rate (cfm)	Emission Rate (g/min)
1a	1	na	499	na
	2	na	499	na
	3	1530.90	499	117
	4	488.40	499	37.4
	5	218.20	499	16.7
	6	na	499	na
	7	61.20	499	4.69
	8	21.50	499	1.65
	9	108.80	499	8.33
	10	38.10	499	2.92
	11	180.10	499	13.8
	12	36.80	499	2.82
	13	30.60	499	2.34
2a	1	155.81	757	17.7
	2	141.95	757	16.1
	3	128.14	757	14.6
	4	120.16	757	13.6
	5	184.72	757	21.0
	6	281.16	757	31.9
	7	285.15	757	32.4
	8	142.81	757	16.2
	9	46.17	757	5.24
	10	196.65	757	22.3
	11	97.26	757	11.0
	12	184.34	757	20.9
	13	621.50	757	70.6
	14	195.09	757	22.2
3a	1	67.67	646	6.56
	2	141.79	646	13.7
	3	186.47	646	18.1
	4	60.50	646	5.87
	5	160.35	646	15.5
	6	85.83	646	8.32
	7	130.79	646	12.7
	8	108.64	646	10.5
	9	110.31	646	10.7
	10	84.23	646	8.17

na: not available

TABLE XII: LOCAL EXHAUST VENTILATION EMISSION RATES (CONTINUED)

Site	Interval	Concentration (ppm)	Flow Rate (cfm)	Emission Rate (g/min)
3a	11	139.34	646	13.5
	12	145.33	646	14.1
	13	79.65	646	7.72
4a	1	141.00	838	17.7
	2	223.18	838	28.1
	3	66.74	838	8.40
6a	1	5.00	869	0.652
	2	5.13	869	0.669
	3	11.56	869	1.51
	4	11.53	869	1.50
	5	10.12	869	1.32
	6	2.55	869	0.332
	7	28.42	869	3.71
	8	18.78	869	2.45
	9	49.97	869	6.52
	10	42.53	869	5.55
	11	na	869	na
	12	16.07	869	2.10
	13	na	869	na
	14	8.74	869	1.14
	15	117.09	869	15.3
6b	1	249.26	416	15.6
	2	338.10	416	21.1
	3	500.46	416	31.2
	4	216.99	416	13.5
	5	234.10	416	14.6
	6	390.74	416	24.4
	7	359.89	416	22.5
	8	241.16	416	15.1
	9	295.22	416	18.4
	10	338.92	416	21.2
	11	354.62	416	
	12	301.90	416	18.9
	13	340.73	416	
	14	358.31	416	22.4
7a	1	349.06	231	12.1

na: not available

TABLE XII: LOCAL EXHAUST VENTILATION EMISSION RATES (CONTINUED)

Site	Interval	Concentration (ppm)	Flow Rate (cfm)	Emission Rate (g/min)
7a	2	417.29	231	14.4
	3	359.15	231	12.4
	4	153.70	231	5.32
	5	306.84	231	10.6
	6	196.90	231	6.81
	7	352.35	231	12.2
	8	120.27	231	4.16
	9	174.88	231	6.05
	10	277.92	231	9.62
	11	443.54	231	15.3
	12	81.18	231	2.81
	13	345.92	231	12.0
8a	1	502.63	1365	103
	2	354.15	1365	72.6
	3	54.94	1365	11.3
	4	332.14	1365	68.1
	5	10.53	1365	2.16
	6	504.91	1365	103
	7	578.08	1365	118
	8	526.59	1365	108
	9	759.15	1365	156
	10	750.67	1365	154
	11	548.54	1365	112
	12	758.70	1365	155
	13	565.63	1365	116
8b	1	635.80	1127	108
	2	759.38	1127	129
	3	966.46	1127	164
	4	1006.35	1127	170
	5	445.74	1127	75.4
	6	760.01	1127	129
	7	573.42	1127	97.0
	8	605.41	1127	102
	9	560.44	1127	94.8
	10	354.44	1127	60.0
	11	859.78	1127	146

na: not available

TABLE XII: LOCAL EXHAUST VENTILATION EMISSION RATES (CONTINUED)

Site	Interval	Concentration (ppm)	Flow Rate (cfm)	Emission Rate (g/min)
8b	12	463.83	1127	78.5
	13	385.83	1127	65.3
9a	1	187.33	810	28.8
	2	170.12	810	26.2
	3	9.16	810	1.41
	4	43.06	810	6.62
	5	59.26	810	9.11
	6	255.74	810	39.3
	7	14.59	810	2.24
	8	172.64	810	26.6
10a	1	70.80	315	3.35
	2	26.57	315	1.26
	3	33.10	315	1.57
	4	171.43	315	8.11
	5	155.59	315	7.36
	6	105.24	315	4.98
	7	na	na	na
	8	41.28	455	2.82
	9	82.77	455	5.65
	10	85.82	455	5.86
	11	79.45	455	5.43
	12	15.42	455	1.05
	13	116.68	455	7.97
	14	76.11	455	5.20
	15	6.77	455	0.46
10b	1	0.24	731	0.03
	2	38.50	731	4.23
	3	17.67	731	1.94
	4	20.85	731	2.29
	5	15.41	731	1.69
	6	15.31	731	1.68
	7	7.73	731	0.85
	8	25.25	755	2.86
	9	15.64	755	1.77
	10	11.51	755	1.30
	11	10.76	755	1.22

na: not available

TABLE XII: LOCAL EXHAUST VENTILATION EMISSION RATES (CONTINUED)

Site	Interval	Concentration (ppm)	Flow Rate (cfm)	Emission Rate (g/min)
10b	12	13.46	755	1.53
	13	na	755	na
	14	28.54	755	3.23
	15	217.73	755	24.7
11a	1	88.01	359	4.75
	2	180.40	359	9.73
	3	161.73	359	8.72
	4	178.46	359	9.62
	5	256.85	359	13.9
	6	301.18	359	16.2
	7	208.92	359	11.3
	8	47.67	359	2.57
	9	21.99	359	1.19
	10	98.04	359	5.29
	11	363.30	359	19.6
	12	167.33	359	9.02
	13	223.87	359	12.1
12a	1	6.50	526	0.33
	2	4.60	526	0.24
	3	28.00	526	1.43
	4	200.20	526	10.3
	5	74.40	526	3.81
	6	14.70	526	0.753
	7	76.10	526	3.90
	8	8.60	526	0.440
	9	5.20	526	0.266
	10	4.40	526	0.225
	11	34.80	526	1.78
	12	140.30	526	7.18
13a	1	48.82	104	0.760
	2	52.20	104	0.813
	3	81.65	104	1.27
	4	86.45	104	1.35
	5	71.63	104	1.12
	6	84.66	104	1.32
	7	43.86	112	0.740

na: not available

TABLE XII: LOCAL EXHAUST VENTILATION EMISSION RATES (CONTINUED)

Site	Interval	Concentration (ppm)	Flow Rate (cfm)	Emission Rate (g/min)
13a	8	50.44	112	0.851
	9	67.00	112	1.13
	10	18.34	112	0.310
	11	26.35	112	0.445
	12	67.22	112	1.13
	13	101.67	112	1.72
14a	1	164.92	595	14.7
	2	190.63	595	17.0
	3	258.56	595	23.1
	4	274.40	595	24.5
	5	195.20	595	17.4
	6	204.01	595	18.2
	7	256.29	595	22.9
	8	220.10	595	19.7
	9	120.59	595	10.8
	10	176.91	595	15.8
	11	171.52	595	15.3
	12	154.29	595	13.8
	13	185.34	595	16.6
	14	108.95	595	9.74
	15	144.90	595	13.0
	16	96.56	595	8.63

na: not available

5.3 Appendix C

Field Data for Each Site

TABLE XIII: FIELD DATA FOR SITE 1A

Degreaser:	1A
Rotameter:	003766
Rotameter Curve:	ml/min=5.54*rr
Solvent:	Methyl Chloroform
MW:	133.4

Location	Distance			
	x(in)	y(in)	z(in)	r(m)
A	51.5	68	18.25	2.22
B	111.5	77	36.25	3.56
C	255.5	62	36.25	6.74
D	327.5	54	36.25	8.48
D	159.5	62	36.25	4.44
E	<---	duct	-----	--->
F	110.5	62	132.3	4.65

	VP	V
	0.08	1132
	0.11	1327
	0.14	1497
	0.15	1550
	0.16	1601
	0.15	1550
	0.15	1550
	0.14	1497
	0.13	1443
	0.08	1132
Vav (fpm)		1428
d (in)		8
A (ft2)		0.349
Q (cfm)		498.5

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	End	Time (min)	Volume (l)	Mass front (mg)	back (mg)	Concentration (mg/m3)	Concentration (ppm)
1	A	1A	8	2	8	58	17	15	56	4.96	3.284		661.6	121.3
	B	1B	8	0	9	0	15	15	60	4.99	1.744		349.8	64.1
	C	1C	8	12	9	12	15	22	60	6.15	1.744		283.6	52.0
	D	1D	8	14	9	14	15	20	60	5.82	1.026		176.4	32.3
2	A	2A	8	58	9	58	15	15	60	4.99	0.985		197.6	36.2
	B	2B	9	0	10	0	15	16	60	5.15	0.825		160.1	29.3
	C	2C	9	12	10	14	22	18	62	6.87	0.781		113.7	20.8
	D	2D	9	14	10	14	20	22	60	6.98	0.364		52.1	9.6
3	A	3A	10	20	11	20	15	15	60	4.99	1.981		397.3	72.8
	B	3B	10	20	11	20	15	15	60	4.99	1.722		345.4	63.3
	C	3C	10	20	11	20	18	18	60	5.98	1.152		192.5	35.3
	D	3D	10	20	11	20	20	20	60	6.65	1.813		272.7	50.0
	E	1E	10	20	11	20	15	15	60	4.99	41.646		8352.6	1530.9
4	A	4A	11	32	11	33	15	15	1	0.08				
	B	4B	11	32	12	30	15	13	58	4.50	0.509		113.1	20.7
	C	4C	11	32	12	30	18	18	58	5.78	0.004		0.7	0.1
	D	4D	11	32	12	30	20	20	58	6.43	0.625		97.3	17.8
	E	2E	11	36	12	30	15	14	54	4.34	11.559		2664.7	488.4
5	A	5A	12	42	13	42	15	15	60	4.99	2.997		601.1	110.2
	B	5B	12	42	13	42	13	15	60	4.65	1.863		400.3	73.4

TABLE XIII: FIELD DATA FOR SITE 1A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Rotameter Reading End	Time (min)	Volume (l)	Mass front (mg)	back (mg)	Concentration (mg/m3)	Concentration (ppm)
	C	5C	12	42	13	42	18	17	60	5.82	0.168		28.9	5.3
	D	5D	12	42	13	42	20	19	60	6.48	0.266		41.0	7.5
	E	3E	12	42	13	42	15	13	60	4.65	5.541		1190.7	218.2
6	A	6A	13	48	14	48	15	16	60	5.15	0.708		137.4	25.2
	B	6B	13	48	14	48	15	16	60	5.15	0.359		69.7	12.8
	C	6C	13	48	14	48	17	10	60	4.49	0.002		0.4	0.1
	D	6D	13	48	14	48	19	18	60	6.15	0.314		51.1	9.4
	E	4E	14	22	14	56	13	17	34	2.83				
7	A	7A	7	24	8	24	12	12	60	3.99	0.193		48.4	8.9
	B	7B	7	24	8	24	10	10	60	3.32	0.172		51.7	9.5
	C	7C	7	24	8	24	13	13	60	4.32	0.219		50.7	9.3
	D	7D	7	24	8	24	14	14	60	4.65	0.219		47.1	8.6
	E	7E	7	24	8	24	25	25	60	8.31	2.777		334.2	61.2
8	A	8A	8	44	9	10	12	10	26	1.58	0.027		17.0	3.1
	B	8B	8	44	9	10	10	10	26	1.44	0.023		16.0	2.9
	C	8C	8	44	9	10	13	13	26	1.87	0.028		15.0	2.7
	D	8D	8	44	9	10	14	15	26	2.09	0.027		12.9	2.4
	E	8E	8	44	9	10	25	15	26	2.88	0.338		117.3	21.5
	F	1F	8	44	9	10	10	10	26	1.44	0.042		29.2	5.3
9	A	10A	9	22	10	22	10	10	60	3.32	2.135		642.3	117.7
	B	10B	9	22	10	22	10	11	60	3.49	1.049		300.6	55.1
	C	10C	9	22	10	22	13	14	60	4.49	0.758		168.9	31.0
	D	10D	9	22	10	22	15	10	60	4.16	0.994		239.2	43.8
	E	10E	9	22	10	22	15	14	60	4.82	2.862		593.8	108.8
	F	3F	9	22	10	22	10	9	60	3.16	1.53		484.5	88.8
10	A	9A	10	32	11	4	10	10	32	1.77	0.123		69.4	12.7
	B	9B	10	32	11	4	11	12	32	2.04	0.069		33.8	6.2
	C	9C	10	32	11	4	14	8	32	1.95	0.037		19.0	3.5
	D	9D	10	32	11	4	10	15	32	2.22	0.068		30.7	5.6
	E	9E	10	32	11	4	14	13	32	2.39	0.497		207.7	38.1
	F	2F	10	32	11	4	9	17	32	2.30	0.848		368.0	67.4
11	A	11A	11	14	12	6	10	10	52	2.88	1.308		454.0	83.2
	B	11B	11	14	12	6	12	10	52	3.17	1.18		372.4	68.2
	C	11C	11	14	12	6	8	8	52	2.30	1.181		512.4	93.9
	D	11D	11	14	12	6	15	15	52	4.32	1.529		353.8	64.9
	E	11E	11	14	12	6	13	12	52	3.60	3.538		982.5	180.1
	F	4F	11	14	12	6	17	5	52	3.17	0.009		2.8	0.5
12	A	12A	12	12	13	10	10	10	58	3.21	0.003		0.9	0.2

TABLE XIII: FIELD DATA FOR SITE 1A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	End	Time (min)	Volume (l)	Mass front (mg)	back (mg)	Concentration (mg/m3)	Concentration (ppm)
	B	12B	12	12	13	10	10	10	58	3.21	0.427		132.9	24.4
	C	12C	12	12	13	10	8	5	58	2.09	0.392		187.7	34.4
	D	12D	12	12	13	10	15	14	58	4.66	0.518		111.2	20.4
	E	12E	12	12	13	10	12	0	58	1.93	0.387		200.7	36.8
	F	5F	12	12	13	10	5	5	58	1.61	0.36		224.1	41.1
13	A	13A	13	30	14	0	10	10	30	1.66	0.169		101.7	18.6
	B	13B	13	30	14	0	10	10	30	1.66	0.14		84.2	15.4
	C	13C	13	30	14	0	5	14	30	1.58	0.192		121.6	22.3
	D	13D	13	30	14	0	14	13	30	2.24	0.15		66.9	12.3
	E	13E	13	30	14	0	15	15	30	2.49	0.416		166.9	30.6
	F	6F	13	30	14	0	5	0	30	0.42	0.079		190.1	34.8

TABLE XIV: FIELD DATA FOR SITE 2A

Degreaser:	2A
Rotameter:	003766
Rotameter Curve:	ml/min=5.54*rr
Solvent:	Trichloroethylene
MW:	131.4

Day 1					Day 2			
Location	Distance				Distance			
	x(in)	y(in)	z(in)	r(m)	x(in)	y(in)	z(in)	r(m)
A	42	36	58	2.04	17	66	46	2.09
B					55	56	58	2.48
C	70	70	86	3.33	98	52	77	3.43
D	32	62	30	1.93	172	52	77	4.97
E	100	68	94	3.89	<---	duct	----	---->
E2	165	67	86	5.02				
F(1-6)	<---	duct	----	---->				

	VP	V
	0.24	1961
	0.28	2118
	0.32	2264
	0.33	2299
	0.33	2299
	0.34	2334
	0.35	2368
	0.35	2368
	0.22	1877
	0.2	1790
Vav (fpm)		2168
d (in)		8
A (ft2)		0.349
Q (cfm)		757

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	1A	9	16	10	20	20	15	0.145	BDL	64	6.20	23.4	4.35
	C	1C	9	16	10	24	20	30	0.184		68	9.42	19.5	3.64
	D	1D	9	16	10	26	20	10	0.253	BDL	70	5.82	43.5	8.09
	E	1E	9	16	10	26	20	0	0.068	0.001	70	3.88	17.8	3.31
	F	1F	9	16	10	28	10	10	3.34	BDL	72	3.99	837.3	155.81
2	A	2A	10	34	11	42	15	16	0.145		68	5.84	24.8	4.62
	C	2C	10	36	11	44	20	20	0.133		68	7.53	17.7	3.28
	D	2D	10	44	11	42	20	22	0.165		58	6.75	24.5	4.55
	E	2E	10	52	11	44	20	44	0.102		52	9.22	11.1	2.06
	F	2F	10	44	11	40	10	8	2.13		56	2.79	762.9	141.95
3	A	3A	12	2	12	32	15	15	0.001		30	2.49	0.4	0.07
	C	3C	12	2	12	34	21	19	0.012		32	3.55	3.4	0.63
	D	3D	12	2	12	38	20	20	0.035		36	3.99	8.8	1.63
	E	3E	12	2	12	36	20	20	0.023		34	3.77	6.1	1.14
	F	3F	12	2	12	30	8	9	0.908		28	1.32	688.7	128.14
4	A	4A	12	48	13	50	15	21	0.107		62	6.18	17.3	3.22
	C	4C	12	48	13	52	20	15	0.116		64	6.20	18.7	3.48
	D	4D	12	46	13	50	16	16	0.172		64	5.67	30.3	5.64
	E2	4E	12	46	13	52	8	19	0.007		66	4.94	1.4	0.26
	F	4F	12	50	13	48	20	12	3.32		58	5.14	645.8	120.16
5	A	5A	13	56	14	58	15	11	0.155		62	4.47	34.7	6.46
	C	5C	13	56	14	58	15	0	0.084		62	2.58	32.6	6.07

TABLE XIV: FIELD DATA FOR SITE 2A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Rotameter Reading End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	D	5D	13	56	14	56	20	19	0.23		60	6.48	35.5	6.60
	E2	5E	13	58	15	0	21	19	0.084		62	6.87	12.2	2.28
	F	5F	13	56	14	56	10	8	2.97		60	2.99	992.8	184.73
6	A	6A	15	2	15	56	14	3	0.074		54	2.54	29.1	5.41
	C	6C	15	2	15	58	20	0	0.04		56	3.10	12.9	2.40
	D	6D	15	2	15	56	17	18	0.143		54	5.24	27.3	5.08
	E2	6E	15	2	15	58	20	20	0.022		56	6.20	3.5	0.66
	F	6F	15	2	15	54	9	8	3.7		52	2.45	1511.0	281.16
7	A	7A	8	2	8	56	20	20	0.334		54	5.98	55.8	10.39
	B	7B	8	2	8	56	20	20	0.232		54	5.98	38.8	7.22
	C	7C	8	2	8	56	20	18	0.082		54	5.68	14.4	2.68
	D	7D	8	2	8	56	25	34	0.212		54	8.83	24.0	4.47
	E	7E	8	2	8	56	12	10	5.043		54	3.29	1532.5	285.15
8	A	8A	9	4	10	4	20	12	0.207		60	5.32	38.9	7.24
	B	8B	9	4	10	4	22	19	0.125		60	6.81	18.3	3.41
	C	8C	9	4	10	4	20	15	0.148		60	5.82	25.4	4.73
	D	8D	9	4	10	4	25	29	0.124		60	8.97	13.8	2.57
	E	8E	9	4	10	4	10	8	2.296		60	2.99	767.5	142.81
9	A	9A	10	6	11	4	20	20	0.106		58	6.43	16.5	3.07
	B	9B	10	6	11	4	20	20	0.076		58	6.43	11.8	2.20
	C	9C	10	6	11	4	20	16	0.082		58	5.78	14.2	2.64
	D	9D	10	6	11	4	25	25	0.082		58	8.03	10.2	1.90
	E	9E	10	6	11	4	10	5	0.598		58	2.41	248.1	46.17
10	A	10A	11	10	11	46	21	24	0.048		36	4.49	10.7	1.99
	B	10B	11	10	11	46	20	21	0.041		36	4.09	10.0	1.87
	C	10C	11	10	11	46	18	17	0.045		36	3.49	12.9	2.40
	D	10D	11	10	11	46	28	28	0.052		36	5.58	9.3	1.73
	E	10E	11	10	11	46	10	8	1.897		36	1.79	1056.8	196.65
11	A	11A	11	58	12	32	21	20	0.039		34	3.86	10.1	1.88
	B	11B	11	58	12	32	20	20	0.024		34	3.77	6.4	1.19
	C	11C	11	58	12	32	20	16	0.034		34	3.39	10.0	1.87
	D	11D	11	58	12	32	27	23	0.042		34	4.71	8.9	1.66
	E	11E	11	58	12	32	12	10	1.083		34	2.07	522.7	97.26
12	A	12A	12	42	13	40	20	10	0.078		58	4.82	16.2	3.01
	B	12B	12	42	13	40	20	0	0.065		58	3.21	20.2	3.76
	C	12C	12	42	13	40	20	0	0.153		58	3.21	47.6	8.86
	D	12D	12	42	13	40	25	21	0.101		58	7.39	13.7	2.54
	E	12E	12	42	13	40	10	26	5.73		58	5.78	990.7	184.34
13	A	13A	13	54	15	18	30	30	0.204		84	13.96	14.6	2.72
	B	13B	13	54	15	18	20	18	0.144		84	8.84	16.3	3.03
	C	13C	13	54	15	18	20	20	0.226		84	9.31	24.3	4.52

TABLE XIV: FIELD DATA FOR SITE 2A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Rotameter Reading End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	D	13D	13	54	15	18	25	0	0.153		84	5.82	26.3	4.89
	E	13E	13	54	15	18	12	0	9.326		84	2.79	3340.1	621.50
14	A	14A	15	26	16	0	27	27	0.176		34	5.09	34.6	6.44
	B	14B	15	28	16	0	18	18	0.03		32	3.19	9.4	1.75
	C	14C	15	28	16	0	20	20	0.029		32	3.55	8.2	1.52
	D	14D	15	28	16	0	20	0	0.012		32	1.77	6.8	1.26
	E	14E	15	28	16	0	17	15	2.974		32	2.84	1048.5	195.09

TABLE XV: FIELD DATA FOR SITE 3A

Degreaser:	3A
Rotameter:	003766
Rotameter Curve:	ml/min=5.54*rr
Solvent:	Trichloroethylene
MW:	131.4

Location	Distance x(in)	y(in)	z(in)	r(m)
A	8	74	74	2.67
B	39	53	126	3.61
C	14	72	182	4.98
D	87	73	288	7.86
E	<---	DUCT	----	-->

	VP	V
	0.13	1443
	0.13	1443
	0.18	1698
	0.25	2001
	0.25	2001
	0.25	2001
	0.25	2001
	0.26	2041
	0.26	2041
	0.21	1834
Vav (fpm)		1850
d (in)		8
A (ft2)		0.349
Q (cfm)		645.9

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	End	Mass front (mg)	back (mg)	Time (min)	Volume Total (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	17A	8	28	9	36	18	17	0.394		68	6.59	59.8	11.12
	B	17B	8	28	9	36	18	14	0.261		68	6.03	43.3	8.06
	C	17C	8	28	9	36	19	22	0.142		68	7.72	18.4	3.42
	D	17D	8	28	9	36	20	22	0.236		68	7.91	29.8	5.55
	E	17E	8	28	9	36	10	10	1.370		68	3.77	363.7	67.67
2	A	18A	9	36	10	42	15	17	0.415		66	5.85	70.9	13.20
	B	18B	9	36	10	40	16	17	0.209		64	5.85	35.7	6.65
	C	18C	9	36	10	38	22	21	0.093		62	7.38	12.6	2.34
	D	18D	9	36	10	34	22	23	0.125		58	7.23	17.3	3.22
	E	18E	9	36	10	46	10	10	2.955		70	3.88	762.0	141.79
3	A	19A	10	46	11	40	21	16	0.387		54	5.53	69.9	13.01
	B	19B	10	46	11	42	16	15	0.290		56	4.81	60.3	11.22
	C	19C	10	46	11	44	23	21	0.401		58	7.07	56.7	10.56
	D	19D	10	46	11	46	24	15	0.288		60	6.48	44.4	8.27
	E	19E	10	46	11	48	10	9	3.270		62	3.26	1002.1	186.47
4	A	20A	11	48	12	24	18	19	0.161		36	3.69	43.6	8.12
	B	20B	11	48	12	20	15	15	0.047		32	2.66	17.7	3.29
	C	20C	11	48	12	20	23	22	0.102		32	3.99	25.6	4.76

TABLE XV: FIELD DATA FOR SITE 3A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Rotameter Reading End	Mass front (mg)	back (mg)	Time (min)	Volume Total (l)	Concentration (mg/m3)	Concentration (ppm)
	D	20D	11	48	12	16	15	0	0.046		28	1.16	39.5	7.36
	E	20E	11	48	12	26	9	9	0.616		38	1.89	325.1	60.50
5	A	21A	12	28	13	30	19	18	0.423		62	6.35	66.6	12.39
	B	21B	12	28	13	34	21	21	0.170		66	7.68	22.1	4.12
	C	21C	12	28	13	26	22	0	0.134		58	3.53	37.9	7.05
	D	21D	12	28	13	32	22	23	0.004		64	7.98	0.5	0.09
	E	21E	12	28	13	30	9	6	2.220		62	2.58	861.8	160.35
6	A	22A	13	36	14	38	22	21	0.230		62	7.38	31.1	5.80
	B	22B	13	36	14	38	19	22	0.123		62	7.04	17.5	3.25
	C	22C	13	36	14	40	25	0	0.100		64	4.43	22.6	4.20
	D	22D	13	36	14	42	22	22	0.026		66	8.04	3.2	0.60
	E	22E	13	36	14	38	15	8	1.822		62	3.95	461.3	85.83
7	A	23A	8	10	9	14	20	25	0.213		64	7.98	26.7	4.97
	B	23B	8	10	9	14	20	20	0.298		64	7.09	42.0	7.82
	C	23C	8	10	9	14	21	20	0.148		64	7.27	20.4	3.79
	D	23D	8	10	9	16	20	20	0.134		66	7.31	18.3	3.41
	E	23E	8	10	9	18	10	10	2.648		68	3.77	702.9	130.79
8	A	24A	9	20	10	22	20	22	0.241		62	7.21	33.4	6.22
	B	24B	9	24	10	24	20	20	0.269		60	6.65	40.5	7.53
	C	24C	9	26	10	24	20	25	0.231		58	7.23	32.0	5.95
	D	24D	9	26	10	24	20	20	0.178		58	6.43	27.7	5.15
	E	24E	9	28	10	24	10	11	1.902		56	3.26	583.9	108.64
9	A	25A	10	26	11	40	20	20	0.252		74	8.20	30.7	5.72
	B	25B	10	26	11	40	20	20	0.412		74	8.20	50.2	9.35
	C	25C	10	28	11	40	20	21	0.231		72	8.18	28.2	5.26
	D	25D	10	28	11	40	18	0	0.098		72	3.59	27.3	5.08
	E	25E	10	28	11	42	11	10	2.552		74	4.30	592.9	110.31
10	A	26A	11	50	12	24	20	18	0.137		34	3.58	38.3	7.12
	B	26B	11	50	12	24	20	20	0.125		34	3.77	33.2	6.17
	C	26C	11	50	12	26	23	6	0.106		36	2.89	36.7	6.82
	D	26D	11	50	12	28	21	22	0.089		38	4.53	19.7	3.66
	E	26E	11	50	12	30	10	3	0.652		40	1.44	452.7	84.23
11	A	27A	12	40	14	2	20	20	0.429		82	9.09	47.2	8.79
	B	27B	12	40	14	4	21	21	0.295		84	9.77	30.2	5.62
	C	27C	12	42	14	4	V=7680ML		0.219		82	7.68	28.5	5.31
	D	27D	12	42	14	6	22	21	0.179		84	10.01	17.9	3.33

TABLE XV: FIELD DATA FOR SITE 3A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	End	Mass front (mg)	back (mg)	Time (min)	Volume Total (l)	Concentration (mg/m3)	Concentration (ppm)
	E	27E	12	42	14	2	10	10	3.319		80	4.43	748.9	139.34
12	A	28A	14	10	15	34	20	0	0.315		84	4.65	67.7	12.60
	B	28B	14	10	15	36	20	21	0.375		86	9.77	38.4	7.14
	C	28C	14	12	15	36	V=7970ML		0.226		84	7.97	28.4	5.28
	D	28D	14	12	15	36	20	0	0.116		84	4.65	24.9	4.64
	E	28E	14	14	15	36	11	11	3.903		82	5.00	781.1	145.33
13	A	29A	15	50	16	20	V=1827ML		0.047		30	1.83	25.7	4.79
	B	29B	15	50	16	20	22	21	0.072		30	3.57	20.1	3.75
	C	29C	15	50	16	22	V=3003ML		0.033		32	3.00	11.0	2.04
	D	29D	15	52	16	22	20	24	0.084		30	3.66	23.0	4.27
	E	29E	15	54	16	22	10	10	0.664		28	1.55	428.1	79.65

TABLE XVI: FIELD DATA FOR SITE 4A

Degreaser:	4A
Rotameter:	003766
Rotameter Curve:	ml/min=5.23*rr
Solvent:	Trichloroethylene
MW:	131.4

Location	Distance x(in)	y(in)	z(in)	r(m)
A	64	54	17	2.17
B	136	48	-5	3.67
C	184	52	1	4.86
D	220	72	1	5.88
E	<----	duct	---	-->

	VP	V
	0.04	800
	0.05	895
	0.07	1059
	0.07	1059
	0.06	980
	0.05	895
	0.07	1059
	0.1	1266
	0.11	1327
	0.11	1327
Vav (fpm)		1067
d (in)		12
A (ft2)		0.785
Q (cfm)		838

Interval	Location	Sample	Time Start (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	30A	9	56	11	0	20	18	0.427		64	6.74	63.4	11.79
	B	30B	9	56	11	0	20	24	0.232		64	7.80	29.7	5.53
	C	30C	9	56	11	0	20	19	0.216		64	6.91	31.2	5.81
	D	30D	9	56	11	0	21	20	0.317		64	7.27	43.6	8.12
	E	30E	9	56	11	0	10	8	2.418		64	3.19	757.7	141.00
2	A	31A	11	10	11	34	20	13	0.257		24	2.19	117.1	21.80
	B	31B	11	8	11	34	20	18	0.133		26	2.74	48.6	9.04
	C	31C	11	8	11	32	20	16	0.144		24	2.39	60.2	11.20
	D	31D	11	8	11	32	20	20	0.243		24	2.66	91.4	17.00
	E	31E	11	10	11	34	10	9	1.515		24	1.26	1199.4	223.18
3	A	32A	11	44	12	48	20	18	0.032		64	6.74	4.8	0.88
	B	32B	11	44	12	50	20	16	0.059		66	6.58	9.0	1.67
	C	32C	11	44	12	50	20	20	0.066		66	7.31	9.0	1.68
	D	32D	11	44	12	50	20	17	0.066		66	6.76	9.8	1.82
	E	32E	11	44	12	48	10	7	1.081		64	3.01	358.7	66.74

TABLE XVII: FIELD DATA FOR SITE 6A

Degreaser:	6A
Rotameter:	003766
Rotameter Curve:	ml/min=5.32*rr
Solvent:	Trichloroethylene
MW:	131.4

Location	Distance x(in)	y(in)	z(in)	r(m)
A	33	75	19	2.14
B	58	75	43	2.64
C	75	65	88	3.37
D	<---	duct	---	-->

	VP	V
	0.2	1790
	0.21	1834
	0.2	1790
	0.21	1834
	0.2	1790
	0.06	980
	0.1	1266
	0.15	1550
	0.16	1601
	0.14	1497
Vav (fpm)		1593
d (in)		10
A (ft2)		0.55
Q (cfm)		869

Slot 1 V (fpm)	377
Slot 1 A (ft2)	0.82
Slot 2 V (fpm)	486
Slot 2 A (ft2)	0.47
Q (cfm)	537

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume Total (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	101A	9	8	9	34	10	4	20	25	25	23			56	6.94	0.0	0.00
	B	101B	9	8	9	34	10	4	21	22	22	22	0.132		56	6.49	20.4	3.79
	C	101C	9	8	9	34	10	4	20	20	20	20	0.132		56	5.96	22.2	4.12
	D	101D	9	8	9	34	10	4	23	27	27	30	0.215		56	8.01	26.9	5.00
2	A	102A	10	6	10	26	11	2	24	24	24	21	0.373		56	6.86	54.4	10.11
	B	102B	10	6	10	26	11	2	22	23	23	23	0.109		56	6.80	16.0	2.98
	C	102C	10	6	10	26	11	2	26	24	24	25	0.127		56	7.35	17.3	3.21
	D	102D	10	6	10	26	11	2	15	49	49	20	0.276		56	10.01	27.6	5.13
3	A	103A	11	4	11	28	11	44	24	23	23	22	0.154		40	4.92	31.3	5.83
	B	103B	11	4	11	28	11	44	17	20	20	19	0.035		40	4.02	8.7	1.62
	C	103C	11	4	11	28	11	44	26	28	28	26	0.041		40	5.75	7.1	1.33
	D	103D	11	4	11	30	11	46	17	18	18	17	0.243		42	3.91	62.1	11.56
4	A	104A	11	48			12	40	25			22	0.430		52	6.41	67.1	12.49
	B	104B	11	48			12	40	19			19	0.069		52	6.41	10.8	2.00
	C	104C	11	48			12	40	24			21	0.079		52	5.96	13.3	2.47
	D	104D	11	46			12	40	18			16	0.489		54	7.89	61.9	11.53
5	A	105A	12	46	13	22	13	56	23	20	20	23	0.219		70	8.01	27.4	5.09
	B	105B	12	46	13	22	13	56	20	18	18	0	0.024		70	5.27	4.6	0.85
	C	105C	12	46	13	20	13	56	18	7	7	0	0.005		70	2.93	1.7	0.32
	D	105D	12	46	13	22	13	56	21	13	13	0	0.241		70	4.43	54.4	10.12
6	A	106A	14	10	14	38	15	4	24	27	27	25	0.061		54	7.39	8.2	1.53
	B	106B	14	12	14	36	15	4	18	18	18	19	0.007		52	5.05	1.4	0.26

TABLE XVII: FIELD DATA FOR SITE 6A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume Total (l)	Concentration (mg/m3)	Concentration (ppm)
	C	106C	14	16	14	36	15	2	19	15	15	17	0.002		46	4.02	0.5	0.09
	D	106D	14	40			15	4	15			5	0.052		24	3.80	13.7	2.55
7	A	107A	15	14			15	36	26			24	0.030		22	6.50	4.6	0.86
	B	107B	15	12			15	36	20			16	0.022		24	5.26	4.2	0.78
	C	107C	15	12			15	36	18			18	0.021		24	6.22	3.4	0.63
	D	107D	15	14			15	36	15			15	0.746		22	4.88	152.8	28.42
8	A	108A	8	4	8	28	9	6	20	23	23	24	0.170		62	7.50	22.7	4.22
	B	108B	8	4	8	28	8	58	20	12	12	19	0.066		54	4.52	14.6	2.72
	C	108C	8	6	8	26	8	58	20	24	24	25	0.096		52	6.51	14.7	2.74
	D	108D	8	6	8	30	9	6	15	12	12	12	0.406		60	4.02	100.9	18.78
9	A	109A	9	8	9	24	10	2	23	23	23	23	0.734		54	6.61	111.1	20.67
	B	109B	9	8	9	24	10	2	16	16	16	14	0.179		54	4.39	40.7	7.58
	C	109C	9	6	9	24	10	2	23	23	23	24	0.221		56	6.95	31.8	5.91
	D	109D	9	6	9	26	10	4	15	15	15	16	1.270		58	4.73	268.5	49.97
10	A	110A	10	6	10	30	11	0	27	27	27	25	0.332		54	7.60	43.7	8.13
	B	110B	10	6	10	30	11	0	15	15	15	18	0.105		54	4.55	23.1	4.30
	C	110C	10	6	10	28	11	0	26	24	24	25	0.118		54	7.10	16.6	3.09
	D	110D	10	6	10	30	11	2	17	15	15	16	1.070		56	4.68	228.6	42.53
11	A	111A	11	2	11	28	11	58	26	24	24	25	0.001		56	7.37	0.1	0.03
	B	111B	11	2	11	26	11	56	17	15	15	15	0.047		54	4.44	10.6	1.97
	C	111C	11	2	11	26	11	56	25	21	21	0	0.004		54	4.61	0.9	0.16
	D	111D	11	4	11	30	11	58	16	17	17	15			54	4.67	0.0	0.00
12	A	112A	12	2	12	16	12	32	24	23	23	17	0.006		30	3.45	1.7	0.32
	B	112B	12	2	12	16	12	32	20	20	20	17	0.046		30	3.06	15.0	2.79
	C	112C	12	2	12	14	12	30	19	20	20	16	0.039		28	2.78	14.0	2.61
	D	112D	12	2			12	32	14			0	0.413		30	4.78	86.4	16.07
13	A	113A	12	40	13	10	13	44	20	0	20	21	0.173		64	5.30	32.6	6.07
	B	113B	12	40	13	10	13	42	16	16	16	13	0.036		62	5.02	7.2	1.33
	C	113C	12	40	13	10	13	42	18	16	16	16	0.028		62	5.44	5.1	0.96
	D	113D	12	40	13	10	13	44	15	14	14	16			64	5.03	0.0	0.00
14	A	114A	13	46	14	14	14	42	17	22	22	17	0.136		56	5.81	23.4	4.36
	B	114B	13	44	14	12	14	42	15	15	15	16	0.050		58	4.71	10.6	1.98
	C	114C	13	44	14	12	14	42	16	16	16	15	0.042		58	4.86	8.6	1.61
	D	114D	13	46	14	14	14	42	15	15	15	15	0.210		56	4.47	47.0	8.74
15	A	115A	14	54			15	22	20			17	0.031		28	3.27	9.5	1.76
	B	115B	14	54			15	22	20			15	0.008		28	2.95	2.7	0.50
	C	115C	14	54			15	22	20			16	0.006		28	2.61	2.3	0.43
	D	115D	14	54			15	22	15			14	0.703		28	1.12	629.3	117.09

TABLE XVIII: FIELD DATA FOR SITE 6B

Degreaser:	6B
Rotameter:	007699
Rotameter Curve:	ml/min=5.32*rr
Solvent:	Trichloroethylene
MW:	131.4

Location	Distance x(in)	y(in)	z(in)	r(m)
A	20.5	63	22	1.77
B	1.5	60	77	2.48
C	98.5	48	77	3.40
D	<----	DUCT	----	-->

	VP	V
	0.16	1601
	0.17	1650
	0.14	1497
	0.09	1201
	0.02	566
	0.01	400.2
	0.03	693.2
	0.04	800.4
	0.04	800.4
	0.03	693.2
Vav (fpm)		990.2
d (in)		8
A (ft2)		0.349
Q (cfm)		345.7

Slot 1 V (fpm)	534
Slot 1 A (ft2)	0.333
Slot 2 V (fpm)	714
Slot 2 A (ft2)	0.333
Q (cfm)	415.6

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End hr	min	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	116A	8	38			9	34	20			17	0.162		56	5.51	29.4	5.47
	B	116B	8	38			9	36	21			21	0.144		58	6.48	22.2	4.14
	C	116C	8	38			9	36	20			18	0.288		58	5.86	49.1	9.14
	D	116D	8	38			9	38	15			14	6.2		60	4.63	1339.6	249.26
2	A	117A	9	36	9	56	10	26	18	17	17	15	0.28		50	4.42	63.4	11.80
	B	117B	9	36	9	58	10	28	21	27	27	28	0.009		52	7.20	1.3	0.23
	C	117C	9	36	9	58	10	24	19	20	20	17	0.255		48	4.84	52.7	9.80
	D	117D	9	38	9	58	10	24	15	15	15	15	6.67		46	3.67	1817.0	338.10
3	A	118A	10	28	10	58	11	50	17	16	16	13	0.771		82	6.64	116.0	21.59
	B	118B	10	30	10	58	11	50	29	27	27	21	0.457		80	10.81	42.3	7.87
	C	118C	10	26	10	58	11	50	16	16	16	13	0.575		84	6.74	85.4	15.89
	D	118D	10	26	10	58	11	50	14	15	15	15	17.8		84	6.62	2689.6	500.46
4	A	119A	11	58			12	40	20			22	0.004		42	4.69	0.9	0.16
	B	119B	11	58			12	40	20			15	0.0005		42	3.91	0.1	0.02
	C	119C	12	2			12	40	19			18	0.007		38	3.74	1.9	0.35
	D	119D	11	58			12	40	18			17	4.56		42	3.91	1166.2	216.99
5	A	120A	12	46	13	20	13	42	22	22	22	23	0.226		56	6.61	34.2	6.36
	B	120B	12	46	13	20	13	42	18	17	17	14	0.003		56	4.98	0.6	0.11
	C	120C	12	46	13	20	13	44	17	21	21	21	0.157		58	6.12	25.7	4.78
	D	120D	12	46	13	20	13	42	20	21	21	19	7.61		56	6.05	1258.1	234.10
6	A	121A	13	44	14	14	14	48	23	20	20	22	0.248		64	7.23	34.3	6.38
	B	121B	13	44	14	14	14	50	16	15	15	9	0.006		66	4.77	1.3	0.23
	C	121C	13	46	14	14	14	50	18	18	18	20	0.313		64	6.32	49.5	9.22

TABLE XVIII: FIELD DATA FOR SITE 6B (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End hr	min	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	D	121D	13	44	14	14	14	48	18	18	18	15	12.3		64	5.86	2099.9	390.74
7	A	122A	14	50	15	14	15	42	20	20	20	19	0.344		52	5.46	63.0	11.73
	B	122B	14	52	15	14	15	44	20	15	15	16	0.009		52	4.52	2.0	0.37
	C	122C	14	52	15	14	15	44	20	18	18	20	0.397		52	5.26	75.5	14.05
	D	122D	14	50	15	14	15	42	15	15	15	16	8.17		52	4.22	1934.1	359.89
8	A	123A	8	2	8	36	8	58	18	21	21	20	24		56	5.93	4049.6	753.53
	B	123B	8	2	8	36	8	58	20	18	18	14	0.195		56	5.31	36.7	6.83
	C	123C	8	2	8	36	9	2	19	21	21	21	0.118		60	6.52	18.1	3.37
	D	123D	8	2	8	36	8	58	14	16	16	0	4.73		56	3.65	1296.1	241.16
9	A	124A	9	0	9	18	10	2	21	18	18	19	32.1		62	6.20	5179.3	963.72
	B	124B	9	2	9	18	10	6	23	20	20	20	0.185		64	6.94	26.7	4.96
	C	124C	9	4	9	18	10	0	21	20	20	18	0.145		56	5.77	25.1	4.67
	D	124D	9	0	9	18	10	4	15	15	15	7	6.55		64	4.13	1586.6	295.22
10	A	125A	10	4	10	34	11	6	19	15	15	18	33.1		62	5.52	5994.0	1115.33
	B	125B	10	6	10	34	11	6	20	20	20	17	0.115		60	6.13	18.8	3.49
	C	125C	10	2	10	30	11	8	19	21	21	20	0.201		66	7.12	28.2	5.25
	D	125D	10	4	10	34	11	4	15	12	12	4	6.25		60	3.43	1821.4	338.92
11	A	126A	11	6	11	34	11	56	19	18	18	18	13.7		50	4.86	2817.5	524.26
	B	126B	11	6	11	34	11	54	16	15	15	14	0.008		48	3.85	2.1	0.39
	C	126C	11	8	11	34	11	54	20	20	20	20	0.15		46	4.89	30.6	5.70
	D	126D	11	4	11	34	11	58	15	9	9	9	5.84		54	3.06	1905.8	354.62
12	A	127A	11	56			12	36	23			22	6.61		40	4.79	1380.5	256.88
	B	127B	11	54			12	36	23			20	0.108		42	4.80	22.5	4.18
	C	127C	11	54			12	36	20			16	0.16		42	4.02	39.8	7.40
	D	127D	11	58			12	36	15			10	4.1		38	2.53	1622.5	301.90
13	A	128A	12	38	13	10	13	40	21	23	23	20	9.1		62	7.18	1268.0	235.94
	B	128B	12	38	13	10	13	44	20	19	19	18	0.186		66	6.67	27.9	5.19
	C	128C	12	38	13	8	13	46	20	18	18	19	0.237		68	6.77	35.0	6.51
	D	128D	12	38	13	10	13	40	15	11	11	0	5.66		62	3.09	1831.2	340.73
.14	A	129A	13	42	14	14	14	46	20	20	20	18	10		64	6.64	1506.2	280.26
	B	129B	13	46	14	14	14	44	19	17	17	16	0.009		58	5.31	1.7	0.32
	C	129C	13	48	14	14	14	46	20	18	18	20	0.454		58	5.86	77.4	14.41
	D	129D	13	42	14	14	14	48	15	10	10	5	6.71		66	3.48	1925.6	358.31

TABLE XIX: FIELD DATA FOR SITE 7A

Degreaser:	7A
Rotameter:	007699
Rotameter Curve:	ml/min=5.32*rr
Solvent:	Trichloroethylene
MW:	131.4

Slot 1 V (fpm)	231
Slot 1 A (ft2)	0.5
Slot 2 V (fpm)	230
Slot 2 A (ft2)	0.5
Q (cfm)	231

Location	Distance			
	x(in)	y(in)	z(in)	r(m)
A	0	51	18.5	1.378
B	8	54	37.5	1.682
C	4	55	117.5	3.297
D	<---	DUCT	----	--->

			Time						Rotameter Reading				Mass					
			Start		Mid		End		Start	Mid	Mid	End	front	back	Time	Volume	Concentration	Concentration
Interval	Location	Sample	(hr)	(min)	(hr)	(min)	(hr)	(min)					(mg)	(mg)	(min)	(l)	(mg/m3)	(ppm)
1	A	130A	8	34	9	8	9	36	20	15	18	15	0.980		62	5.62	174.3	32.43
	B	130B	8	37	9	10	9	46	20	20	20	20	2.000		69	7.34	272.4	50.69
	C	130C	8	38	9	10	9	48	24	21	21	20	2.000		70	7.97	250.8	46.67
	D	130D	8	36	9	8	9	40	15	15	15	17	9.900		64	5.28	1875.9	349.06
2	A	131A	9	37	10	4	10	38	20	20	20	20	1.500		61	6.49	231.1	43.00
	B	131B	9	46	10	6	10	38	20	20	20	18	2.200		52	5.36	410.3	76.34
	C	131C	9	48	10	6	10	40	20	20	20	20	2.100		52	5.53	379.6	70.62
	D	131D	9	40	10	6	10	36	17	17	17	15	11.000		56	4.91	2242.6	417.29
3	A	132A	10	38	11	4	11	48	19	19	19	19	2.000		70	7.08	282.7	52.60
	B	132B	10	38	11	4	11	49	19	20	20	19	2.800		71	7.37	380.1	70.74
	C	132C	10	40	11	6	11	50	20	20	20	20	2.500		70	7.45	335.7	62.46
	D	132D	10	36	11	4	11	51	15	15	15	21	13.000		75	6.74	1930.2	359.15
4	A	133A	11	58			12	32	19			19	1.000		34	5.77	173.2	32.24
	B	133B	11	58			12	33	20			20	1.100		35	7.34	149.8	27.88
	C	133C	12	0			12	12	19			0	0.047		12	8.19	5.7	1.07
	D	133D	12	0			12	34	14			15	4.500		34	5.45	826.0	153.70
5	A	134A	12	39	13	10	13	39	19	19	19	17	1.900		60	5.91	321.5	59.82
	B	134B	12	39	13	10	13	40	20	19	19	20	2.700		61	6.33	426.7	79.39
	C	134C	12	39	13	10	13	42	21	24	24	22	3.100		63	7.63	406.5	75.64
	D	134D	12	39	13	10	13	44	15	12	12	13	7.400		65	4.49	1649.1	306.84
6	A	135A	13	40	14	10	14	41	20	20	20	21	1.900		61	6.57	289.1	53.79
	B	135B	13	42	14	10	14	43	19	20	20	19	2.200		61	6.33	347.7	64.69
	C	135C	13	44	14	10	14	46	21	22	22	21	2.200		62	7.09	310.2	57.73
	D	135D	13	44			14	0	13			12	1.000		16	7.18	139.2	25.91
	D	135E	14	7			14	47	11			11	4.900		40	3.44	1425.8	265.30
7	A	136A	14	42	15	6	15	40	20	18	18	17	1.400		58	5.59	250.4	46.59
	B	136B	14	44	15	6	15	42	19	19	19	19	1.900		58	5.86	324.1	60.30
	C	136C	14	46	15	6	15	44	22	21	21	21	2.100		58	6.53	321.4	59.81

TABLE XIX: FIELD DATA FOR SITE 7A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	D	136D	14	47	15	8	15	45	11	11	11	13	6.800		58	3.59	1893.6	352.35
8	A	137A	15	42			16	14	21			20	1.600		32	6.49	246.5	45.87
	B	137B	15	43			16	16	20			17	1.000		33	7.21	138.8	25.82
	C	137C	15	45			16	19	22			21	1.000		34	4.84	206.6	38.44
	D	137D	15	46			16	18	13			11	4.300		32	6.65	646.4	120.27
9	A	144A	8	2	8	36	9	4	20	20	20	20	0.470		62	6.60	71.2	13.26
	B	144B	8	2	8	36	9	4	19	18	18	19	0.640		62	6.10	104.9	19.52
	C	144C	8	2	8	36	9	6	22	22	22	22	0.750		64	7.49	100.1	18.63
	D	144D	8	2	8	36	9	6	10	10	10	10	3.200		64	3.40	939.8	174.88
10	A	145A	9	4	9	28	10	4	20	18	18	16	1.300		60	5.68	228.8	42.57
	B	145B	9	4	9	28	10	4	18	17	17	18	1.600		60	5.59	286.4	53.30
	C	145C	9	6	9	28	10	4	21	22	22	22	1.900		58	6.73	282.3	52.53
	D	145D	9	6	9	28	10	4	10	13	13	10	5.300		58	3.55	1493.6	277.92
11	A	146A	10	6	10	30	11	6	20	22	22	20	2.100		60	6.70	313.3	58.29
	B	146B	10	6	10	30	11	6	20	20	20	20	2.800		60	6.38	438.6	81.61
	C	146C	10	6	10	30	11	0	20	21	21	0	2.700		54	4.29	628.9	117.02
	D	146D	10	6	10	30	11	6	10	9	9	9	7.000		60	2.94	2383.7	443.54
12	A	147A	11	8	11	24	11	58	19	17	17	20	1.100		50	4.88	225.5	41.96
	B	147B	11	8	11	24	11	58	19	20	20	18	1.400		50	5.10	274.7	51.11
	C	147C	11	8	11	24	11	58	18	20	20	21	1.400		50	5.33	262.9	48.92
	D	147D	11	8	11	24	11	58	10	10	10	11	1.200		50	2.75	436.3	81.18
13	A	148A	12	0	12	26	12	52	18	18	18	19	3.700		52	5.05	732.9	136.37
	B	148B	12	0	12	26	12	52	19	19	19	21	1.500		52	5.39	278.1	51.74
	C	148C	12	0	12	26	12	52	21	20	20	21	1.700		52	5.67	299.8	55.78
	D	148D	12	0	12	26	12	52	11	10	10	11	5.400		52	2.90	1859.0	345.92

TABLE XX: FIELD DATA FOR SITE 8A

Degreaser:	8A
Rotameter:	
Rotameter Curve:	ml/min=6.036*rr-25.403
Solvent:	Trichloroethylene
MW:	131.4

Location	Distance x(in)	y(in)	z(in)	r(m)
A	1	49	12	1.282
B	1	50	44	1.692
C	<----	duct	----	--->
D	<----	large doorway-----		--->
E	<-176" from 8A, 252" from 8B->			

	VP	V
	0.04	800.4
	0.03	693.2
	0.02	566
	0.02	566
	0.03	693.2
	0.09	1201
	0.08	1132
	0.06	980.3
	0.03	693.2
	0.01	400.2
Vav (fpm)		772.5
d (in)		18
A (ft2)		1.767
Q (cfm)		1365

Slot 1 V (fpm)	427.5
Slot 1 A (ft2)	2.1528
Slot 2 V (fpm)	513
Slot 2 A (ft2)	2.1528
Q (cfm)	2024.7

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	160A	11	10			12	0	15			17	0.757	0.000	50	3.56	212.7	39.58
	B	160B	11	10			12	0	15			14	0.031	0.000	50	3.11	10.0	1.86
	C	160C	11	12			12	0	10			8	3.740	0.010	48	1.39	2701.3	502.63
	E	160D	11	16			12	6	15			15	0.032	0.000	50	3.26	9.8	1.83
2	A	162A	12	16			12	34	16			16	0.216	0.011	18	1.28	177.2	32.97
	B	162B	12	14			12	34	14			13	0.097	0.008	20	1.12	93.6	17.42
	C	162C	12	16			12	36	13			13	2.010	0.010	20	1.06	1903.3	354.15
	E	162E	12	18			12	38	15			16	0.020	0.008	20	1.36	20.5	3.82
3	A	164A	12	42	13	10	13	40	17	16	16	11	0.035	0.012	58	3.76	12.5	2.33
	B	164B	12	42	13	10	13	42	14	15	15	11	0.450		60	3.44	130.9	24.36
	C	164C	12	44	13	12	13	44	15	13	13	13	0.989	0.001	60	3.35	295.3	54.94
	E	164E	12	46	13	14	13	56	17	15	15	16	0.281		70	4.86	57.9	10.77
4	A	166A	13	42			14	20	16			19	0.767	0.000	38	3.05	251.6	46.81
	B	166B	13	44			14	20	12			12	0.247	0.000	36	1.69	145.9	27.15
disconnected from duct	C	166C	13	46			14	20	14			15	3.770	0.000	34	2.11	1785.0	332.14
	E	166E	13	58	14	28	15	28	15	15	15	15	7.470	0.000	90	5.86	1274.2	237.09
5	A	168A	14	34			15	28	16			17	0.781	0.000	54	4.01	194.9	36.27
	B	168B	14	36			15	28	14			13	0.223	0.001	52	2.92	76.8	14.29
	C	168C	14	38			15	30	13			14	0.163	0.002	52	2.92	56.6	10.53
1-5	D	160D	11	16	12	8	12	48	15	13	13	12	0.364	0.000	254	10.23	35.6	6.62
6	A	180A	8	0	8	34	9	4	15	14	14	14	1.670	0.003	64	3.89	430.6	80.12
	B	180B	8	0	8	34	9	4	15	15	15	12	0.423	0.003	64	3.90	109.3	20.34
	C	180C	8	0	8	34	9	6	15	15	15	14	11.400	0.004	66	4.20	2713.5	504.91
	E	180E	8	0	8	34	9	0	15	17	17	13	0.319	0.000	60	4.11	77.5	14.43

TABLE XX: FIELD DATA FOR SITE 8A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
7	A	182A	9	6	9	34	10	10	15	13	13	14	1.720	0.003	64	3.67	469.0	87.26
	B	182B	9	4	9	34	10	10	12	14	14	14	0.418	0.003	66	3.72	113.2	21.06
	C	182C	9	6	9	34	10	8	13	14	14	13	10.800	0.003	62	3.48	3106.7	578.08
	E	182E	9	4	9	34	10	2	15	15	15	17	.0.324	0.003	58	3.95	82.8	15.42
8	A	184A	10	10	10	30	11	2	14	15	15	15	1.520		52	3.33	456.9	85.01
	B	184B	10	10	10	30	11	2	13	12	12	14	0.437	0.002	52	2.70	162.6	30.26
	C	184C	10	8	10	30	11	4	15	13	13	13	8.780	0.006	56	3.10	2830.0	526.59
	E	184E	10	2	10	30	11	0	14	15	15	15	0.428	0.002	58	3.69	116.4	21.66
9	A	186A	11	2	11	30	12	0	14	14	14	16	2.200	0.012	58	3.61	612.9	114.04
	B	186B	11	4	11	30	12	0	14	14	14	14	0.780	0.017	56	3.31	240.8	44.81
	C	186C	11	4	11	30	12	0	13	14	14	13	12.800	0.014	56	3.14	4079.9	759.15
	E	186E	11	2	11	30	12	0	15	15	15	15	0.272	0.013	58	3.78	75.4	14.04
10	A	188A	12	6			12	40	14			14	1.240	0.003	34	2.01	618.6	115.10
	B	188B	12	6			12	38	14			14	0.245	0.003	32	1.89	131.1	24.40
	C	188C	12	6			12	42	10			13	6.390	0.002	36	1.58	4034.3	750.67
	E	188E	12	6			12	36	17			16	0.174	0.002	30	2.23	79.1	14.71
11	A	190A	12	42	13	18	13	32	16	15	15	15	1.270	0.003	50	3.37	378.2	70.38
	B	190B	12	42	13	20	13	34	14	14	14	15	0.423	0.003	52	3.12	136.7	25.44
	C	190C	12	42			13	34	14			14	9.060	0.000	52	3.07	2948.0	548.54
	E	190E	12	42	13	16	13	30	15	15	15	15	0.251	0.000	48	3.13	80.3	14.94
12	A	192A	13	32	14	0	14	30	15	14	14	15	1.360	0.000	58	3.60	377.5	70.23
	B	192B	13	34	14	0	14	30	15	13	13	15	0.488	0.022	56	3.31	154.1	28.67
	C	192C	13	36	14	6	14	30	13	12	12	13	11.000	0.020	54	2.70	4077.4	758.70
	E	192E	13	32	14	0	14	38	15	17	17	15	0.349		66	4.70	74.3	13.82
13	A	194A	14	30			15	14	15			15	0.494	0.003	44	2.87	173.4	32.27
	B	194B	14	30			15	14	15			12	0.315	0.002	44	2.47	128.5	23.90
	C	194C	14	32			15	14	15			14	7.930	0.001	42	2.61	3039.8	565.63
	E	194E	14	38			15	14	15			14	0.252	0.004	36	2.24	114.5	21.30
6	D	180D	8	0	8	34	9	0	15	19	19	16	0.211	0.000	60	4.71	44.8	8.33
7-9	D	182D	9	34	10	2	10	30	20	20	20	20	0.456	0.010	146	12.65	36.8	6.86
			11	0	11	30	12	0	21	22	22	0						
10-13	D	188D	12	6	12	36	13	16	14	13	13	10	0.306	0.003	188	7.82	39.5	7.35
			14	0	14	38	15	14	11	11	11	8						

TABLE XXI: FIELD DATA FOR SITE 8B

Degreaser:	8B
Rotameter:	
Rotameter Curve:	ml/min=6.036*rr-25.403
Solvent:	Trichloroethylene
MW:	131.4

Location	Distance x(in)	y(in)	z(in)	r(m)
A	5.00	41.00	33.50	1.35
B	7.00	47.00	66.00	2.07
C	<---	duct	----	--->
D	<---	small door --		--->

	VP	V
	0.01	400
	0.02	566
	0.025	633
	0.035	749
	0.06	980
	0.11	1327
	0.1	1266
	0.07	1059
	0.03	693
	0.01	400
Vav (fpm)		807
d (in)		16
A (ft2)		1.40
Q (cfm)		1127

Slot 1 V (fpm)	921
Slot 1 A (ft2)	0.83
Slot 2 V (fpm)	946
Slot 2 A (ft2)	0.83
Q (cfm)	1556

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	161A	11	18			12	4	15			15	0.032	0.008	46	3.00	13.3	2.48
	B	161B	11	16			12	4	15			13	0.028	0.000	48	2.84	9.9	1.84
	C	161C	11	14			12	4	10			11	6.480	0.008	50	1.90	3416.9	635.80
2	A	163A	12	18			12	36	16			18	0.016	0.010	18	1.39	18.7	3.48
	B	163B	12	18			12	38	13			14	0.015	0.007	20	1.12	19.6	3.65
	C	163C	12	18			12	34	13			12	3.260	0.008	16	0.80	4081.1	759.38
3	A	165A	12	44	13	12	13	46	15	16	16	15	1.280	0.000	62	4.23	302.9	56.36
	B	165B	12	44	13	12	13	48	14	15	15	13	0.782	0.000	64	3.87	202.2	37.63
	C	165C	12	42	13	14	13	52	10	12	12	11	15.500	0.000	70	2.98	5194.0	966.46
4	A	167A	13	48			14	20	15			18	0.660	0.000	32	2.37	278.0	51.73
	B	167B	13	50			14	20	13			15	0.362	0.000	30	1.77	204.2	37.99
	C	167C	13	54			14	20	11			10	5.340	0.000	26	0.99	5408.3	1006.35
5	A	169A	14	40			15	28	16			16	0.822	0.002	48	3.42	241.2	44.88
	B	169B	14	42			15	28	13			13	0.482	0.009	46	2.44	201.1	37.43
	C	169C	14	40			15	30	12			10	4.910		50	2.05	2395.5	445.74
1-5	D	161D	11	14	12	8	12	50	15	30	30	12	0.869	0.008	186	10.68	82.1	15.28
			13	12	13	21	14	20	5	15	10	8						
6	A	181A	8	6	8	34	9	10	15	13	13	14	0.923	0.002	64	3.67	251.8	46.85
	B	181B	8	6	8	34	9	10	15	15	15	15	0.615	0.003	64	4.17	148.2	27.58
	C	181C	8	4	8	34	9	6	16	12	12	13	13.600	0.002	62	3.37	4030.7	750.01
7	A	183A	9	12	9	36	10	4	14	13	13	11	0.780	0.001	52	2.66	293.3	54.57
	B	183B	9	10	9	36	10	4	15	15	15	16	0.681	0.002	54	3.60	189.6	35.28
	C	183C	9	8	9	36	10	6	15	16	16	14	11.900	0.003	58	3.86	3081.7	573.42

TABLE XXI: FIELD DATA FOR SITE 8B (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
8	A	185A	10	6	10	32	11	8	15	14	14	14	1.070	0.002	62	3.74	286.4	53.29
	B	185B	10	4	10	30	11	6	15	15	15	15	14.500	0.002	62	4.04	3590.9	668.17
	C	185C	10	6	10	30	11	6	14	13	13	15	11.300	0.002	60	3.47	3253.6	605.41
9	A	187A	11	8	11	34	12	2	14	15	15	13	1.010	0.014	54	3.27	313.2	58.27
	B	187B	11	6	11	34	12	2	15	17	17	16	0.689	0.014	56	4.07	172.7	32.14
	C	187C	11	6	11	32	12	2	15	15	15	14	10.700	0.014	56	3.56	3011.9	560.44
10	A	189A	12	6			12	44	14			13	0.410	0.003	38	2.13	193.8	36.06
	B	189B	12	6			12	44	15			16	0.297	0.002	38	2.59	115.4	21.48
	C	189C	12	6			12	42	15			10	3.430	0.002	36	1.80	1904.9	354.44
11	A	191A	12	44			13	38	15			14	0.948	0.000	54	3.35	282.6	52.59
	B	191B	12	44			13	38	17			16	0.562	0.000	54	4.01	140.3	26.10
	C	191C	12	44			13	36	13			11	11.300	0.000	52	2.45	4620.7	859.78
12	A	193A	13	38	14	4	14	36	14	12	12	12	0.738	0.020	58	2.88	262.8	48.89
	B	193B	13	38	14	2	14	36	17	15	15	15	0.654	0.024	58	3.92	172.8	32.16
	C	193C	13	38	14	4	14	34	15	14	14	13	8.200	0.020	56	3.30	2492.7	463.83
13	A	195A	14	36			15	16	12			14	0.345	0.019	40	2.12	171.5	31.91
	B	195B	14	38			15	16	15			18	0.316	0.022	38	2.82	119.9	22.31
	C	195C	14	36			15	16	13			15	4.870	0.032	40	2.36	2073.5	385.83
6-9	D	181D	8	6	8	34	9	6	15	12	12	14	1.230	0.017	234	9.23	135.1	25.14
			9	36	10	6	10	30	12	10	10	10						
			11	4	11	32	12	0	10	10	10	0						
10-13	D	189D	12	8	12	42	13	36	10	10	10	11	1.020	0.002	188	6.82	149.9	27.89
			14	4	14	34	15	16	10	10	10	10						

TABLE XXII: FIELD DATA FOR SITE 9A

Degreaser:	9a
Rotameter:	7699
Rotameter Curve:	ml/min=5.32*rr
Solvent:	Perchloroethylene
MW:	165.8

Location	Distance			
	x(in)	y(in)	z(in)	r(m)
A	23	80	24	2.2
B	55	76	60	2.829
C	73	66	132	4.182
D	-72	65	836	21.38
E	<----	----	duct	--->

	VP	V
	0.14	1497
	0.145	1524
	0.14	1497
	0.15	1550
	0.155	1576
	0.15	1550
	0.1	1266
Vav (fpm)		1494
d (in)		
A (ft2)		0.51
Q (cfm)		764

Slot 1 V (fpm)	922.8
Slot 1 A (ft2)	0.431
Slot 2 V (fpm)	957.5
Slot 2 A (ft2)	0.431
Q (cfm)	809.6

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	200A	10	5	10	34	11	6	20	25	25	22	0.247		61	7.47	33.1	4.87
	B	200B	10	5	10	34	11	6	20	20	20	20	0.203		61	6.49	31.3	4.61
	C	200C	10	14	10	34	11	6	20	20	20	19	0.150		52	5.45	27.5	4.06
	D	200D	10	7	10	36	11	8	20	20	20	20	0.180		61	6.49	27.7	4.09
	E	200E	10	6	10	34	11	8	10	10	10	10	4.190		62	3.30	1270.3	187.33
2	A	201A	11	10	11	44	12	0	23	23	23	21	0.049		50	6.03	8.1	1.20
	B	201B	11	10	11	45	12	0	22	20	20	20	0.090		50	5.51	16.3	2.41
	C	201C	11	10	11	45	12	0	18	20	20	20	0.062		50	5.13	12.1	1.78
	D	201D	11	12	11	46	12	0	19	19	19	20	0.053		48	4.89	10.8	1.60
	E	201E	11	12	11	48	12	0	10	11	11	11	3.130		48	2.71	1153.6	170.12
3	A	202A	12	7	12	44	12	52	21	22	22	22	0.046		45	5.17	8.9	1.31
	B	202B	12	10	12	44	12	52	20	20	20	20	0.036		42	4.47	8.1	1.19
	C	202C	12	10	12	45	12	52	20	20	20	20	0.029		42	4.47	6.5	0.96
	D	202D	12	10	12	45	12	52	20	19	19	19	0.037		42	4.34	8.5	1.26
	E	202E	12	12	12	46	12	52	12	11	11	11	0.151		40	2.43	62.1	9.16
4	A	203A	12	56	13	26	13	56	20	19	19	18	0.088		60	6.06	14.5	2.14
	B	203B	12	56	13	26	13	56	18	20	20	20	0.035		60	6.22	5.6	0.83
	C	203C	12	56	13	26	13	58	20	26	26	26	0.028		62	8.10	3.5	0.51
	D	203D	12	56	13	26	13	58	20	20	20	20	0.028		62	6.60	4.2	0.63
	E	203E	12	56	13	26	13	58	10	10	10	11	0.988		62	3.38	292.0	43.06
5	A	204A	14	4	14	36	14	58	18	18	18	18	0.069		54	5.17	13.3	1.97
	B	204B	14	4	14	36	14	58	21	21	21	20	0.019		54	5.97	3.2	0.47
	C	204C	14	6	14	36	14	58	27	27	27	27	0.021		52	7.47	2.8	0.41
	D	204D	14	7	14	40	14	58	18	18	18	19	0.017		51	4.93	3.4	0.51
	E	204E	14	8	14	40	14	58	12	11	11	11	1.210		50	3.01	401.8	59.26
6	A	205A	15	4			15	30	18			16	0.111		26	2.35	47.2	6.96

TABLE XXII: FIELD DATA FOR SITE 9A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	B	205B	15	5			15	30	21			20	0.048		25	2.73	17.6	2.60
	C	205C	15	5			15	31	27			27	0.035		26	3.73	9.4	1.38
	D	205D	15	5			15	32	18			18	0.033		27	2.59	12.8	1.88
	E	205E	15	6			15	34	12			12	3.100		28	1.79	1734.2	255.74
7	A	206A	8	48	9	22	9	46	20	20	20	20	0.038		58	6.17	6.2	0.91
	B	206B	8	48	9	22	9	46	20	21	21	23	0.037		58	6.52	5.7	0.84
	C	206C	8	50	9	22	9	46	20	22	22	20	0.032		56	6.26	5.1	0.75
	D	206D	8	52	9	22	9	46	20	20	20	20	0.034		54	5.75	5.9	0.87
	E	206E	8	48	9	22	9	46	10	10	10	12	0.318		58	3.21	99.0	14.59
8	A	207A	10	4	10	30	11	34	20	22	22	22	0.136		90	10.40	13.1	1.93
	B	207B	10	6	10	30	11	34	21	22	22	21	0.185		88	10.07	18.4	2.71
	C	207C	10	6	10	30	11	34	21	21	21	20	0.122		88	9.66	12.6	1.86
	D	207D	10	10	10	32	11	36	21	20	20	20	0.056		86	9.21	6.1	0.90
	E	207E	10	8	10	32	11	40	10	10	10	10	5.730		92	4.89	1170.7	172.64

TABLE XXIII: FIELD DATA FOR SITE 10A

Degreaser:	10A
Rotameter:	003766
Rotameter Curve:	ml/min=2.262258*rr-16.0255
Solvent:	Trichloroethylene
MW:	131.4

Day 1 Location	Distance x(in)	y(in)	z(in)	r(m)	Day 2 Distance x(in)	y(in)	z(in)	r(m)
A (1-3)	0	33	15	0.921	24	43	19.5	1.345
A (4-6)	9	33	15	0.949				
B	-47.5	41	35	1.825	-46	44	33	1.821
C	64	58	27	2.299				
D	<----	duct	----	--->	<---	duct	----	--->

Slot 1 V (fpm)	day 1	315
Slot 1 A (ft2)		1.00
Slot 2 V (fpm)	day2	455
Slot 2 A (ft2)		1.00
Q (cfm)	day 1	315
	day 2	455

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	210A	10	6	10	38	11	2	53	53	53	53	0.646	BDL	56	5.82	111.1	20.66
	B	210B	10	6	10	38	11	2	52	52	52	51			56	5.66	0.0	0.00
	C	210C	10	10	10	38	11	2	52	52	52	51	0.282	BDL	52	5.26	53.6	9.98
	D	210D	10	12	10	38	11	4	25	25	25	25	0.801	0.001	52	2.11	380.5	70.80
2	A	212A	11	6	11	38	12	2	53	53	53	53	7.020	BDL	56	5.82	1206.8	224.55
	B	212B	11	6	11	38	12	2	52	51	51	49	0.146		56	5.55	26.3	4.90
	C	212C	11	6	11	38	12	2	50	51	51	50	0.066	0.002	56	5.50	12.4	2.30
	D	212D	11	6	11	38	12	2	24	24	24	24	0.306		56	2.14	142.8	26.57
3	A	214A	12	4			12	34	53			52	0.340	0.002	30	5.82	58.8	10.94
	B	214B	12	4			12	34	52			51	0.139	0.003	30	5.63	25.2	4.70
	C	214C	12	4			12	34	50			50	0.043	0.001	30	5.23	8.4	1.57
	D	214D	12	4			12	36	24			25	0.374	0.001	32	2.11	177.9	33.10
4	A	216A	12	38	13	6	13	36	53	52	52	52	1.570	0.002	58	5.93	265.3	49.37
	B	216B	12	38	13	6	13	36	53	53	53	56	0.872	BDL	58	6.13	142.3	26.48
	C	216C	12	38	13	8	13	36	50	49	49	49	0.106	0.002	58	5.53	19.5	3.63
	D	216D	12	38	13	12	13	36	25	23	23	22	1.970	BDL	58	2.14	921.3	171.43
5	A	218A	13	44	14	8	14	32	52	52	52	51	0.721	BDL	48	4.85	148.6	27.66
	B	218B	13	44	14	4	14	32	55	55	55	56	0.403	0.002	48	5.23	77.4	14.40
	C	218C	13	44	14	8	14	32	49	48	48	47		0.001	48	4.44	0.2	0.04
	D	218D	13	44	14	4	14	32	24	15	15	23	1.100	0.001	48	1.32	836.2	155.59
6	A	220A	14	34	15	6	15	30	51	51	51	50	0.544	0.001	56	5.54	98.4	18.32
	B	220B	14	34	15	4	15	30	55	53	53	54	0.284	0.001	56	5.91	48.2	8.97
	C	220C	14	34	15	6	15	30	47	46	46	45	0.074	0.001	56	4.94	15.2	2.83
	D	220D	14	34	15	6	15	30	22	23	23	23	1.120	BDL	56	1.98	565.6	105.24
7	A	222A	8	0	8	30	9	4	53	52	52	50	0.249	BDL	64	6.46	38.5	7.17

TABLE XXIII: FIELD DATA FOR SITE 10A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	B	222B	8	0	8	30	9	4	52	53	53	53	0.459	0.001	64	6.61	69.5	12.94
	D	222D	8	0	8	30	9	4	25	25	25	24	0.566	0.001	64	2.56	221.9	41.28
8	A	224A	9	6	9	34	10	2	53	53	53	52	0.641	0.001	56	5.79	111.0	20.65
	B	224B	9	6	9	32	10	2	53	50	50	50	0.367	0.001	56	5.53	66.6	12.39
	D	224D	9	6	9	34	10	2	21	23	23	25	0.896	0.001	56	2.02	444.8	82.77
9	A	226A	10	4	10	30	11	2	51	50	50	50	0.197	0.002	58	5.66	35.2	6.54
	B	226B	10	4	10	30	11	2	51	54	54	52	0.345	0.002	58	6.00	57.9	10.77
	D	226D	10	4	10	30	11	4	24	22	22	22	0.960	0.001	60	2.08	461.2	85.82
10	A	228A	11	4	11	30	11	54	51	50	50	51	0.133	BDL	50	4.91	27.1	5.04
	B	228B	11	4	11	30	11	54	52	52	52	53	0.122	0.001	50	5.11	24.1	4.48
	D	228D	11	4	11	30	11	54	25	24	24	23	0.817	0.001	50	1.92	427.0	79.45
11	A	230A	12	0			12	28	51			51	0.084	BDL	28	5.63	14.9	2.78
	B	230B	12	0			12	28	52			52	0.079	BDL	28	2.02	39.2	7.29
	D	230D	12	0			12	30	23			24	0.471	0.001	30	5.70	82.9	15.42
12	A	232A	12	38	13	8	13	36	52	51	51	51	0.314	BDL	58	5.80	54.2	10.08
	B	232B	12	38	13	8	13	36	56	57	57	57		BDL	58	6.52	0.0	0.00
	D	232D	12	38	13	8	13	36	24	22	22		0.832	0.001	58	1.33	627.1	116.68
13	A	234A	13	44	14	10	14	18	53	53	53	52	0.281	0.001	34	3.52	80.1	14.90
	B	234B	13	44	14	10	14	18	52	52	52	53	0.104	BDL	34	3.46	30.0	5.59
	D	234D	13	44	14	10	14	18	25	25	25	24	0.559	0.001	34	1.37	409.0	76.11
14	A	236A	14	20			14	56	53			55	0.114	BDL	36	2.85	40.1	7.46
	B	236B	14	20			14	56	53			55	0.123	BDL	36	1.11	110.4	20.54
	D	236D	14	20			14	56	23			25	0.211	0.001	36	5.83	36.4	6.77

TABLE XXIV: FIELD DATA FOR SITE 10B

Degreaser:	10B
Rotameter:	003766
Rotameter Curve:	ml/min=2.262258*rr-16.0255
Solvent:	Trichloroethylene
MW:	131.4

Day 1 Location	Distance x(in)	y(in)	z(in)	r(m)	Day 2 Distance x(in)	y(in)	z(in)	r(m)
A	-27	39	17	1.28	-24	39	19	1.259
B	-76	46	17	2.297	-63	48	18	2.063
C	38	49	36	1.821	39	48	18	1.636
D	<----	duct	----	--->	<----	duct	----	--->

Slot 1 V (fpm)	day 1	731
Slot 1 A (ft2)		1.00
Slot 2 V (fpm)	day2	755
Slot 2 A (ft2)		1.00
Q (cfm)	day 1	731
	day 2	755

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	209A	10	0	10	36	11	0	52	52	52	53	1.780	0.002	60	6.12	291.0	54.14
	B	209B	10	4	10	36	11		53	53	53	52	0.980	0.003	56	5.79	169.8	31.59
	C	209C	10	6	10	36	11	0	52	52	52	53	0.092	0.001	54	5.51	16.9	3.14
	D	209D	10	4	10	36	11	2	25	25	25	24	*	0.003	58	2.32	1.3	0.24
2	A	211A	11	4	11	36	11	58	53	52	52	52	1.020	0.001	54	5.52	184.8	34.40
	B	211B	11	4	11	36	11	58	52	52	52	52	0.710	0.002	54	5.49	129.8	24.14
	C	211C	11	4	11	36	11	58	53	51	51	51	0.055		54	5.44	10.1	1.88
	D	211D	11	4	11	36	11	58	26	26	26	25	0.473		54	2.29	206.9	38.50
3	A	213A	12	0			12	30	53			51	0.351	0.002	30	6.16	57.3	10.65
	B	213B	12	0			12	30	50			50	0.256	0.001	30	5.75	44.7	8.31
	C	213C	12	0			12	30	51			51	0.073	0.002	30	5.55	13.5	2.52
	D	213D	12	0			12	30	25			26	0.215	0.002	30	2.29	95.0	17.67
4	A	215A	12	30	13	2	13	28	52	51	51	50	3.570	0.002	58	5.77	619.1	115.21
	B	215B	12	30	13	0	13	28	50	49	49	49	1.430		58	5.53	258.4	48.08
	C	215C	12	30	13	4	13	28	51	51	51	50	0.081	0.001	58	5.74	14.3	2.66
	D	215D	12	30	13	4	13	28	27	25	25	24	0.267	0.002	58	2.40	112.0	20.85
5	A	217A	13	30	14	2	14	30	51	50	50	50	2.290	0.001	60	5.86	390.8	72.73
	B	217B	13	30	14	2	14	30	50	51	51	51	0.822	0.001	60	5.92	138.9	25.85
	C	217C	13	30	14	2	14	30	52	50	50	50	0.115	bdl	60	5.90	19.5	3.63
	D	217D	13	30	14	2	14	30	25	26	26	25	0.205	0.002	60	2.50	82.8	15.41
6	A	219A	14	32	15	4	15	28	51	50	50	50	2.160	0.001	56	5.47	394.8	73.47
	B	219B	14	32	15	2	15	28	50	49	49	50	0.559	bdl	56	5.37	104.0	19.36
	C	219C	14	32	15	4	15	28	49	50	50	48	0.255	0.001	56	5.35	47.9	8.91
	D	219D	14	32	15	4	15	28	25	25	25	26	0.188	0.001	56	2.30	82.3	15.31
7	A	221A	15	30			15	58	51			50	1.390	bdl	28	5.89	235.9	43.89
	B	221B	15	30			15	58	50			50	0.177	0.002	28	5.89	30.4	5.65

TABLE XXIV: FIELD DATA FOR SITE 10B (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	C	221C	15	32			15	58	49			48	0.128	0.001	26	5.96	21.6	4.03
	D	221D	15	34			15	58	25			27	0.101	bdl	24	2.43	41.5	7.73
8	A	223A	8	0	8	30	9	0	52	53	53	51	3.630	0.002	60	6.13	592.4	110.23
	B	223B	8	0	8	30	9	0	52	53	53	51	1.480	0.003	60	6.13	241.9	45.01
	C	223C	8	0	8	30	9	2	52	54	54	53	0.147	0.001	62	6.48	22.9	4.25
	D	223D	8	0	8	30	9	2	25	25	25	25	0.339	0.002	62	2.51	135.7	25.25
9	A	225A	9	6	9	30	10	0	52	52	52	51	1.500	0.002	54	5.45	275.4	51.25
	B	225B	9	6	9	30	10	0	52	52	52	51	1.090	0.001	54	5.45	200.1	37.23
	C	225C	9	6	9	30	10	0	52	52	52	52	0.038	0.001	54	5.49	7.1	1.32
	D	225D	9	6	9	30	10	0	25	25	25	25	0.182	0.002	54	2.19	84.1	15.64
10	A	227A	10	2	10	32	11	0	51	52	52	51	1.260	0.001	58	5.83	216.4	40.26
	B	227B	10	2	10	32	11	0	53	53	53	52	0.974	0.001	58	5.99	162.7	30.27
	C	227C	10	2	10	32	11	0	52	52	52	50	0.063	0.001	58	5.83	11.0	2.04
	D	227D	10	2	10	34	11	2	24	24	24	25	0.142	0.002	60	2.33	61.9	11.51
11	A	229A	11	2	11	28	11	48	51	51	51	51	0.785	0.002	46	4.57	172.2	32.04
	B	229B	11	2	11	28	11	48	52	52	52	49	0.913	0.001	46	4.61	198.4	36.92
	C	229C	11	2	11	30	11	50	51	50	50	51	0.014	0.001	48	4.71	3.2	0.59
	D	229D	11	2	11	30	11	52	25	25	25	20	0.109	0.001	50	1.90	57.8	10.76
12	A	231A	11	56			12	26	52			52	0.957	0.003	30	5.76	166.6	31.00
	B	231B	11	56			12	26	51			51	0.455	0.001	30	5.96	76.5	14.24
	C	231C	11	56			12	26	51			51	0.095	bdl	30	5.76	16.5	3.07
	D	231D	11	56			12	28	21			24	0.170	0.001	32	2.36	72.3	13.46
13	A	233A	12	36	13	6	13	32	51	50	50	53	0.424	0.002	56	5.56	76.6	14.26
	B	233B	12	36	13	4	13	34	52	52	52	52	1.410	0.002	58	5.89	239.6	44.58
	C	233C	12	36	13	6	13	34	52	51	51	50	0.118	0.001	58	5.76	20.6	3.84
	D	233D	12	36	13	6	13	34	26	23	23	24			58	2.22	0.0	0.00
14	A	235A	12	42	14	8	14	22	51	51	51	51	0.468	bdl	100	9.94	47.1	8.76
	B	235B	12	42	14	6	14	20	53	52	52	52	0.708	bdl	98	10.05	70.4	13.10
	C	235C	12	42	14	8	14	22	50	50	50	50	0.129	bdl	100	9.71	13.3	2.47
	D	235D	12	42	14	8	14	22	24	24	24	24	0.587	bdl	100	3.83	153.4	28.54
15	A	237A	12	24			14	52	51			51	0.678	0.001	148	5.69	119.3	22.20
	B	237B	12	24			14	52	52			51	0.627	bdl	148	5.89	106.4	19.80
	C	237C	12	24			14	52	50			50	*	0.002	148	5.76	0.3	0.06
	D	237D	12	24			14	52	22			22	2.750	0.001	148	2.35	1170.2	217.73

TABLE XXV: FIELD DATA FOR SITE 11A

Degreaser:	11A
Rotameter:	003766
Rotameter Curve:	ml/min=2.262258*rr-16.0255
Solvent:	Trichloroethylene
MW:	131.4

Location	Distance x(in)	y(in)	z(in)	r(m)
A	17.5	45	-0.56	1.226
B	54	45	3.938	1.788
C	84	49	11.94	2.489
D	<----	duct	----	--->
E	-15	73	-249	6.602

	VP	V
	0	0
	0.03	693
	0.09	1201
	0.08	1132
	0	0
	0	0
	0	0
	0.1	1266
	0.08	1132
	0.06	980
Vav (fpm)		640
d (in)		8
A (ft2)		0.35
Q (cfm)		224

Slot 1 V (fpm)	1140
Slot 1 A (ft2)	0.315
Slot 2 V (fpm)	
Slot 2 A (ft2)	
Q (cfm)	359.2

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	238A	8	34	9	0	9	26	52	46	46	48	0.001		52	4.81	0.2	0.04
	B	238B	8	34	9	0	9	26	52	51	51	49	0.001		52	5.14	0.2	0.03
	C	238C	8	34	9	0	9	26	52	52	52	52	0.001		52	5.28	0.1	0.02
	D	238D	8	34	9	0	9	26	25	29	29	28	1.150		52	2.43	473.0	88.01
	E	238E	8	34	9	0	9	26	100	100	100	104	0.002		52	11.05	0.2	0.03
2	A	239A	9	30	10	14	10	30	47	47	47	46	0.001		60	5.40	0.2	0.04
	B	239B	9	30	10	14	10	30	48	47	47	47	0.001		60	5.47	0.1	0.02
	C	239C	9	30	10	14	10	30	52	52	52	52	0.001		60	6.10	0.1	0.02
	D	239D	9	30	10	14	10	30	29	30	30	29	2.950		60	3.04	969.5	180.40
	E	239E	9	30	10	16	10	30	100	96	96	98	0.002		60	12.31	0.1	0.03
3	A	240A	10	30	10	58	11	30	47	45	45	45	0.001		60	5.21	0.2	0.03
	B	240B	10	30	10	58	11	30	50	50	50	50	0.001		60	5.83	0.1	0.02
	C	240C	10	30	10	58	11	30	53	52	52	51	0.001		60	6.09	0.1	0.02
	D	240D	10	30	10	58	11	30	29	29	29	25	2.460		60	2.83	869.2	161.73
	E	240E	10	30	10	58	11	30	95	92	92	100	0.001		60	11.91	0.1	0.02
4	A	241A	11	32	11	52	12	0	45	45	45	45	0.000		28	2.40	0.2	0.03
	B	241B	11	32	11	52	12	0	55	50	50	50	0.000		28	2.83	0.1	0.02
	C	241C	11	32	11	52	12	0	50	53	53	53	0.000		28	2.84	0.1	0.02
	D	241D	11	32	11	52	12	0	27	27	27	27	1.210		28	1.26	959.1	178.46
	E	241E	11	32	11	52	12	0	105	100	100	100	.00072	0.033	28	6.00	5.4	1.01
5	A	242A	12	2	12	30	13	0	47	46	46	45	2.010		58	5.10	393.8	73.28
	B	242B	12	2	12	30	13	0	49	47	47	48	0.002		58	5.33	0.3	0.05
	C	242C	12	2	12	30	13	0	55	54	54	54	0.001		58	6.19	0.2	0.03

TABLE XXV: FIELD DATA FOR SITE 11A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	D	242D	12	2	12	30	13	0	27	26	26	26	3.470		58	2.51	1380.4	256.85
	E	242E	12	2	12	30	13	0	105	102	102	102	0.003		58	12.55	0.2	0.04
6	A	243A	13	2	13	36	14	0	46	45	45	45	0.017		58	5.01	3.3	0.62
	B	243B	13	2	13	36	14	0	50	50	50	49	0.001		58	5.60	0.2	0.03
	C	243C	13	2	13	36	14	0	54	55	55	55	0.001		58	6.25	0.2	0.04
	D	243D	13	2	13	36	14	0	27	26	26	26	4.080		58	2.52	1618.6	301.18
	E	243E	13	2	13	36	14	0	103	97	97	95	0.002		58	11.97	0.2	0.04
7	A	244A	14	2	14	34	15	0	47	46	46	45	0.001		58	5.11	0.2	0.04
	B	244B	14	2	14	34	15	0	50	51	51	50	0.001		58	5.70	0.2	0.03
	C	244C	14	2	14	34	15	0	54	53	53	53	0.001		58	6.06	0.1	0.03
	D	244D	14	2	14	34	15	0	26	26	26	27	2.820		58	2.51	1122.8	208.92
	E	244E	14	2	14	34	15	0	90	95	95	92	0.002		58	11.27	0.1	0.03
8	A	245A	8	0	8	28	8	54	46	45	45	46	0.160		54	4.69	34.1	6.34
	B	245B	8	0	8	28	8	54	50	50	50	50	0.288		54	5.24	54.9	10.22
	C	245C	8	0	8	28	8	54	53	53	53	54	0.095		54	5.64	16.9	3.14
	D	245D	8	0	8	28	8	54	26	26	26	26	0.592		54	2.31	256.2	47.67
	E	245E	8	0	8	28	8	54	100	94	94	100	0.113		54	10.98	10.3	1.91
9	A	246A	9	2	9	28	10	0	46	45	45	45	0.068		58	5.00	13.6	2.54
	B	246B	9	2	9	28	10	0	49	50	50	47	0.058		58	5.49	10.5	1.95
	C	246C	9	2	9	28	10	0	54	52	52	52	0.088		58	5.95	14.8	2.74
	D	246D	9	2	9	28	10	0	26	26	26	25	0.289		58	2.45	118.2	21.99
	E	246E	9	2	9	28	10	0	100	107	107	105	0.410		58	12.83	32.0	5.95
10	A	247A	10	0	10	30	11	26	45	45	45	45	1.130		86	7.38	153.2	28.50
	B	247B	10	0	10	30	11	26	49	50	49	49.5	0.101		86	8.22	12.3	2.29
	C	247C	10	0	10	30	11	26	55	55	55	54.5	0.133		86	9.29	14.3	2.66
	D	247D	10	0	10	30	11	26	25	25	25	24.5	1.820		86	3.45	526.9	98.04
	E	247E	10	0	10	30	11	26	104	100	93	100	0.238		86	17.77	13.4	2.49
11	A	248A	11	28			11	56	45			45	0.050		28	0.98	51.2	9.53
	B	248B	11	28			11	56	50			50	0.089		28	1.13	78.2	14.54
	C	248C	11	28			11	56	55			54	0.088		28	0.48	181.8	33.83
	D	248D	11	28			11	56	25			25	0.670		28	0.34	1952.4	363.30
	E	248E	11	28			11	56	105			105	ND		28	2.88	0.0	0.00
12	A	249A	11	58	12	28	13	0	45	45	45	46	1.160		62	5.35	216.6	40.31
	B	249B	11	58	12	28	13	0	50	50	50	50	0.138		62	6.02	22.9	4.27
	C	249C	11	58	12	28	13	0	55	54	54	55	0.102		62	6.65	15.3	2.85
	D	249D	11	58	12	28	13	0	25	25	25	25	2.260		62	2.51	899.3	167.33
	E	249E	11	58	12	28	13	0	103	103	103	108	0.311		62	13.63	22.8	4.24
13	A	250A	13	2	13	28	13	56	45	45	45	45	1.880		54	4.63	405.9	75.52
	B	250B	13	2	13	28	13	56	50	49	49	50	0.068		54	5.18	13.0	2.43
	C	250C	13	2	13	28	13	56	54	55	55	55	0.067		54	5.82	11.5	2.13
	D	250D	13	2	13	28	13	56	25	24	24	25	2.560		54	2.13	1203.1	223.87
	E	250E	13	2	13	28	13	56	105	106	106	104	0.180		54	11.99	15.0	2.79

TABLE XXVI: FIELD DATA FOR SITE 12A

Degreaser:	12a
Rotameter:	
Rotameter Curve:	
Solvent:	Methylene Chloride
MW:	

Location	Distance x(in)	y(in)	z(in)	r(m)
A	0	0	7	0.178
B	0	0	19	0.483
C	0	0	55	1.397
D	<----	duct	---	-->
E	<----	air return	---	-->
F	<----	mixed	supply	-->
G	<----	outside	make-up ->	

Slot 1 V (fpm)	
Slot 1 A (ft2)	
Slot 2 V (fpm)	
Slot 2 A (ft2)	
Q (cfm)	526

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	a																775.3	222.7
	b																26.3	7.6
	c																19.8	5.7
	d																22.5	6.5
	e																19.5	5.6
	f																14.5	4.2
	g																0.8	0.2
2	a																193.9	55.7
	b																10.7	3.1
	c																11.4	3.3
	d																15.9	4.6
	e																19.5	5.6
	f																14.5	4.2
	g																0.8	0.2
3	a																748.9	215.2
	b																50.4	14.5
	c																17.8	5.1
	d																97.4	28.0
	e																19.5	5.6
	f																14.5	4.2
	g																0.8	0.2
4	a																844.6	242.7
	b																20.9	6.0
	c																30.3	8.7
	d																696.8	200.2

TABLE XXVI: FIELD DATA FOR SITE 12A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	e																93.2	26.8
	f																100.1	28.8
	g																0.1	0.0
5	a																905.3	260.1
	b																126.5	36.3
	c																62.2	17.9
	d																259	74.4
	e																93.2	26.8
	f																100.1	28.8
	g																0.1	0.0
6	a																928.8	266.8
	b																43.5	12.5
	c																35.2	10.1
	d																51	14.7
	e																93.2	26.8
	f																100.1	28.8
	g																0.1	0.0
7	a																727.7	209.1
	b																255.7	73.5
	c																262.4	75.4
	d																264.7	76.1
	e																93.2	26.8
	f																100.1	28.8
	g																0.1	0.0
8	a																140.8	40.4
	b																29.5	8.5
	c																18.9	5.4
	d																29.8	8.6
	e																11.9	3.4
	f																10.5	3.0
	g																2	0.6
9	a																131.7	37.8
	b																11.8	3.4
	c																11.2	3.2
	d																18.2	5.2
	e																11.9	3.4
	f																10.5	3.0
	g																2	0.6
10	a																103	29.6
	b																10.5	3.0
	c																10.3	2.9
	d																15.3	4.4

TABLE XXVI: FIELD DATA FOR SITE 12A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	e																11.9	3.4
	f																10.5	3.0
	g																2	0.6
11	a																50.9	14.6
	b																10.1	2.9
	c																10.1	2.9
	d																121.1	34.8
	e																11.9	3.4
	f																10.4	3.0
	g																1.2	0.3
12	a																771.8	221.7
	b																17.9	5.2
	c																10.1	2.9
	d																488.3	140.3
	e																11.9	3.4
	f																10.4	3.0
	g																1.2	0.3

TABLE XXVII: FIELD DATA FOR SITE 13A

Degreaser:	13A
Rotameter:	003766
Rotameter Curve:	ml/min=5.666938*RR-13.0884
Solvent:	Trichloroethylene
MW:	131.4

Day 1 Location	Distance x(in)	y(in)	z(in)	r(m)	Day 2 Distance x(in)	y(in)	z(in)	r(m)
A	21.5	57	0	1.55	21.5	57	0	1.55
B	22.5	59	27.5	1.75	28.5	59	24.5	1.78
C	18.5	55	57.5	2.07	28.5	55	51.5	2.05
D	40.5	59	84.5	2.81	55.5	59	77.5	2.85
D'	60.5	59	69.5	2.78				
E	<----	duct	----	--->	<----	duct	----	--->

	VP	V
	0.01	400.2
	0.01	400.2
	0.01	400.2
	0.01	400.2
	0.01	400.2
	0.01	400.2
	0.01	400.2
	0.01	346.6
	0.01	283
	0	0
Vav (fpm)		343.1
d (in)		6
A (ft2)		0.196
Q (cfm)		67.37

	day1	day2
Slot 1 V (fpm)	102	111
Slot 1 A (ft2)	0.44	0.44
Slot 2 V (fpm)	135	146
Slot 2 A (ft2)	0.44	0.44
Q (cfm)	103.6875	112.4375

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume Total (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	251A	9	2	9	30	10	0	20	20	20	21	0.588	0.001	58	5.90	99.8	18.56
	B	251B	9	2	9	30	10	0	20	20	20	40	0.071	0.000	58	7.51	9.5	1.77
	C	251C	9	2	9	30	10	0	20	20	20	20	0.059	0.000	58	5.81	10.2	1.90
	D	251D	9	2	9	30	10	0	20	20	20	22	0.077	0.000	58	5.98	12.8	2.39
	E	251E	9	2	9	30	10	0	10	10	10	10	0.663	0.000	58	2.53	262.4	48.82
2	A	252A	10	2	10	30	11	0	20	21	21	20	0.850	0.000	58	5.98	142.2	26.46
	B	252B	10	2	10	30	11	0	20	20	20	20	0.070	0.000	58	5.81	12.0	2.23
	C	252C	10	4	10	30	11	2	20	18	18	18	0.066	0.000	58	5.30	12.5	2.33
	D	252D	10	4	10	30	11	2	20	17	17	16	0.068		58	4.96	13.8	2.57
	E	252E	10	4	10	30	11	2	10	10	10	10	0.709	0.000	58	2.53	280.5	52.20
3	A	253A	11	2	11	28	11	56	21	20	20	20	0.957	0.000	54	5.49	174.4	32.46
	B	253B	11	4	11	28	11	56	20	20	20	20	0.073	0.000	52	5.21	13.9	2.59
	C	253C	11	4	11	28	11	56	20	20	20	20	0.065	0.000	52	5.21	12.5	2.33
	D	253D	11	4	11	28	11	56	20	20	20	20	0.064	0.000	52	5.21	12.3	2.28
	E	253E	11	6	11	28	11	56	10	10	10	10	0.956	0.000	50	2.18	438.8	81.65
4	A	254A	11	58	12	30	12	56	20	20	20	20	1.240	0.000	58	5.81	213.3	39.69
	B	254B	11	58	12	30	12	56	20	19	19	20	0.071	0.000	58	5.65	12.6	2.35
	C	254C	11	58	12	30	12	56	20	19	19	20	0.068	0.000	58	5.65	12.0	2.24
	D	254D	11	58	12	30	12	56	20	20	20	20	0.069	0.000	58	5.81	11.9	2.22
	E	254E	12	0	12	30	12	56	10	9	9	10	1.060	0.000	56	2.28	464.6	86.45
5	A	255A	12	58	13	28	13	58	21	20	20	20	0.873	0.000	60	6.10	143.1	26.63
	B	255B	12	58	13	28	13	58	20	20	20	20	0.074	0.000	60	6.02	12.3	2.29
	C	255C	12	58	13	28	13	58	20	20	20	20	0.065	0.000	60	6.02	10.8	2.01

TABLE XXVII: FIELD DATA FOR SITE 13A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume Total (l)	Concentration (mg/m3)	Concentration (ppm)
	D	255D	12	58	13	28	13	58	20	20	20	20	0.065	0.000	60	6.02	10.9	2.02
	E	255E	13	0	13	28	13	58	10	10	10	10	0.973	0.000	58	2.53	385.0	71.63
6	A	256A	14	0	14	30	14	58	20	22	22	21	2.430	0.000	58	6.22	390.5	72.67
	B	256B	14	0	14	30	14	58	20	20	20	21	0.068	0.001	58	5.89	11.7	2.17
	C	256C	14	0	14	30	14	58	20	20	20	20	0.064	0.000	58	5.81	11.0	2.05
	D	256D	14	0	14	30	14	58	20	20	20	23	0.074	0.000	58	6.05	12.2	2.27
	E	256E	14	0	14	30	14	58	10	10	10	10	1.150	0.000	58	2.53	455.0	84.66
7	A	258A	7	58	8	44	8	58	20	20	20	20	1.260	0.000	60	6.02	209.5	38.98
	B	258B	8	0	8	44	8	58	20	20	20	21	0.081	0.000	58	5.85	13.9	2.59
	C	258C	8	0	8	44	8	58	20	18	18	20	0.090	0.000	58	5.49	16.4	3.05
	D	258D	8	0	8	44	8	58	20	20	20	20	0.078	0.000	58	5.81	13.4	2.50
	E	258E	8	0	8	44	8	58	10	10	10	10	0.585	0.011	58	2.53	235.7	43.86
8	A	259A	9	0	9	26	9	56	20	20	20	20	1.210	0.000	56	5.61	215.5	40.10
	B	259B	9	0	9	26	9	56	20	20	20	20	0.072	0.000	56	5.61	12.8	2.39
	C	259C	9	2	9	26	9	56	20	20	20	20	0.070	0.000	54	5.41	12.9	2.41
	D	259D	9	2	9	26	9	56	20	20	20	20	0.067	0.000	54	5.41	12.4	2.30
	E	259E	9	4	9	26	9	56	10	10	10	10	0.614	0.000	52	2.27	271.1	50.44
9	A	260A	10	0	10	34	10	58	20	20	20	22	2.030	0.000	58	5.95	341.2	63.48
	B	260B	10	0	10	34	10	58	20	20	20	20	0.088	0.000	58	5.81	15.1	2.81
	C	260C	10	0	10	34	10	58	20	20	20	20	0.081	0.000	58	5.81	13.9	2.58
	D	260D	10	0	10	34	10	58	20	20	20	19	0.076	0.000	58	5.75	13.3	2.47
	E	260E	10	0	10	34	10	58	10	10	10	10	0.910	0.000	58	2.53	360.1	67.00
10	A	261A	11	0			11	24	21			20	0.201	0.000	24	5.98	33.7	6.26
	B	261B	11	0			11	24	20			20	0.053	0.000	24	9.10	5.9	1.09
	C	261C	11	0			11	24	20			20	0.052	0.000	24	5.81	8.9	1.66
	D	261D	11	0			11	24	20			20	0.052	0.000	24	6.14	8.5	1.59
	E	261E	11	0			11	24	10			10	0.249	0.000	24	2.53	98.6	18.34
11	A	262A	11	24	12	4	12	22	22	20	20	20	0.323	0.000	58	6.04	53.5	9.95
	B	262B	11	24	12	4	12	22	20	20	20	20	0.053	0.000	58	5.81	9.2	1.71
	C	262C	11	24	12	10	12	22	20	35	20	20	0.053	0.000	58	7.77	6.8	1.27
	D	262D	11	24	12	4	12	22	20	19	19	20	0.052	0.000	58	5.65	9.3	1.73
	E	262E	11	24	12	4	12	22	10	9	9	10	0.473	0.000	58	2.36	200.2	37.26
12	A	263A	12	24	12	54	13	18	21	22	22	22	0.488	0.000	54	5.94	82.2	15.29
	B	263B	12	24	12	54	13	18	20	20	20	20	0.055	0.000	54	5.41	10.2	1.90
	C	263C	12	24	12	54	13	18	20	20	20	20	0.053	0.000	54	5.41	9.7	1.81
	D	263D	12	24	12	54	13	18	20	20	20	21	0.051	0.000	54	5.48	9.4	1.74
	E	263E	12	24	12	54	13	18	10	10	10	10	0.850	0.000	54	2.35	361.3	67.22
13	A	264iA	13	22	13	52	14	24	22	21	21	22	1.570	0.000	62	6.74	232.9	43.33
	B	264iB	13	22	13	52	14	24	20	20	20	19	0.076	0.000	62	6.12	12.4	2.30
	C	264iC	13	22	13	52	14	24	20	20	20	20	0.069	0.000	62	6.22	11.1	2.06
	D	264iD	13	22	13	52	14	24	20	19	19	18	0.059	0.000	62	5.86	10.1	1.88
	E	264iE	13	22	13	52	14	24	10	9	9	10	1.870	0.000	62	2.53	740.3	137.75

TABLE XXVIII: FIELD DATA FOR SITE 14A

Degreaser:	14A
Rotameter:	003766
Rotameter Curve:	ml/min=5.666938*RR-13.0884
Solvent:	Trichloroethylene
MW:	131.4

Location	Distance x(in)	y(in)	z(in)	r(m)
A	0	34	29	1.135
B	26	43	72	2.23
C	48	40	92	2.825
D	131	24	131	4.745
E	<----	Duct	----	--->

	VP	V
	0.21	1834
	0.215	1856
	0.22	1877
	0.2	1790
	0.175	1674
	0.17	1650
	0.19	1744
	0.19	1744
	0.135	1470
	0.125	1415
Vav (fpm)		1705
d (in)		8
A (ft2)		0.35
Q (cfm)		595

Slot 1 V (fpm)	289
Slot 1 A (ft2)	0.779
Slot 2 V (fpm)	378
Slot 2 A (ft2)	0.779
Q (cfm)	519.4

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
1	A	265Ai	8	10	8	44	9	8	20	22	22	21	0.627	0.000	58	6.21	101.0	18.79
	B	265Bi	8	10	8	44	9	8	21	20	20	20	0.278	0.000	58	5.91	47.1	8.76
	C	265Ci	8	10	8	44	9	8	20	19	19	21	0.202	0.000	58	5.72	35.4	6.58
	D	265Di	8	10	8	44	9	8	20	21	21	18	0.167	0.000	58	5.84	28.6	5.32
	E	265Ei	8	10	8	44	9	8	10	10	10	10	2.240	0.000	58	2.53	886.3	164.92
2	A	264A	9	10	9	44	10	6	23	23	23	21	1.070	0.000	56	6.44	166.1	30.91
	B	264B	9	10	9	44	10	6	18	17	17	16	0.174	0.000	56	4.70	37.1	6.91
	C	264C	9	10	9	44	10	6	19	18	18	18	0.147	0.000	56	5.08	29.0	5.40
	D	264D	9	10	9	44	10	6	23	21	21	21	0.122	0.000	56	6.12	20.0	3.71
	E	264E	9	10	9	44	10	6	10	10	10	10	2.500	0.000	56	2.44	1024.5	190.63
3	A	266Ai	10	16	10	46	11	6	21	21	21	22	1.680	0.000	50	5.35	313.9	58.41
	B	266Bi	10	16	10	46	11	6	20	18	18	19	0.169	0.000	50	4.67	36.2	6.74
	C	266Ci	10	16	10	46	11	6	20	19	19	18	0.151	0.000	50	4.76	31.8	5.91
	D	266Di	10	16	10	46	11	6	21	21	21	22	0.101	0.001	50	5.35	19.1	3.55
	E	266Ei	10	16	10	46	11	6	11	10	10	10	2.950	0.196	50	2.26	1389.5	258.56
4	A	266Aii	11	12	11	40	12	6	22	22	22	21		0.000	54	5.95	0.0	0.00
	B	266Bii	11	12	11	40	12	6	20	19	19	19	0.156	0.000	54	5.19	30.1	5.60
	C	266Cii	11	12	11	40	12	6	20	18	18	20	0.123	0.000	54	5.11	24.1	4.49
	D	266Dii	11	12	11	40	12	6	22	21	21	21	0.096	0.000	54	5.80	16.6	3.09
	E	266Eii	11	12	11	40	12	6	10	10	10	10	3.470	0.001	54	2.35	1474.7	274.40
5	A	267Ai	12	10	12	44	13	6	22	22	22	22	1.630	0.000	56	6.25	260.9	48.54
	B	267Bi	12	10	12	44	13	6	18	18	18	16	0.157	0.000	56	4.85	32.4	6.03

TABLE XXVIII: FIELD DATA FOR SITE 14A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	C	267Ci	12	10	12	44	13	6	18	18	18	20	0.135	0.000	56	5.10	26.5	4.93
	D	267Di	12	10	12	44	13	6	21	21	21	21	0.108	0.000	56	5.93	18.3	3.40
	E	267Ei	12	10	12	44	13	6	10	10	10	10	2.560	0.000	56	2.44	1049.1	195.20
6	A	267Aii	13	10	13	46	14	4	23	21	21	22	1.640	0.000	54	5.97	274.5	51.09
	B	267Bii	13	10	13	46	14	4	20	18	18	20	0.156	0.000	54	5.11	30.6	5.69
	C	267Cii	13	10	13	46	14	4	21	19	19	11	0.134	0.000	54	4.90	27.3	5.09
	D	267Dii	13	10	13	46	14	4	21	21	21	21	0.112	0.000	54	5.72	19.6	3.65
	E	267Eii	13	10	13	46	14	4	10	10	10	10	2.580	0.000	54	2.35	1096.4	204.01
7	A	268Ai	14	8	14	40	15	8	21	22	22	21	1.960	0.000	60	6.53	300.4	55.90
	B	268Bi	14	8	14	40	15	8	19	18	18	20	0.182	0.000	60	5.58	32.6	6.07
	C	268Ci	14	8	14	40	15	8	20	20	20	21	0.164	0.000	60	6.09	26.9	5.01
	D	268Di	14	8	14	40	15	8	21	22	22	20	0.149	0.000	60	6.45	23.1	4.31
	E	268Ei	14	8	14	40	15	8	10	10	10	10	0.052	3.550	60	2.61	1377.4	256.29
8	A	268Aii	15	10	15	40	16	0	21	21	21	22	0.947	0.000	50	5.35	177.0	32.93
	B	268Bii	15	10	15	40	16	0	18	16	16	16	0.116	0.000	50	4.05	28.7	5.34
	C	268Cii	15	10	15	40	16	0	21	21	21	20	0.107	0.000	50	5.24	20.4	3.80
	D	268Dii	15	10	15	40	16	0	21	21	21	21	0.098	0.000	50	5.30	18.4	3.43
	E	268Eii	15	10	15	40	16	0	10	9	9	10	2.410	0.000	50	2.04	1182.9	220.10
9	A	269Ai	8	0	8	30	8	56	22	21	21	22	0.870	0.000	56	6.09	142.9	26.58
	B	269Bi	8	0	8	30	8	56	20	20	20	20	0.164	0.000	56	5.61	29.2	5.44
	C	269Ci	8	0	8	30	8	56	20	16	16	19	0.158	0.000	56	4.91	32.2	6.00
	D	269Di	8	0	8	30	8	56	20	21	21	20	0.122	0.000	56	5.77	21.1	3.93
	E	269Ei	8	0	8	30	8	56	10	13	13	10	1.890	0.000	56	2.92	648.1	120.59
10	A	269Aii	9	0	9	30	9	56	23	21	21	21	1.220	0.000	56	6.10	200.0	37.21
	B	269Bii	9	0	9	30	9	56	20	20	20	20	0.153	0.000	56	5.61	27.3	5.08
	C	269Cii	9	0	9	30	9	56	21	20	20	20	0.113	0.000	56	5.70	19.9	3.70
	D	269Dii	9	0	9	30	9	56	20	19	19	19	0.102	0.000	56	5.38	19.0	3.53
	E	269Eii	9	0	9	30	9	56	10	10	10	10	2.320	0.000	56	2.44	950.7	176.91
11	A	270Ai	10	0	10	30	10	58	21	20	20	21	1.250	0.000	58	5.98	209.1	38.91
	B	270Bi	10	2	10	30	10	58	20	20	20	20	0.183	0.000	56	5.61	32.6	6.07
	C	270Ci	10	0	10	30	10	58	22	22	22	20	0.180	0.000	58	6.31	28.5	5.31
	D	270Di	10	0	10	30	10	58	20	18	18	19	0.164	0.000	58	5.41	30.3	5.64
	E	270Ei	10	0	10	30	10	58	10	10	10	10	2.330	0.000	58	2.53	921.8	171.52
12	A	270Aii	11	0	11	30	11	56	21	20	20	20	1.410	0.000	56	5.70	247.4	46.04
	B	270Bii	11	0	11	30	11	56	20	20	20	20	0.191	0.000	56	5.61	34.0	6.33
	C	270Cii	11	0	11	30	11	56	22	21	21	21	0.165	0.000	56	6.02	27.4	5.11
	D	270Dii	11	0	11	30	11	56	20	18	18	18	0.115	0.000	56	5.15	22.3	4.16
	E	270Eii	11	0	11	30	11	56	10	12	12	13	2.470	0.000	56	2.98	829.2	154.29
13	A	271Ai	12	0	12	34	12	58	21	20	20	20	1.200	0.000	58	5.91	203.0	37.78
	B	271Bi	12	0	12	34	12	58	20	20	20	20	0.189	0.000	58	5.81	32.5	6.05
	C	271Ci	12	0	12	34	12	58	20	20	20	20	0.156	0.000	58	5.81	26.8	4.99
	D	271Di	12	0	12	34	12	58	20	18	18	19	0.112	0.000	58	5.42	20.7	3.85

TABLE XXVIII: FIELD DATA FOR SITE 14A (CONTINUED)

Interval	Location	Sample	Time Start (hr)	(min)	Mid (hr)	(min)	End (hr)	(min)	Rotameter Reading Start	Mid	Mid	End	Mass front (mg)	back (mg)	Time (min)	Volume (l)	Concentration (mg/m3)	Concentration (ppm)
	E	271Ei	12	0	12	34	12	58	10	10	10	9	2.450	0.000	58	2.46	996.1	185.34
14	A	271Aii	13	0	13	30	13	56	20	20	20	20	0.156	0.000	56	5.61	27.8	5.17
	B	271Bii	13	0	13	30	13	56	20	20	20	20	0.116	0.000	56	5.61	20.7	3.85
	C	271Cii	13	0	13	30	13	56	20	20	20	18	0.112	0.000	56	5.47	20.5	3.82
	D	271Dii	13	0	13	30	13	56	21	20	20	20	0.101	0.000	56	5.70	17.7	3.30
	E	271Eii	13	0	13	30	13	56	9	9	9	8	1.200	0.000	56	2.05	585.5	108.95
15	A	272Ai	14	2	14	32	14	56	22	20	20	20	1.120	0.000	54	5.58	200.6	37.33
	B	272Bi	14	2	14	32	14	56	20	20	20	20	0.162	0.000	54	5.41	29.9	5.57
	C	272Ci	14	2	14	32	14	56	20	20	20	20	0.150	0.000	54	5.41	27.7	5.16
	D	272Di	14	2	14	32	14	56	20	18	18	20	0.119	0.000	54	5.11	23.3	4.34
	E	272Ei	14	2	14	32	14	56	10	13	13	10	2.190	0.000	54	2.81	778.7	144.90
16	A	272Aii	15	8	15	36	15	58	20	20	20	21	0.597	0.000	50	5.07	117.7	21.89
	B	272Bii	15	8	15	36	15	58	19	20	20	19	0.131	0.000	50	4.87	26.9	5.00
	C	272Cii	15	8	15	36	15	58	20	20	20	19	0.117	0.000	50	4.95	23.6	4.40
	D	272Dii	15	8	15	36	15	58	19	18	18	19	0.103	0.000	50	4.59	22.5	4.18
	E	272Eii	15	8	15	36	15	58	12	12	12	10	1.360	0.000	50	2.62	518.9	96.56

5.4 Appendix D

Intermediate Crossdraft Data

TABLE XXIX. INTERMEDIATE CROSSDRAFT DATA

Sta.	Day	Time	Interval	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Average Velocity Vz (fps)	Average Velocity Vx (fps)	Average Velocity V (fps)	Average Angle (rad)	Average Turb. Int. (%)
1a	2	816	7	0.58	0.08	6.49	4.00	-0.06	0.58	0.58	0.10	0.58	0.06	6.65	4.00	-0.06	0.59	0.59	0.10	0.65	0.02	38.07	4.00	-0.02	0.65	0.65	0.03	0.58	-0.07	27.58	4.00	0.07	0.59	0.59	-0.13	0.72	-0.38	49.75	1.00	-0.72	-0.36	0.81	-0.47	-0.16	0.41	0.65	-0.07	25.32
		820	7	0.78	-0.29	31.99	4.00	0.29	0.78	0.82	-0.37	0.75	-0.29	30.94	4.00	0.29	0.75	0.80	-0.37	0.89	-0.25	30.42	4.00	0.25	0.89	0.74	-0.35	1.01	-0.49	55.60	1.00	-1.01	-0.49	1.13	-0.45	0.56	-0.17	31.17	3.00	0.56	0.17	0.59	-0.29	0.08	0.38	0.81	-0.37	38.02
		824	7	1.08	-0.48	35.97	4.00	0.48	1.08	1.15	-0.41	0.84	-0.19	27.74	4.00	0.19	0.84	0.86	-0.29	0.86	-0.07	51.88	1.00	-0.88	-0.07	0.88	-0.08	1.28	-0.66	30.11	4.00	0.66	1.28	1.45	-0.47	0.88	-0.39	39.51	4.00	0.39	0.88	0.96	-0.42	0.17	0.76	1.02	-0.33	37.04
		848	8	0.86	-0.48	34.94	4.00	0.48	0.86	0.98	-0.51	0.92	-0.56	44.79	4.00	0.56	0.92	1.08	-0.55	0.87	-0.48	41.83	4.00	0.48	0.87	0.99	-0.49	0.87	-0.32	40.71	4.00	0.32	0.87	0.75	-0.44	0.79	-0.59	45.78	4.00	0.59	0.79	0.98	-0.64	0.48	0.82	0.95	-0.53	41.57
		850	8	0.88	-0.10	43.83	4.00	0.10	0.88	0.88	-0.15	0.78	-0.53	47.63	4.00	0.53	0.78	0.94	-0.80	0.86	-0.19	34.77	4.00	0.19	0.86	0.88	-0.20	0.59	0.01	27.84	4.00	-0.01	0.59	0.59	0.02	0.60	-0.03	35.77	4.00	0.03	0.60	0.60	-0.05	0.17	0.66	0.70	-0.21	37.93
		854	8	0.64	-0.30	37.62	4.00	0.30	0.64	0.71	-0.44	0.89	-0.22	56.61	4.00	0.22	0.89	0.91	-0.24	0.83	-0.17	28.79	4.00	0.17	0.83	0.88	-0.27	0.87	-0.21	40.00	4.00	0.21	0.87	0.89	-0.22	0.78	-0.27	35.05	4.00	0.27	0.78	0.82	-0.33	0.24	0.78	0.82	-0.30	39.61
		858	8	0.93	-0.68	31.06	4.00	0.68	0.93	1.15	-0.63	0.73	-0.44	37.95	1.00	-0.73	-0.44	0.85	-0.54	0.77	-0.48	53.85	4.00	0.48	0.77	0.90	-0.53	0.98	-0.71	42.10	4.00	0.71	0.98	1.13	-0.66	0.73	-0.52	38.81	4.00	0.52	0.73	0.90	-0.62	0.33	0.57	0.89	-0.60	40.38
		902	8	0.11	-0.56	28.75	4.00	0.56	0.11	0.58	-1.38	0.81	-0.32	27.93	4.00	0.32	0.81	0.87	-0.38	0.80	-0.28	47.12	4.00	0.28	0.80	0.85	-0.34	0.72	-0.07	47.83	4.00	0.07	0.72	0.72	-0.10	0.82	-0.45	37.80	4.00	0.45	0.82	0.94	-0.50	0.34	0.85	0.79	-0.54	37.89
		906	8	0.79	-0.31	37.41	4.00	0.31	0.79	0.85	-0.37	0.57	-0.26	21.29	4.00	0.26	0.57	0.63	-0.44	0.75	-0.54	41.27	4.00	0.54	0.75	0.93	-0.63	0.01	-0.31	61.17	4.00	0.31	0.01	0.31	-1.53	0.99	-0.75	37.81	4.00	0.75	0.99	1.24	-0.65	0.44	0.62	0.79	-0.72	39.78
		918	9	0.79	-0.51	48.50	4.00	0.51	0.79	0.94	-0.57	0.87	-0.47	82.23	1.00	-0.87	-0.47	1.08	-0.45	0.78	-0.50	34.56	4.00	0.50	0.78	0.92	-0.57	0.81	-0.44	35.02	4.00	0.44	0.81	0.93	-0.49	0.75	-0.45	48.93	4.00	0.45	0.75	0.87	-0.54	0.18	0.52	0.95	-0.53	45.43
		922	9	0.76	-0.32	32.77	4.00	0.32	0.76	0.83	-0.40	1.06	-0.60	47.11	4.00	0.60	1.06	1.22	-0.51	0.78	-0.40	30.56	4.00	0.40	0.78	0.87	-0.47	0.87	-0.63	33.83	4.00	0.63	0.87	1.15	-0.58	0.75	-0.39	38.70	4.00	0.39	0.75	0.85	-0.48	0.47	0.86	0.96	-0.49	36.20
		926	9	1.10	-0.77	39.23	4.00	0.77	1.10	1.34	-0.61	1.31	-0.74	50.99	4.00	0.74	1.31	1.50	-0.52	1.07	-0.55	53.63	4.00	0.55	1.07	1.21	-0.48	1.21	-0.77	39.97	4.00	0.77	1.21	1.44	-0.57	0.72	-0.29	40.00	4.00	0.29	0.72	0.77	-0.39	0.82	1.08	1.25	-0.51	44.77
		930	9	0.87	-0.51	38.60	4.00	0.51	0.87	1.00	-0.53	0.95	-0.55	40.41	4.00	0.55	0.95	1.10	-0.52	0.83	-0.48	42.48	4.00	0.48	0.83	0.98	-0.53	1.11	-0.53	37.74	4.00	0.53	1.11	1.23	-0.45	0.92	-0.42	47.44	4.00	0.42	0.92	1.02	-0.43	0.50	0.94	1.08	-0.48	41.33
		934	9	0.89	-0.62	40.62	4.00	0.62	0.89	1.09	-0.61	0.71	-0.33	84.86	2.00	-0.33	-0.71	0.79	-0.44	0.71	-0.41	43.73	4.00	0.41	0.71	0.82	-0.52	0.82	-0.53	39.27	4.00	0.53	0.82	0.97	-0.57	0.86	-0.32	35.53	4.00	0.32	0.86	0.92	-0.36	0.31	0.51	0.82	-0.50	44.80
		938	9	0.73	-0.38	48.69	4.00	0.38	0.73	0.82	-0.48	0.83	-0.25	45.24	3.00	0.83	0.25	0.87	-0.29	0.83	-0.18	38.81	4.00	0.18	0.83	0.85	-0.25	0.68	-0.02	0.36	4.00	0.02	0.68	0.68	-0.03	0.57	-0.09	22.10	3.00	0.57	0.09	0.58	-0.16	0.39	0.48	0.72	-0.24	31.28
		948	9	0.78	-0.42	43.33	4.00	0.42	0.78	0.87	-0.50	0.83	-0.34	46.74	4.00	0.34	0.83	0.90	-0.38	0.90	-0.37	39.88	4.00	0.37	0.90	0.97	-0.39	1.15	-0.14	33.05	4.00	0.14	1.15	1.16	-0.12	0.86	-0.12	29.84	4.00	0.12	0.86	0.87	-0.18	0.28	0.86	0.91	-0.31	38.33
		952	9	0.88	-0.49	50.03	4.00	0.49	0.88	1.01	-0.51	1.45	-0.95	45.81	4.00	0.95	1.45	1.73	-0.58	0.85	-0.05	48.88	4.00	0.05	0.85	0.86	-0.06	0.85	-0.58	88.00	4.00	0.58	0.85	1.12	-0.56	1.50	-0.81	50.22	4.00	0.81	1.50	1.70	-0.50	0.58	1.13	1.28	-0.44	53.00
		956	9	1.11	-0.73	32.61	4.00	0.73	1.11	1.33	-0.58	1.11	-0.59	31.88	4.00	0.59	1.11	1.26	-0.48	1.18	-0.58	52.12	4.00	0.58	1.18	1.32	-0.46	1.17	-0.26	28.50	4.00	0.26	1.17	1.20	-0.22	1.07	-0.36	40.60	4.00	0.36	1.07	1.13	-0.33	0.51	1.13	1.25	-0.41	37.14
		1000	9	0.86	-0.50	34.83	4.00	0.50	0.86	1.00	-0.48	0.71	-0.38	36.02	4.00	0.38	0.71	0.79	-0.47	0.73	-0.30	54.52	3.00	0.73	0.30	0.79	-0.39	0.73	-0.22	61.08	3.00	0.73	0.22	0.78	-0.30	0.83	-0.27	74.98	3.00	0.83	0.27	0.87	-0.32	0.83	0.49	0.96	-0.39	52.28
		1004	9	0.62	-0.29	33.48	4.00	0.29	0.62	0.69	-0.44	0.70	-0.50	29.57	4.00	0.50	0.70	0.86	-0.63	0.83	-0.22	37.77	3.00	0.83	0.22	0.87	-0.34	1.08	-0.17	54.78	4.00	0.17	1.08	1.08	-0.16									0.40	0.65	0.82	-0.39	38.90
		1008	9	1.10	-0.53	81.98	3.00	1.10	0.53	1.22	-0.45	1.19	-0.37	75.70	3.00	1.19	0.37	1.25	-0.30	0.82	-0.20	60.39	3.00	0.82	0.20	0.85	-0.24	0.82	-0.23	70.80	3.00	0.82	0.23	0.85	-0.27	0.80	-0.24	59.55	3.00	0.80	0.24	0.84	-0.30	0.95	0.31	1.00	-0.31	63.89
		1012	9	1.07	-0.40	75.32	3.00	1.07	0.40	1.14	-0.36	0.78	-0.23	64.46	3.00	0.78	0.23	0.81	-0.29	0.84	-0.13	41.34	3.00	0.84	0.13	0.86	-0.20	0.74	-0.33	62.21	3.00	0.74	0.33	0.81	-0.41	1.36	-0.28	59.40	3.00	1.36	0.28	1.39	-0.20	0.82	0.27	0.86	-0.29	60.55
		1020	9	0.87	-0.20	51.03	3.00	0.87	0.20	0.89	-0.20	1.10	-0.35	69.75	3.00	1.10	0.35	1.16	-0.31	0.98	-0.16	58.15	3.00	0.98	0.16	0.98	-0.17	0.80	-0.25	46.88	4.00	0.25	0.80	0.84	-0.31	0.72	-0.09	47.17	4.00	0.09	0.72	0.72	-0.12	0.67	0.45	0.84	-0.22	54.06
		1024	9	0.56	-0.19	30.31	3.00	0.56	0.18	0.59	-0.33	1.04	-0.19	14.27	4.00	0.19	1.04	1.06	-0.18	0.73	-0.78	76.38	3.00	0.73	0.78	1.07	-0.82	0.82	-0.11	58.34	3.00	0.82	0.11	0.83	-0.13	0.78	-0.24	51.97	4.00	0.24	0.78	0.82	-0.30	0.51	0.56	0.87	-0.35	57.85
		1028	10	0.83	-0.47	42.13	4.00	0.47	0.83	1.04	-0.47	0.71	-0.11	34.18	4.00	0.11	0.71	0.71	-0.15	0.85	-0.16	56.61	4.00	0.16	0.85	0.86	-0.19	0.81	-0.23	80.14	4.00	0.23	0.81	0.84	-0.27	0.71	-0.23	48.24	4.00	0.23	0.71	0.75	-0.32	0.34	0.80	0.84	-0.28	52.28
		1032	10	0.64	-0.34	32.46	4.00	0.34	0.64	0.73	-0.48	0.77	-0.13	79.84	4.00	0.13	0.77	0.78	-0.16	0.86	-0.26	50.01	4.00	0.26	0.86	0.71	-0.38	0.66	-0.33	33.30	4.00	0.33	0.66	0.74	-0.47	0.57	-0.13	27.51	4.00	0.13	0.57	0.58	-0.22	0.24	0.66	0.71	-0.35	44.58
		1046	10	0.80	-0.27	70.32	2.00	0.80	0.27	0.84	-0.32	1.09	-0.11	58.10	4.00	0.11	1.09	1.10	-0.10	0.77	-0.28	48.29	4.00	0.28	0.77	0.81	-0.35	0.77	-0.18	75.38	3.00	0.77	0.18	0.79	-0.24	0.87	-0.25	43.87	3.00	0.87	0.25	0.72	-0.35	0.53	0.51	0.85	-0.27	59.35
		1052	10	0.93	-0.09	85.20	4.00	0.09	0.93	0.94	-0.10	0.70	-0.25	52.78	4.00	0.25	0.70	0.75	-0.34	0.78	-0.19	58.13	4.00	0.19	0.78	0.80	-0.24	1.27	-0.21	74.45	3.00	1.27	0.21	1.28	-0.16	0.80	-0.26	63.08	3.00	0.80	0.26	0.84	-0.32	0.52	0.58	0.82	-0.23	82.93
		1056	10	0.88	-0.42	37.29	3.00	0.88	0.42	0.80	-0.55	0.74	-0.12	51.71	4.00	0.12	0.74	0.75	-0.16	1.52	-0.58	75.55	3.00	1.52	0.58	1.63	-0.37	1.33	-0.22	83.24	3.00	1.33	0.32	1.37	-0.24	0.70	-0.30	56.69	3.00	0.70	0.30	0.78	-0.40	0.87	0.47	1.06	-0.34	56.90
		1100	10	1.25	-0.48	87.62	3.00	1.25	0.48	1.34	-0.35	1.43	-0.48	70.04	3.00	1.43	0.48	1.51	-0.32	0.88	0.06	37.14	4.00	-0.06	0.88	0.88	0.09	0.74	-0.34	80.96	4.00	0.34	0.74	0.81	-0.43									0.74	0.58	1.00	-0.25	63.94
		1136	11	0.80	0.02	33.29	3.00	0.80	-0.02	0.80	0.04	0.61	-0.05	28.86	4.00	0.05	0.61	0.61	-0.09	0.83	-0.18	29.81	4.00	0.18	0.83	0.86	-0.20	0.75	-0.08	36.89	4.00	0.08	0.75	0.75	-0.11	0.69	-0.13	37.51	4.00	0.13	0.69	0.70	-0.19	0.21	0.53	0.87	-0.13	33.43
		1140	11	0.78	-0.00	53.56	4.00	0.00	0.78	0.78	-0.00	0.88	-0.34	28.34	4.00	0.34	0.88	0.92	-0.36	0.55	-0.12	21.74	4.00	0.12	0.55	0.57	-0.21	0.84	0.00	37.72	4.00	-0.00	0.84	0.84	0.01	0.96	-0.35	27.82	4.00	0.35	0.96	1.02	-0.35	0.18	0.75	0.78	-0.19	33.43
		1152	11	0.87	-0.18	25.81	4.00	0.18	0.87	0.89	-0.24	0.90	-0.31	25.04	4.00	0.31	0.90	0.95	-0.34	0.82	-0.24	24.98	4.00	0.24	0.82	0.86	-0.29	1.03	-0.25	24.83	4.00	0.25	1.03	1.06	-0.23	0.82	-0.27	33.96	4.00	0.27	0.82	0.87	-0.32	0.25	0.85	0.86	-0.29	28.82
		1156	11	0.95	-0.33	32.74	4.00	0.33	0.95	1.00	-0.33	1.13	-0.40	33.80	4.00	0.40	1.13	1.20	-0.34	1.34	-0.49	27.88	4.00	0.49	1.34	1.43	-0.35	0.92	-0.48	35.84	4.00	0.48	0.92	1.04	-0.48	0.82	-0.20	30.27	4.00	0.20	0.82	0.85	-0.32	0.38	0.99	1.06	-0.37	32.04
		1328	13	0.58	0.03	28.49	3.00	0.58	-0.03	0.59	0.06	0.82	-0.25	27.05	4.00	0.25	0.82	0.87	-0.36	0.59	-0.13	34.70	4.00	0.13	0.59	0.61	-0.22	0.71	-0.08	44.85	4.00	0.08	0.71	0.72	-0.12	0.88	-0.81	44.28	4.00	0.81	0.88	1.13	-0.84	0.38	0.51	0.74	-0.32	35.43
		1332	13	0.72	-0.02	48.23	4.00	0.02	0.72	0.72	-0.02	0.54	-0.18	73.27	4.00	0.18	0.54	0.56	-0.29	0.58	-0.17	22.29	4.00	0.17	0.58	0.61	-0.28	0.84	-0.18	22.82	4.00	0.18	0.84	0.86	-0.21	0.81	0.01	39.80	4.00	-0.01	0.81	0.81	0.01	0.10	0.70	0.71	-0.18	31.24
		1336	13	0.72	-0.13	46.18	4.00	0.13	0.72	0.73	-0.17	0.95	-0.25	80.43	4.00	0.25	0.95	0.98	-0.26	0.76	-0.18	27.48	4.00	0.18	0.78	0.78	-0.25	1.01	-0.15	45.86	4.00	0.15	1.01	1.02	-0.15	0.83	-0.35	28.78	4.00	0.35	0.83	0.90	-0.40	0.21	0.85	0.88	-0.24	41.30
		1340	13	0.65	-0.10	43.03	4.00	0.10	0.65	0.66	-0.15	0.98	-0.32	51.62	4.00	0.32	0.98	1.03	-0.32	0.81	-0.12	61.78	4.00	0.12	0.81	0.82	-0.13	0.53	-0.04	17.07	4.00	0.04	0.53	0.53	-0.07	0.56	-0.09	22.90	4.00	0.09	0.56	0.57	-0.15	0.13	0.73	0.74	-0.18	39.76
		1344	13	0.85	-0.20	43.41	4.00	0.20	0.85	0.87	-0.23	0.91	-0.34	40.02	4.00	0.34	0.91	0.97	-0.36	0.93	-0.59	43.52	4.00	0.59	0.93	1.10	-0.58	0.71	-0.28	37.55	4.00	0.29	0.71	0.78	-0.38	0.80	-0.32	48.41	4.00	0.32	0.80	0.88	-0.38	0.35	0.84	0.81	-0.38	42.58
		1348	13	0.80	-0.28	49.10	4.00	0.28	0.80	0.85	-0.35	0.89	-0.07	33.83	4.00	0.07	0.89	0.89	-0.08	0.80	-0.08	25.23	3.00	0.80	0.08	0.80	-0.10	0.83	-0.09	28.38	4.00	0.09	0.83	0.83	-0.15									0.28	0.58	0.74	-0.17	28.91
		1352	13	0.81	-0.28	37.87	4.00	0.28	0.81	0.86	-0.31	0.78	-0.30	50.23	4.00	0.30	0.78	0.84	-0.37	1.07	-0.86	48.88	4.00	0.86	1.07	1.28	-0.66	0.88	-0.41	28.98	4.00	0.41	0.86	0.97	-0.44	0.87	-0.20	30.18	4.00	0.20	0.87	0.89	-0.20	0.37	0.87	1.00	-0.38	39.38
		1356	13	0.82	-0.15	21.73	4.00	0.15	0.82	0.84	-0.24	0.98	-0.45	31.54	4.00	0.45	0.98	1.08	-0.44	0.83	-0.11	37.85	4.00	0.11	0.83	0.83	-0.13	0.81	-0.12	30.04	4.00	0.12	0.81	0.81	-0.15	0.73	-0.24	70.98	3.00	0.73	0.24	0.77	-0.31	0.31	0.69	0.82	-0.25	38.43
2a	1	0958	1	1.78	0.14	56.01	3.00	0.14	1.78	1.79	0.08	2.18	-0.12	41.81	3.00	-0.12	2.18	2.18	-0.05	1.58	0.30	48.45	3.00	0.30	1.58	1.61	0.19	2.08	0.07	51.03	3.00	0.07	2.08	2.08	0.04	1.07	0.22	48.27	2.00	1.07	0.22	1.09	0.12	0.45	1.57	1.91	0.07	48.34
		1002	1	1.08	0.17	51.06	3.00	0.17	1.08	1.10	0.16	1.87	0.02	45.87	3.00	0.02	1.87	1.87	0.01	2.86	0.43	28.81	3.00	0.43	2.86	2.90	0.15	1.99	0.18	49.86	3.00	0.18	1.99	2.00	0.08	1.25	0.05	44.78	3.00	0.05	1.25	1.25	0.04	0.18	1.77	1.78	0.09	44.25
		1006	1	2.30	0.28	34.78	3.00	0.28	2.30	2.32	0.12	2.22	-0.05	41.03	3.00	-0.05	2.22	2.22	-0.02	1.83	0.32	44.04	3.00	0.32	1.83	1.86	0.17	2.50	0.29	31.78	3.00	0.29	2.50	2.52	0.11	1.84	0.11	41.88	3.00	0.11	1.84	1.84	0.06	0.19	2.14	2.15	0.08	38.86
		1010	1	1.39	-0.04	45.48	3.00	-0.04	1.39	1.39	-0.03	2.29	0.12	37.48	3.00	0.12	2.29	2.29	0.05	2.22	0.12	32.70	3.00	0.12	2.22	2.22	0.05	1.58	0.21	43.28	3.00	0.21	1.56	1.60	0.13	1.82	-0.15	32.40	3.00	-0.15	1.82	1.83	-0.08	0.06	1.86	1.87	0.03	38.27
		1014	1	1.94	0.18	53.28	3.00	0.18	1.94	1.95	0.09	1.69	0.11	53.73	3.00	0.11	1.69	1.69	0.07	1.39	0.28	53.31	3.00	0.28	1.39	1.42	0.20	2.75	0.22	38.03	3.00	0.22	2.75	2.78	0.08	1.98	0.28	52.24	3.00	0.28	1.98	1.90	0.15	0.21	1.93	1.94	0.12	49.71
		1054	2	0.69	0.01	45.02	2.00	0.69	0.01	0.69	0.01	0.58	-0.00	27.35	3.00	-0.00	0.58	0.58	-0.00	0.90	-0.07	80.39	3.00	-0.07	0.90	0.90	-0.08	1.38	0.05	58.53	3.00	0.05	1.38	1.38	0.04	2.37	0.42	35.82	3.00	0.42	2.37	2.41	0.18	0.22	1.06	1.19	0.03	45.42
		1058	2	1.06	-0.08	44.15	3.00	-0.08	1.06	1.06	-0.07	1.84	0.17	44.58	3.00	0.17	1.84	1.85	0.09	1.88	0.15	42.21	3.00	0.15	1.88	1.87	0.09	1.80	-0.01	57.76	3.00	-0.01	1.80	1.80	-0.01	1.84	0.03	80.51	3.00	0.03	1.84	1.84	0.02	0.05	1.58	1.58	0.02	48.84
		1102	2	1.86	0.12	38.74	3.00	0.12	1.86	1.87	0.06	2.18	0.02	34.78	3.00	0.02	2.18	2.18	0.01	2.03	-0.09	39.17	3.00	-0.09	2.03	2.03	-0.04	2.18	0.23	41.38	3.00	0.23	2.18	2.21	0.11	1.72	0.27	51.23	3.00	0.27	1.72	1.74	0.15	0.11	1.90	2.00	0.08	41.06
		1106	2	1.34	-0.02	55.21	3.00	-0.02	1.34	1.34	-0.02	2.02	0.28	30.92	3.00	0.28	2.02	2.04	0.13	1.43	0.15	56.44	3.00	0.15	1.43	1.44	0.10	2.11	0.12	34.11	3.00	0.12	2.11	2.11	0.08	1.23	0.12	53.38	3.00	0.12	1.23	1.23	0.10	0.13	1.83	1.83	0.07	46.01
		1110	2	1.21	-0.32	40.05	3.00	-0.32	1.21	1.25	-0.26	1.36	0.15	42.07	3.00	0.15	1.36	1.37	0.11	1.17	-0.32	41.72	3.00	-0.32	1.17	1.22	-0.27	1.40	0.02	82.48	3.00	0.02	1.40	1.40	0.01	1.50	0.14	41.52	3.00	0.14	1.50	1.51	0.10	-0.07	1.33	1.35	-0.08	45.56
		1210	3	1.69	-0.07	42.03	3.00	-0.07	1.69	1.69	-0.04	2.12	0.05	39.78	3.00	0.05	2.12	2.12	0.03	1.57	-0.15	39.97	3.00	-0.15	1.57	1.57	-0.09	2.18	0.43	27.89	3.00	0.43	2.18	2.20	0.20	2.21	-0.07	43.85	3.00	-0.07	2.21	2.21	-0.03	0.04	1.95	1.96	0.01	38.38
		1214	3	1.50	-0.09	48.80	3.00	-0.08	1.50	1.50	-0.05	1.00	-0.14	55.94	3.00	-0.14	1.00	1.01	-0.14	0.87	-0.06	54.04	3.00	-0.06	0.87	0.87	-0.07	2.31	0.05	36.82	3.00	0.05	2.31	2.32	0.02	1.55	-0.14	49.48	3.00	-0.14	1.55	1.56	-0.09	-0.07	1.47	1.47	-0.06	49.23
		1218	3	2.04	0.07	58.11	3.00	0.07	2.04	2.04	0.04	1.98	0.11	33.78	3.00	0.11	1.98	1.98	0.06	1.61	0.15	53.59	3.00	0.15	1.61	1.62	0.09	1.30	-0.03	50.81	3.00	-0.03	1.30	1.30	-0.02	0.72	-0.03	47.13	3.00	-0.03	0.72	0.72	-0.05	0.05	1.52	1.53	0.02	48.24
		1222	3	0.72	-0.01	38.20	3.00	-0.01	0.72	0.72	-0.02	1.87	0.03	47.32	3.00	0.03	1.87	1.87	0.02	1.98	0.08	45.34	3.00	0.08	1.98	1.98	0.04	1.21	0.01	40.70	3.00	0.01	1.21	1.21	0.01	1.42	-0.03	44.64	3.00	-0.03	1.42	1.42	-0.02	0.02	1.40	1.40	0.01	43.24
		1226	3	0.57	-0.10	25.25	2.00	0.57	-0.10	0.58	-0.17	0.84	-0.14	44.38	3.00	-0.14	0.84	0.86	-0.21	0.89	-0.25	47.50	3.00	-0.25	0.89	0.93	-0.27	0.84	-0.17	53.09	3.00	-0.17	0.84	0.86	-0.20	1.08	-0.22	39.65	3.00	-0.22	1.08	1.11	-0.20	-0.04	0.87	0.83	-0.21	41.87
		1400	5	1.06	0.15	71.82	3.00	0.15	1.08	1.09	0.14	0.96	-0.04	41.71	3.00	-0.04	0.96	0.97	-0.05	1.41	-0.01	55.61	3.00	-0.01	1.41	1.41	-0.01	1.15	-0.10	71.71	3.00	-0.10	1.15	1.16	-0.08	1.23	-0.02	59.71	3.00	-0.02	1.23	1.23	-0.02	-0.00	1.16	1.15	-0.00	80.17
		1406	5	1.71	0.29	44.81	3.00	0.29	1.71	1.74	0.16	1.66	0.29	43.88	3.00	0.29	1.66	1.68	0.18	1.52	-0.02	54.11	3.00	-0.02	1.52	1.52	-0.02	1.49	0.21	48.19	3.00	0.21	1.49	1.50	0.14	1.24	0.11	58.07	3.00	0.11	1.24	1.25	0.09	0.17	1.52	1.54	0.11	49.99
		1412	5	1.20	0.21	54.15	3.00	0.21	1.20	1.22	0.17	1.01	-0.11	47.45	3.00	-0.11	1.01	1.01	-0.11	0.96	0.10	45.03	3.00	0.10	0.96	0.97	0.11	1.01	-0.05	52.86	3.00	-0.05	1.01	1.01	-0.05	0.67	-0.01	48.41	3.00	-0.01	0.67	0.67	-0.01	0.03	0.87	0.88	0.02	49.54
		1418																																														
		1436																																														
		1442																																														
		1450																																														
		1524																																														
		1528																																														
		0848	7	0.95	0.05	43.44	3.00	0.05	0.95	0.95	0.05	0.70	0.01	48.02	3.00	0.01	0.70	0.70	0.02	1.05	-0.01	38.58	3.00	-0.01	1.05	1.05	-0.01	0.87	0.08	30.92	3.00	0.08	0.87	0.88	0.12	0.12	-0.02	43.31	3.00	-0.02	0.12	0.12	-0.18	0.02	0.88	0.88	0.00	40.25
		0857	7	0.96	-0.06	60.30	3.00	-0.06	0.96	0.96	-0.06	1.21	-0.00	35.89	3.00	-0.00	1.21	1.21	-0.00	0.77	-0.04	21.98	3.00	-0.04	0.77	0.77	-0.05	0.71	-0.02	30.32	3.00	-0.02	0.71	0.71	-0.03	0.82	-0.03	36.01	3.00	-0.03	0.82	0.82	-0.05	-0.03	0.86	0.86	-0.04	38.90
		0858	7	0.84	0.12	34.44	3.00	0.12	0.84	0.84	0.15	0.94	-0.02	48.87	3.00	-0.02	0.94	0.94	-0.02	0.78	0.06	48.09	3.00	0.06	0.78	0.78	0.08	0.84	-0.04	33.19	3.00	-0.04	0.84	0.84	-0.06	0.71	0.02	38.02	3.00	0.02	0.71	0.71	0.03	0.03	0.78	0.78	0.03	39.74
		0902	8	1.04	0.06	48.11	3.00	0.06	1.04	1.05	0.06	1.02	-0.03	47.12	3.00	-0.03	1.02	1.02	-0.03	1.71	0.13	41.27	3.00	0.13	1.71	1.71	0.08																	0.06	1.28	1.28	0.03	43.83
		0908	8	0.89	0.02	48.82	2.00	0.02	0.89	0.89	0.02	1.18	0.09	52.50	3.00	0.09	1.18	1.18	0.08					0.00	0.00	0.00	ERR																	0.08	1.03	1.04	0.05	50.55
		0914	8	0.59	0.05	23.00	3.00	0.05	0.59	0.59	0.09	0.67	-0.00	38.09	3.00	-0.00	0.67	0.67	-0.00	0.59	0.00	40.73	3.00	0.00	0.59	0.59	0.00	0.83	0.15	42.33	3.00	0.15	0.83	0.85	0.18	0.99	0.17	52.84	3.00	0.17	0.99	1.01	0.17	0.07	0.74	0.74	0.08	39.38
		0934	8	0.51	0.03	11.56	3.00	0.03	0.51	0.51	0.06	0.53	0.04	12.59	3.00	0.04	0.53	0.53	0.07	0.51	0.03	11.88	3.00	0.03	0.51	0.51	0.06	0.52	0.03	11.98	3.00	0.03	0.52	0.52	0.06	0.54	0.03	12.85	3.00	0.03	0.54	0.54	0.06	0.03	0.52	0.52	0.06	12.13
		1022	9	1.30	0.14	48.48	3.00	0.14	1.30	1.31	0.11	1.32	0.11	61.32	3.00	0.11	1.32	1.32	0.08	1.15	0.11	38.43	3.00	0.11	1.15	1.15	0.10	1.34	0.15	41.13	3.00	0.15	1.34	1.35	0.11	1.19	-0.07	48.86	3.00	-0.07	1.19	1.19	-0.06	0.09	1.26	1.27	0.07	47.26
		1026	9	0.80	0.01	36.18	3.00	0.01	0.80	0.80	0.01	0.78	0.07	29.47	3.00	0.07	0.78	0.78	0.09	1.60	0.03	34.85	3.00	0.04	1.60	1.60	0.03	0.70	0.09	35.87	3.00	0.09	0.70	0.70	0.11	0.82	0.69	45.29	3.00	0.69	0.82	1.08	0.70	0.18	0.94	0.96	0.16	38.26
		1032	9	0.83	0.05	44.32	3.00	0.05	0.83	0.83	0.06	1.01	0.10	48.72	3.00	0.10	1.01	1.02	0.10	0.71	-0.04	38.22	3.00	-0.04	0.71	0.71	-0.06	1.06	0.02	55.94	3.00	0.02	1.06	1.06	0.02	0.94	-0.08	41.53	3.00	-0.08	0.94	0.94	-0.08	-0.03	0.91	0.91	-0.03	45.33
		1036	9	0.80	0.00	48.77	3.00	0.00	0.90	0.90	0.00	0.81	-0.01	36.37	3.00	-0.01	0.81	0.81	-0.01	1.01	0.02	35.30	3.00	0.02	1.01	1.01	0.02	1.28	-0.04	47.10	3.00	-0.04	1.39	1.39	-0.03	1.23	-0.02	39.98	3.00	-0.02	1.23	1.23	-0.02	-0.01	1.07	1.07	-0.01	41.50
		1132	10	0.53	0.04	18.14	3.00	0.04	0.53	0.54	0.06	0.53	0.04	21.41	3.00	0.04	0.53	0.53	0.06	0.52	0.04	11.95	3.00	0.04	0.52	0.52	0.07	0.51	0.04	110.77	3.00	0.04	0.51	0.51	0.08	0.51	0.04	10.90	3.00	0.04	0.51	0.51	0.07	0.04	0.52	0.52	0.08	34.64
		1140	10	0.51	0.04	12.36	3.00	0.04	0.51	0.52	0.07	0.05	0.04	18.97	3.00	0.04	0.05	0.06	0.06	0.51	0.04	20.26	3.00	0.04	0.51	0.52	0.07	0.51	0.04	22.04	3.00	0.04	0.51	0.52	0.07	0.51	0.03	17.06	3.00	0.03	0.51	0.51	0.07	0.04	0.42	0.42	0.08	18.14
		1206	11	0.11	-0.03	45.80	3.00	-0.03	0.11	0.11	-0.28	0.67	-0.05	31.41	3.00	-0.05	0.67	0.67	-0.08	0.78	-0.01	34.52	3.00	-0.00	0.78	0.78	-0.01	0.82	0.07	38.81	3.00	0.07	0.82	0.82	0.08	1.11	0.02	44.63	3.00	0.02	1.11	1.11	0.02	0.00	0.69	0.69	-0.05	39.39
		1210	11	1.09	0.01	41.99	3.00	0.01	1.09	1.09	0.01	0.60	0.04	22.78	3.00	0.04	0.60	0.61	0.06	0.10	0.07	42.83	3.00	0.07	0.10	0.12	0.59	0.82	0.04	38.86	3.00	0.04	0.82	0.82	0.05	0.89	-0.01	48.15	3.00	-0.01	0.89	0.89	-0.02	0.03	0.70	0.71	0.14	38.56
		1216	11	1.02	0.13	40.22	3.00	0.13	1.02	1.03	0.12	0.93	0.10	42.88	3.00	0.10	0.93	0.94	0.10	0.87	0.04	29.49	3.00	0.04	0.87	0.87	0.05	0.99	0.08	38.58	3.00	0.08	0.99	0.99	0.08	0.79	0.06	29.50	3.00	0.06	0.79	0.79	0.08	0.08	0.92	0.92	0.09	38.33
		1220	11	0.98	0.01	38.93	3.00	0.01	0.98	0.99	0.02	0.77	0.03	38.08	3.00	0.03	0.77	0.77	0.04	0.78	-0.00	50.86	3.00	-0.00	0.78	0.78	-0.01	0.68	0.08	48.24	3.00	0.08	0.68	0.69	0.07	0.80	0.02	46.37	3.00	0.02	0.80	0.80	0.02	0.02	0.82	0.82	0.03	43.70
		1224	11	1.10	0.17	40.09	3.00	0.17	1.10	1.11	0.15	1.30	0.15	49.75	3.00	0.15	1.30	1.31	0.11	1.12	0.02	45.30	3.00	0.02	1.12	1.12	0.02	1.13	0.14	54.18	3.00	0.15	1.13	1.14	0.13	1.29	0.15	48.86	3.00	0.15	1.29	1.30	0.12	0.11	1.18	1.20	0.11	47.24
		1228	11	0.92	0.09	49.53	3.00	0.09	0.82	0.92	0.09	1.17	0.12	45.73	3.00	0.12	1.17	1.18	0.10	0.80	0.01	43.24	3.00	0.01	0.80	0.80	0.01	1.07	0.07	43.57	3.00	0.07	1.07	1.07	0.07	0.80	0.07	44.19	3.00	0.07	0.80	0.80	0.08	0.07	0.99	0.99	0.07	45.25
		1254	12	1.07	0.08	52.08	2.00	1.07	0.08	1.07	0.08	1.11	-0.01	51.63	3.00	-0.01	1.11	1.11	-0.01	0.98	-0.07	47.00	3.00	-0.07	0.98	0.98	-0.07	1.01	-0.09	50.85	3.00	-0.09	1.01	1.02	-0.09	1.00	-0.18	45.58	3.00	-0.18	1.00	1.02	-0.18	0.14	0.84	1.04	-0.08	49.43
		1258	12	0.70	-0.01	37.82	3.00	-0.01	0.70	0.70	-0.01	0.85	0.07	45.24	3.00	0.07	0.85	0.85	0.08	0.89	-0.17	46.79	3.00	-0.17	0.89	0.91	-0.18	1.22	-0.21	47.89	3.00	-0.21	1.22	1.23	-0.17	1.06	-0.08	45.81	3.00	-0.08	1.06	1.06	-0.07	-0.09	0.94	0.95	-0.07	44.63
		1304	12	1.21	-0.12	53.87	3.00	-0.12	1.21	1.22	-0.10	1.20	-0.08	46.19	3.00	-0.08	1.20	1.20	-0.06	1.58	-0.22	51.82	3.00	-0.22	1.56	1.58	-0.14	1.48	-0.15	53.85	3.00	-0.15	1.48	1.49	-0.10	1.08	0.06	44.34	3.00	0.06	1.08	1.08	0.05	-0.10	1.31	1.32	-0.07	50.37
		1326	12	1.01	-0.03	47.88	3.00	-0.03	1.01	1.01	-0.03	0.61	-0.10	27.53	3.00	-0.10	0.61	0.62	-0.17	0.58	-0.08	29.30	3.00	-0.06	0.58	0.58	-0.15	0.58	-0.08	21.26	3.00	-0.08	0.58	0.58	-0.16	0.82	0.06	37.57	3.00	0.06	0.82	0.83	0.07	-0.05	0.72	0.73	-0.09	32.47
		1332	12	0.78	0.06	32.70	3.00	0.06	0.78	0.78	0.07	0.77	0.03	27.11	3.00	0.03	0.77	0.77	0.04	1.06	0.17	42.19	3.00	0.17	1.06	1.08	0.16	0.73	0.00	38.12	3.00	0.00	0.73	0.73	0.00	0.79	0.06	39.85	3.00	0.06	0.79	0.79	0.07	0.06	0.81	0.82	0.10	36.21
		1336	12	0.81	-0.10	28.77	3.00	-0.10	0.81	0.82	-0.12	1.02	0.03	45.01	3.00	0.03	1.02	1.02	0.03	1.12	-0.04	35.97	3.00	-0.04	1.12	1.12	-0.04	0.78	0.03	42.14	3.00	0.03	0.78	0.78	0.04	0.84	0.01	44.27	3.00	0.01	0.84	0.84	0.02	-0.02	0.89	0.89	-0.02	38.43
		1420	13	0.58	0.08	22.85	3.00	0.08	0.58	0.58	0.10	0.88	-0.28	45.87	3.00	-0.28	0.88	0.92	-0.31	0.85	0.13	34.18	3.00	0.13	0.85	0.87	0.20	0.90	0.13	39.35	3.00	0.13	0.90	0.91	0.14	0.52	0.04	18.74	3.00	0.04	0.52	0.53	0.07	0.01	0.71	0.72	0.04	32.18
		1424	13	0.62	0.12	20.38	3.00	0.12	0.62	0.63	0.20	0.54	0.04	15.24	3.00	0.04	0.54	0.54	0.07	0.59	0.13	16.73	3.00	0.13	0.59	0.60	0.21	0.58	-0.00	32.56	3.00	-0.00	0.58	0.58	-0.00	0.61	-0.04	32.54	3.00	-0.04	0.61	0.61	-0.06	0.05	0.56	0.58	0.08	23.49

TABLE XXX INTERMEDIATE CROSSDRAFT DATA (CONTINUED)

Site	Day	Time	Interval	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Average Velocity Vz (fps)	Average Velocity Vx (fps)	Average Velocity V (fps)	Average Angle (rad)	Average Turb Int (%)
		1428	13	0.59	0.02	21.73	3.00	0.02	0.59	0.59	0.03	0.52	-0.02	17.94	3.00	-0.02	0.52	0.52	-0.03	0.71	0.10	28.53	3.00	0.10	0.71	0.72	0.15	0.58	0.02	23.88	3.00	0.02	0.59	0.59	0.04	0.65	0.09	43.78	3.00	0.09	0.65	0.65	0.14	0.04	0.81	0.81	0.06	27.12
		1530	14	0.17	0.39	35.50	3.00	0.39	0.17	0.43	1.16	0.13	0.09	44.84	3.00	0.09	0.13	0.16	0.60	0.79	0.05	41.09	3.00	0.05	0.79	0.80	0.06	0.15	0.11	40.24	3.00	0.11	0.15	0.18	0.63	1.14	0.21	39.25	3.00	0.21	1.14	1.18	0.18	0.17	0.48	0.54	0.53	40.18
		1534	14	1.51	0.08	33.31	3.00	0.08	1.51	1.51	0.05	0.87	-0.04	44.10	3.00	-0.04	0.87	0.87	-0.05	1.04	-0.13	49.44	3.00	-0.13	1.04	1.05	-0.12	0.76	0.05	46.37	3.00	0.05	0.76	0.76	0.06	0.90	-0.02	52.39	3.00	-0.02	0.90	0.90	-0.02	-0.01	1.02	1.02	-0.01	45.12
		1538	14	1.08	0.04	35.21	3.00	0.04	1.08	1.08	0.03	0.90	0.03	43.21	3.00	0.03	0.90	0.90	0.03	0.77	0.14	40.55	3.00	0.14	0.77	0.79	0.18	0.88	0.10	42.01	3.00	0.10	0.88	0.88	0.12	1.38	0.35	51.48	3.00	0.35	1.38	1.41	0.25	0.13	1.00	1.01	0.12	42.49
		1544	14	0.69	0.05	44.99	3.00	0.05	0.69	0.70	0.07	0.98	0.06	52.41	3.00	0.06	0.98	0.98	0.06	1.01	0.12	50.87	3.00	0.12	1.01	1.02	0.12	0.72	0.08	40.82	3.00	0.08	0.72	0.73	0.10	1.32	0.26	40.57	3.00	0.26	1.32	1.34	0.20	0.11	0.95	0.95	0.11	45.85
		1548	14	1.58	0.14	40.81	3.00	0.14	1.58	1.59	0.09	0.75	0.06	47.18	3.00	0.06	0.75	0.75	0.08	1.12	0.20	41.21	3.00	0.20	1.12	1.14	0.18	0.69	0.02	41.30	3.00	0.02	0.69	0.69	0.03	0.99	0.15	51.90	3.00	0.15	0.99	1.00	0.15	0.11	1.03	1.03	0.11	43.43
		1552	14	0.53	-0.03	22.48	3.00	-0.03	0.53	0.53	-0.05	0.53	0.04	18.03	3.00	0.04	0.53	0.53	0.07	0.57	0.08	22.38	3.00	0.08	0.57	0.57	0.14	0.68	0.09	58.21	3.00	0.09	0.68	0.69	0.14	0.52	0.05	15.98	3.00	0.05	0.52	0.52	0.10	0.05	0.56	0.57	0.08	28.99
3a	1	1038	2	0.53	0.06	14.97	4.00	0.33	-0.42	0.54	0.12	0.55	0.07	26.23	4.00	0.34	-0.43	0.55	0.12	0.53	0.07	16.84	4.00	0.33	-0.43	0.54	0.13	0.54	0.08	17.87	3.00	0.32	-0.44	0.55	0.15	0.54	0.08	18.52	4.00	0.33	-0.44	0.55	0.14	0.33	-0.43	0.54	0.13	18.50
		1042	3	0.53	0.08	14.74	4.00	0.32	-0.43	0.53	0.14	0.55	0.05	21.31	4.00	0.35	-0.43	0.55	0.10	0.55	0.07	17.43	4.00	0.33	-0.44	0.55	0.13	0.54	0.07	15.56	3.00	0.34	-0.43	0.54	0.12	0.58	0.05	22.87	3.00	0.36	-0.43	0.58	0.09	0.34	-0.43	0.55	0.12	18.38
		1046	3	0.54	0.08	18.57	4.00	0.33	-0.44	0.55	0.15	0.54	0.08	15.96	3.00	0.32	-0.44	0.54	0.15	0.55	0.08	20.85	3.00	0.33	-0.44	0.55	0.14	0.55	0.08	18.73	4.00	0.33	-0.44	0.55	0.15	0.54	0.08	15.25	3.00	0.32	-0.44	0.54	0.15	0.33	-0.44	0.55	0.15	17.03
		1052	3	0.55	0.07	17.55	3.00	0.35	-0.44	0.56	0.12	0.54	0.09	13.93	3.00	0.32	-0.44	0.54	0.17	0.54	0.09	18.91	3.00	0.32	-0.44	0.55	0.16	0.57	0.12	20.43	3.00	0.31	-0.48	0.58	0.21	0.54	0.09	16.46	3.00	0.32	-0.45	0.55	0.17	0.32	-0.45	0.56	0.16	17.06
		1056	3	0.55	0.12	18.20	3.00	0.31	-0.48	0.57	0.21	0.57	0.14	17.57	3.00	0.30	-0.50	0.58	0.25	0.58	0.13	17.10	4.00	0.30	-0.49	0.56	0.23	0.56	0.11	18.32	3.00	0.31	-0.47	0.57	0.20	0.56	0.10	17.62	4.00	0.33	-0.48	0.57	0.17	0.31	-0.48	0.57	0.21	17.56
		1102	3	0.56	0.10	15.82	3.00	0.33	-0.47	0.57	0.17	0.58	0.11	18.90	4.00	0.32	-0.47	0.57	0.19	0.54	0.09	17.98	3.00	0.32	-0.45	0.55	0.17	0.55	0.11	15.48	4.00	0.32	-0.47	0.58	0.19	0.55	0.13	17.18	4.00	0.30	-0.48	0.57	0.23	0.32	-0.47	0.56	0.19	18.67
		1108	3	0.56	0.12	15.93	4.00	0.31	-0.48	0.57	0.21	0.56	0.13	181.30	3.00	0.30	-0.48	0.57	0.22	0.57	0.11	18.81	3.00	0.32	-0.48	0.58	0.20	0.56	0.14	18.23	3.00	0.30	-0.49	0.58	0.24	0.57	0.13	17.63	3.00	0.31	-0.50	0.58	0.23	0.31	-0.49	0.58	0.22	50.44
		1158	4	0.54	0.10	16.09	4.00	0.31	-0.45	0.55	0.17	0.56	0.06	15.73	4.00	0.35	-0.44	0.56	0.11	0.55	0.10	19.14	4.00	0.32	-0.48	0.58	0.17	0.55	0.08	17.02	4.00	0.33	-0.45	0.55	0.15	0.53	0.08	13.82	4.00	0.32	-0.43	0.53	0.14	0.33	-0.44	0.55	0.15	16.32
		1200	4	0.55	0.09	17.58	3.00	0.32	-0.45	0.56	0.17	0.56	0.10	16.37	3.00	0.32	-0.47	0.57	0.19	0.54	0.08	15.59	3.00	0.33	-0.44	0.55	0.15	0.55	0.08	14.33	3.00	0.33	-0.45	0.56	0.15	0.55	0.07	15.04	3.00	0.33	-0.44	0.55	0.13	0.33	-0.45	0.56	0.16	15.78
		1206	4	0.54	0.08	18.74	3.00	0.33	-0.44	0.55	0.14	0.53	0.06	14.02	3.00	0.32	-0.44	0.54	0.15	0.54	0.08	15.86	3.00	0.32	-0.44	0.54	0.15	0.55	0.08	14.67	3.00	0.33	-0.44	0.55	0.15	0.54	0.10	15.27	3.00	0.31	-0.45	0.55	0.18	0.32	-0.44	0.55	0.16	15.31
		1210	4	0.54	0.09	14.52	4.00	0.32	-0.44	0.54	0.17	0.54	0.08	18.14	3.00	0.33	-0.44	0.55	0.15	0.53	0.09	15.50	3.00	0.31	-0.44	0.54	0.17	0.54	0.08	14.62	3.00	0.33	-0.44	0.55	0.15	0.54	0.08	15.45	3.00	0.32	-0.44	0.55	0.15	0.32	-0.44	0.55	0.16	15.85
		1214	4	0.56	0.09	18.48	3.00	0.33	-0.46	0.56	0.16	0.54	0.09	13.86	3.00	0.32	-0.44	0.55	0.16	0.55	0.08	17.47	3.00	0.34	-0.44	0.56	0.14	0.53	0.09	14.19	3.00	0.32	-0.44	0.54	0.18	0.54	0.09	15.43	3.00	0.32	-0.44	0.55	0.16	0.32	-0.45	0.55	0.16	15.89
		1232	5	0.55	0.08	14.85	3.00	0.33	-0.45	0.56	0.14	0.55	0.08	14.30	3.00	0.34	-0.44	0.56	0.14	0.54	0.08	13.99	4.00	0.32	-0.44	0.55	0.15	0.53	0.08	14.27	3.00	0.32	-0.43	0.54	0.15	0.54	0.08	14.51	3.00	0.32	-0.44	0.55	0.15	0.33	-0.44	0.55	0.15	14.38
		1236	5	0.54	0.09	15.26	3.00	0.32	-0.45	0.55	0.17	0.52	0.09	13.81	3.00	0.31	-0.43	0.53	0.16	0.52	0.07	13.14	3.00	0.32	-0.42	0.53	0.14	0.53	0.08	14.24	3.00	0.32	-0.43	0.54	0.14	0.55	0.05	17.43	3.00	0.35	-0.43	0.55	0.10	0.32	-0.43	0.54	0.14	14.78
		1240	5	0.53	0.09	15.03	3.00	0.32	-0.44	0.54	0.16	0.54	0.08	14.72	3.00	0.32	-0.44	0.55	0.15	0.54	0.07	18.15	3.00	0.34	-0.43	0.55	0.13	0.54	0.08	16.06	3.00	0.33	-0.43	0.54	0.14	0.55	0.08	15.20	3.00	0.33	-0.44	0.55	0.14	0.33	-0.44	0.55	0.14	15.43
		1244	5	0.54	0.07	14.05	3.00	0.33	-0.43	0.54	0.14	0.53	0.08	14.37	3.00	0.32	-0.43	0.54	0.16	0.53	0.08	13.87	3.00	0.32	-0.43	0.53	0.15	0.54	0.08	15.60	3.00	0.33	-0.44	0.55	0.15	0.54	0.08	13.83	4.00	0.33	-0.44	0.55	0.14	0.32	-0.43	0.54	0.15	14.34
		1248	5	0.53	0.10	13.78	4.00	0.30	-0.45	0.54	0.19	0.55	0.13	14.86	4.00	0.29	-0.48	0.56	0.24	0.56	0.14	15.78	4.00	0.29	-0.49	0.57	0.26	0.58	0.08	15.39	4.00	0.34	-0.46	0.57	0.14	0.54	0.09	13.78	4.00	0.32	-0.45	0.55	0.17	0.31	-0.47	0.56	0.20	14.72
		1300	5	0.56	0.09	19.86	4.00	0.33	-0.46	0.57	0.17	0.56	0.11	18.38	4.00	0.32	-0.48	0.57	0.20	0.58	0.13	18.05	4.00	0.30	-0.49	0.57	0.24	0.56	0.12	17.80	4.00	0.31	-0.48	0.58	0.21	0.54	0.11	16.97	4.00	0.31	-0.46	0.55	0.18	0.31	-0.47	0.57	0.20	17.37
		1308	5	0.54	0.11	18.78	4.00	0.30	-0.46	0.55	0.20	0.54	0.12	14.87	4.00	0.30	-0.46	0.55	0.22	0.55	0.11	18.57	4.00	0.31	-0.48	0.56	0.18	0.54	0.10	15.15	4.00	0.31	-0.46	0.55	0.19									0.31	-0.46	0.55	0.20	12.67
		1356	6	0.54	0.10	14.90	3.00	0.32	-0.45	0.55	0.17	0.57	0.09	24.92	3.00	0.34	-0.47	0.58	0.18	0.54	0.11	15.04	3.00	0.30	-0.48	0.56	0.21	0.56	0.10	18.12	4.00	0.32	-0.47	0.57	0.19	0.56	0.11	19.45	4.00	0.32	-0.48	0.57	0.19	0.32	-0.47	0.57	0.18	18.49
		1400	6	0.58	0.14		3.00	0.31	-0.51	0.60	0.24	0.57	0.08	22.18	3.00	0.34	-0.47	0.58	0.18	0.58	0.11	29.88	3.00	0.34	-0.49	0.58	0.18	0.59	0.11	25.57	3.00	0.34	-0.49	0.60	0.18	0.63	0.08	31.75	3.00	0.39	-0.50	0.63	0.13	0.34	-0.48	0.60	0.18	27.34
		1404	6	0.54	0.12	14.04	3.00	0.30	-0.48	0.55	0.21	0.56	0.11	27.48	3.00	0.34	-0.49	0.59	0.18	0.58	0.12	17.80	3.00	0.31	-0.48	0.57	0.21	0.55	0.12	17.72	3.00	0.30	-0.47	0.58	0.22	0.57	0.10	34.48	3.00	0.34	-0.48	0.58	0.17	0.32	-0.48	0.57	0.20	21.27
		1408	6	0.55	0.09	18.24	3.00	0.33	-0.48	0.56	0.16	0.54	0.12	15.88	3.00	0.30	-0.47	0.55	0.21	0.55	0.11	18.52	3.00	0.31	-0.47	0.56	0.18	0.54	0.12	14.71	3.00	0.30	-0.47	0.55	0.22	0.54	0.12	14.98	3.00	0.30	-0.47	0.55	0.22	0.31	-0.46	0.56	0.20	16.03
		1412	6	0.58	0.10	28.02	3.00	0.35	-0.48	0.60	0.17	0.58	0.12	20.48	3.00	0.32	-0.48	0.56	0.20	0.57	0.11	19.88	3.00	0.32	-0.48	0.58	0.20	0.57	0.12	18.81	4.00	0.31	-0.48	0.58	0.21	0.57	0.12	22.79	3.00	0.32	-0.48	0.58	0.20	0.32	-0.48	0.58	0.20	22.32
		1416	6	0.58	0.12	21.97	3.00	0.32	-0.48	0.58	0.21	0.56	0.13	22.33	3.00	0.32	-0.50	0.60	0.21	0.58	0.14	21.41	3.00	0.31	-0.51	0.59	0.23	0.56	0.11	18.87	3.00	0.32	-0.48	0.57	0.20	0.57	0.09	18.83	3.00	0.34	-0.47	0.58	0.16	0.32	-0.49	0.59	0.20	20.44
		1420	6	0.59	0.11	27.97	3.00	0.34	-0.48	0.60	0.18	0.57	0.10	21.80	3.00	0.33	-0.47	0.58	0.17	0.58	0.11	27.88	3.00	0.34	-0.49	0.58	0.18	0.57	0.11	20.83	3.00	0.32	-0.48	0.58	0.18	0.59	0.09	27.70	3.00	0.36	-0.48	0.60	0.15	0.34	-0.48	0.59	0.18	25.22
		1424	6	0.57	0.13	22.27	3.00	0.32	-0.48	0.58	0.22	0.56	0.13	17.40	3.00	0.30	-0.48	0.57	0.23	0.61	0.11	27.41	3.00	0.35	-0.51	0.62	0.18	0.58	0.13	21.77	3.00	0.32	-0.51	0.60	0.22	0.57	0.10	19.70	3.00	0.34	-0.47	0.58	0.17	0.33	-0.49	0.59	0.20	21.71
	2	0852	7	0.63	0.05	20.86	4.00	0.41	-0.48	0.63	0.07	0.63	0.00	23.25	4.00	0.44	-0.45	0.63	0.01	0.66	-0.01	21.15	4.00	0.47	-0.46	0.66	-0.02	0.66	-0.00	24.70	4.00	0.47	-0.47	0.66	-0.00	0.53	0.09	13.89	4.00	0.42	-0.43	0.54	0.15	0.42	-0.48	0.62	0.04	20.73
		0856	7	0.58	0.04	20.11	4.00	0.38	-0.44	0.58	0.08	0.65	0.03	23.10	4.00	0.44	-0.48	0.65	0.05	0.63	0.03	24.06	4.00	0.43	-0.47	0.64	0.05	0.66	0.04	23.04	4.00	0.44	-0.48	0.66	0.06	0.80	0.05	23.94	4.00	0.36	-0.47	0.80	0.10	0.41	-0.47	0.63	0.06	22.85
		0900	8	0.56	0.06	17.10	4.00	0.34	-0.45	0.56	0.14	0.57	0.06	18.07	4.00	0.35	-0.46	0.57	0.13	0.63	0.10	27.83	4.00	0.38	-0.51	0.64	0.15	0.58	0.07	17.73	4.00	0.35	-0.45	0.58	0.13	0.56	0.07	19.01	4.00	0.34	-0.45	0.56	0.13	0.35	-0.46	0.58	0.14	20.14
		0904	8	0.56	0.06	17.51	4.00	0.35	-0.44	0.56	0.11	0.57	0.05	18.82	4.00	0.37	-0.43	0.57	0.08	0.55	0.05	18.74	4.00	0.35	-0.43	0.55	0.10	0.58	0.03	18.50	4.00	0.40	-0.45	0.60	0.06	0.83	0.05	27.83	4.00	0.41	-0.48	0.63	0.08	0.37	-0.44	0.58	0.09	20.44
		1108	9	0.65	0.02	21.11	4.00	0.44	-0.47	0.65	0.04	0.57	0.02	18.84	4.00	0.39	-0.42	0.57	0.04	0.60	0.07	20.78	4.00	0.36	-0.47	0.61	0.11	0.60	0.12	21.40	4.00	0.34	-0.51	0.61	0.19	0.53	0.05	14.34	4.00	0.34	-0.41	0.53	0.10	0.38	-0.46	0.59	0.10	19.29
		1112	9	0.54	0.07	15.50	4.00	0.33	-0.43	0.55	0.13	0.63	0.15	21.89	4.00	0.34	-0.55	0.65	0.24	0.52	0.05	14.08	4.00	0.33	-0.41	0.53	0.09	0.57	0.11	18.12	4.00	0.32	-0.48	0.58	0.19	0.55	0.03	14.88	4.00	0.36	-0.41	0.55	0.05	0.34	-0.46	0.57	0.14	17.10
		1118	9	0.53	0.07	14.78	4.00	0.32	-0.43	0.54	0.14	0.58	0.07	21.38	4.00	0.36	-0.46	0.58	0.12	0.53	0.05	15.80	4.00	0.34	-0.41	0.54	0.09	0.54	0.09	15.18	4.00	0.32	-0.44	0.55	0.16	0.56	0.05	18.91	4.00	0.36	-0.43	0.56	0.09	0.34	-0.43	0.55	0.12	17.21
		1158	10	0.56	0.06	17.72	3.00	0.36	-0.44	0.57	0.10	0.53	0.05	14.90	3.00	0.34	-0.42	0.54	0.10	0.56	0.09	17.13	3.00	0.33	-0.46	0.56	0.15	0.54	0.05	15.13	4.00	0.34	-0.42	0.54	0.10	0.61	0.06	19.93	4.00	0.39	-0.48	0.61	0.11	0.35	-0.44	0.56	0.11	18.86
		1202	10	0.64	0.04	21.75	4.00	0.42	-0.48	0.64	0.07	0.60	0.07	21.74	4.00	0.37	-0.48	0.61	0.12	0.61	0.08	21.75	4.00	0.39	-0.48	0.62	0.10	0.62	0.08	21.08	4.00	0.39	-0.48	0.62	0.10	0.58	0.07	19.82	4.00	0.36	-0.46	0.58	0.12	0.39	-0.48	0.61	0.10	21.13
		1206	10	0.59	0.06	20.03	4.00	0.37	-0.48	0.59	0.10	0.60	0.07	20.44	4.00	0.37	-0.48	0.61	0.12	0.58	0.07	21.54	4.00	0.37	-0.47	0.60	0.11	0.61	0.08	20.58	4.00	0.36	-0.49	0.62	0.13	0.61	0.08	18.76	4.00	0.38	-0.48	0.62	0.13	0.38	-0.48	0.61	0.12	20.47
		1210	10	0.58	0.06	18.78	4.00	0.36	-0.44	0.57	0.11	0.54	0.06	14.42	4.00	0.34	-0.42	0.54	0.12	0.54	0.06	15.05	4.00	0.34	-0.43	0.55	0.11	0.54	0.07	15.06	4.00	0.33	-0.43	0.54	0.13	0.54	0.04	16.32	4.00	0.36	-0.41	0.55	0.07	0.34	-0.43	0.55	0.11	15.93
		1218	10	0.59	0.05	20.58	4.00	0.36	-0.45	0.60	0.08	0.61	0.05	19.50	4.00	0.40	-0.46	0.61	0.08	0.59	0.01	19.57	4.00	0.41	-0.42	0.58	0.01	0.52	0.04	14.85	4.00	0.34	-0.40	0.53	0.08	0.54	0.02	15.51	4.00	0.37	-0.40	0.54	0.05	0.38	-0.43	0.57	0.06	18.00
		1506	12	0.49	-0.03	14.12	4.00	0.37	-0.33	0.49	-0.06	0.53	-0.02	25.14	4.00	0.39	-0.36	0.53	-0.04	0.51	-0.04	14.80	4.00	0.38	-0.33	0.51	-0.09	0.52	-0.03	20.33	4.00	0.39	-0.34	0.52	-0.08	0.51	-0.04	22.38	4.00	0.39	-0.33	0.51	-0.09	0.38	-0.34	0.51	-0.07	20.87
		1800	13	0.50	-0.03	14.22	4.00	0.38	-0.33	0.50	-0.07	0.51	-0.04	21.38	4.00	0.39	-0.33	0.51	-0.07	0.52	-0.03	22.26	4.00	0.38	-0.34	0.52	-0.07	0.51	-0.03	13.69	4.00	0.38	-0.33	0.51	-0.06	0.48	-0.02	8.90	4.00	0.35	-0.33	0.48	-0.03	0.38	-0.33	0.50	-0.06	18.29
		1804	13	0.51	-0.04	18.50	4.00	0.38	-0.34	0.51	-0.07	0.49	-0.03	11.13	4.00	0.37	-0.33	0.49	-0.05	0.49	-0.07	13.20	4.00	0.40	-0.30	0.50	-0.14	0.48	-0.01	11.83	4.00	0.34	-0.33	0.48	-0.02	0.50	-0.02	14.20	4.00	0.37	-0.34	0.50	-0.04	0.37	-0.33	0.50	-0.07	13.39
		1808	13	0.48	-0.02	10.98	4.00	0.35	-0.33	0.48	-0.03	0.51	-0.01	20.62	4.00	0.37	-0.35	0.51	-0.02	0.49	-0.02	11.78	4.00	0.38	-0.33	0.49	-0.04	0.50	-0.01	23.63	4.00	0.38	-0.35	0.50	-0.01	0.50	-0.03	13.09	4.00	0.37	-0.33	0.50	-0.07	0.38	-0.34	0.50	-0.03	18.02
		1812	13	0.51	-0.02	19.82	4.00	0.37	-0.35	0.51	-0.04	0.50	-0.02	15.54	4.00	0.36	-0.34	0.50	-0.03	0.48	-0.01																							0.25	-0.23	0.34	-0.02	11.79
4a	1	1018	1	0.78	0.07	34.73	1.00	0.59	0.48	0.78	0.10	0.74	0.04	30.85	1.00	0.55	0.50	0.74	0.05	0.64	-0.01	33.57	1.00	0.45	0.46	0.64	-0.01	0.90	0.07	43.91	1.00	0.69	0.59	0.91	0.07	0.88	-0.02	33.22	1.00	0.81	0.63	0.88	-0.02	0.58	0.53	0.78	0.04	35.26
		1022	1	1.00	0.04	29.33	1.00	0.74	0.68	1.00	0.04	0.66	0.02	29.50	1.00	0.49	0.48	0.66	0.03	0.78	0.09	29.20	1.00	0.61	0.48	0.78	0.12	0.85	-0.01	31.71	1.00	0.59	0.60	0.85	-0.01	0.83	0.04	30.98	1.00	0.62	0.56	0.83	0.05	0.61	0.56	0.83	0.05	31.75
		1026	1	0.86	0.12	52.10	1.00	0.69	0.52	0.87	0.14	0.95	-0.07	48.84	1.00	0.82	0.73	0.95	-0.08	0.70	0.02	33.24	1.00	0.61	0.48	0.70	0.02	0.88	-0.03	37.54	1.00	0.48	0.51	0.69	-0.05	0.98	0.02	48.57	1.00	0.71	0.88	0.98	0.02	0.60	0.56	0.84	0.01	43.86
		1030	1	1.09	0.06	34.27	1.00	0.81	0.73	1.09	0.06	0.83	0.03	35.98	1.00	0.81	0.57	0.83	0.04	0.87	0.01	36.27	1.00	0.62	0.61	0.87	0.01	0.71	-0.08	39.18	1.00	0.48	0.55	0.72	-0.08	0.88	-0.12	32.66	1.00	0.54	0.71	0.89	-0.14	0.61	0.63	0.88	-0.02	35.47
		1034	1	0.99	0.00	43.25	1.00	0.70	0.70	0.99	0.00	1.08	-0.03	30.77	1.00	0.75	0.78	1.08	-0.03	0.74	0.15	45.88	1.00	0.83	0.42	0.75	0.20	0.82	-0.09	41.88	1.00	0.52	0.65	0.83	-0.11	0.98	-0.12	39.12	1.00	0.80	0.78	0.99	-0.13	0.64	0.66	0.93	-0.01	40.18
		1114	2	0.74	0.07	39.54	1.00	0.57	0.48	0.75	0.09	1.04	-0.01	37.52	1.00	0.73	0.74	1.04	-0.01	0.74	0.10	33.73	1.00	0.58	0.46	0.75	0.13	0.85	-0.11	39.40	1.00	0.59	0.75	0.96	-0.12	0.65	0.06	23.96	1.00	0.50	0.42	0.66	0.09	0.60	0.57	0.83	0.04	34.83
		1118	2	1.02	-0.01	34.81	1.00	0.72	0.72	1.02	-0.01	0.76	0.13	20.99	1.00	0.63	0.44	0.77	0.17	0.73	0.01	34.90	1.00	0.52	0.51	0.73	0.01	0.88	0.10	33.38	1.00	0.69	0.55	0.89	0.11	0.98	-0.02	36.92	1.00	0.68	0.70	0.98	-0.02	0.65	0.59	0.88	0.05	32.22
		1126	2	0.87	-0.10	41.25	1.00	0.55	0.69	0.89	-0.11	0.77	0.09	33.74	1.00	0.61	0.48	0.78	0.11	0.95	0.02	34.77	1.00	0.66	0.68	0.95	0.02	0.84	-0.00	40.06	1.00	0.59	0.60	0.84	-0.00	0.78	-0.10	39.64	1.00	0.48	0.62	0.78	-0.13	0.58	0.61	0.85	-0.02	37.89
		1146	3	0.69	-0.00	40.15	1.00	0.49	0.49	0.69	-0.00	0.84	0.06	31.18	1.00	0.50	0.41	0.65	0.09	0.86	0.06	47.08	1.00	0.65	0.57	0.86	0.08	0.90	0.05	29.22	1.00	0.87	0.60	0.90	0.06									0.58	0.52	0.77	0.05	36.90
		1150	3	1.01	0.03	42.98	1.00	0.73	0.70	1.01	0.02	0.96	0.07	32.34	1.00	0.72	0.83	0.96	0.07	0.90	0.05	38.81	1.00	0.67	0.60	0.90	0.06	1.26	0.09	32.98	1.00	0.96	0.83	1.26	0.07	1.00	0.05	33.80	1.00	0.74	0.87	1.00	0.05	0.77	0.68	1.03	0.06	36.16
		1154	3	0.82	-0.05	30.96	1.00	0.54	0.61	0.82	-0.06	0.87	0.01	37.51	1.00	0.82	0.61	0.87	0.01	0.71	0.04	26.98	1.00	0.53	0.47	0.71	0.06	0.84	-0.00	34.00	1.00	0.59	0.60	0.84	-0.01	0.80	0.04	31.69	1.00	0.60	0.54	0.81	0.05	0.58	0.57	0.81	0.01	32.23
		1158	3	1.17	0.06	31.08	1.00	0.87	0.79	1.18	0.05	0.99	-0.04	38.83	1.00	0.88	0.73	0.99	-0.04	0.98	0.03	38.75	1.00	0.64	0.61	0.88	0.03	1.01	-0.02	31.59	1.00	0.70	0.73	1.01	-0.02	0.70	0.07	34.78	1.00	0.54	0.44	0.70	0.10	0.68	0.66	0.95	0.02	35.00
8a	1	954	1	0.58	-0.07	23.38	1.00	0.36	0.45	0.58	-0.12	0.66	-0.15	22.11	1.00	0.37	0.57	0.68	-0.22	0.57	-0.11	20.59	1.00	0.32	0.49	0.58	-0.19	1.06	0.05	215.80	1.00	0.79	0.71	1.06	0.05	0.84	0.04	37.95	1.00	0.48	0.42	0.64	0.07	0.48	0.53	0.71	-0.08	63.82
		958	1	0.57	-0.10	20.64	1.00	0.33	0.47	0.57	-0.17	0.57	-0.12	17.89	1.00	0.32	0.49	0.58	-0.21	0.57	-0.08	18.75	1.00	0.35	0.46	0.58	-0.14	0.58	-0.09	22.46	1.00	0.34	0.48	0.59	-0.18	0.58	-0.12	18.99	1.00	0.33	0.49	0.59	-0.20	0.33	0.48	0.58	-0.18	18.74
		1000	1	0.60	-0.01	30.14	1.00	0.42	0.43	0.60	-0.02	0.54	-0.08	23.97	1.00	0.32	0.44	0.55	-0.15	0.56	-0.08	19.64	1.00	0.34	0.45	0.56	-0.14	0.69	-0.03	46.14	1.00	0.47	0.51	0.69	-0.04	0.99	-0.11	51.71	1.00	0.62	0.78	1.00	-0.11	0.43	0.52	0.68	-0.08	34.32
		1004	1	0.56	-0.04	21.04	1.00	0.37	0.42	0.56	-0.06	0.66	-0.09	24.04	1.00	0.40	0.53	0.66	-0.14	0.53	-0.07	13.87	1.00	0.32	0.42	0.53	-0.13	0.58	-0.00	25.23	1.00	0.41	0.41	0.58	-0.00	0.55	-0.06	24.38	1.00	0.35	0.43	0.55	-0.10	0.37	0.44	0.58	-0.09	21.71
		1008	2	0.66	-0.05	45.67	1.00	0.44	0.50	0.67	-0.07	0.59	-0.13	21.47	1.00	0.32	0.51	0.60	-0.22	0.50	-0.06	11.34	1.00	0.31	0.39	0.50	-0.12	0.59	-0.08	25.90	1.00	0.36	0.47	0.59	-0.14	0.68	-0.11	45.65	1.00	0.41	0.56	0.69	-0.18	0.37	0.49	0.61	-0.14	30.01
		1012	2	0.54	-0.05	28.83	1.00	0.34	0.42	0.54	-0.10	0.59	-0.09	18.97	1.00	0.35	0.48	0.59	-0.15	0.64	-0.11	30.80	1.00	0.37	0.54	0.65	-0.18	0.63	-0.08	31.64	1.00	0.39	0.51	0.64	-0.13	0.74	-0.10	50.51	1.00	0.45	0.59	0.74	-0.13	0.38	0.51	0.63	-0.14	31.75
		1158	4	0.55	-0.02	18.67	1.00	0.37	0.41	0.55	-0.04	0.57	-0.03	21.76	1.00	0.39	0.43	0.57	-0.06	0.57	-0.03	14.44	1.00	0.39	0.43	0.57	-0.06	0.57	-0.09	21.60	1.00	0.34	0.47	0.58	-0.18	0.55	-0.07	15.40	1.00	0.34	0.44	0.56	-0.12	0.36	0.43	0.57	-0.09	17.97
		1202	4	0.58	-0.12	18.97	1.00	0.33	0.50	0.59	-0.20	0.70	-0.09	33.54	1.00	0.43	0.56	0.70	-0.13	0.74	-0.07	32.85	1.00	0.47	0.57	0.74	-0.09	0.61	-0.08	24.06	1.00	0.37	0.49	0.61	-0.14	0.57	-0.10	19.99	1.00	0.34	0.47	0.58	-0.17	0.39	0.52	0.65	-0.15	25.48
		1206	4	0.53	0.04	13.89	1.00	0.40	0.35	0.53	0.07	0.53	0.00	18.58	1.00	0.38	0.38	0.53	0.00	0.60	-0.10	18.10	1.00	0.35	0.50	0.61	-0.17	0.52	-0.04	10.87	1.00	0.34	0.39	0.52	-0.07	0.61	-0.03	0.23	1.00	0.40	0.45	0.61	-0.06	0.38	0.41	0.56	-0.04	12.33
		1210	4	0.53	-0.04	15.36	1.00	0.34	0.41	0.53	-0.08	0.57	0.01	18.75	1.00	0.41	0.40	0.57	0.02	0.56	-0.10	27.69	1.00	0.33	0.46	0.57	-0.17	0.67	-0.09	25.07	1.00	0.41	0.53	0.67	-0.13	0.56	-0.11	18.07	1.00	0.31	0.48	0.57	-0.20	0.36	0.46	0.58	-0.11	21.03
		1214	4	0.61	-0.10	18.30	1.00	0.36	0.50	0.61	-0.16	0.62	0.02	18.17	1.00	0.46	0.43	0.62	0.03	0.62	-0.07	32.38	1.00	0.39	0.49	0.62	-0.12	0.59	-0.08	23.19	1.00	0.36	0.47	0.59	-0.14	0.61	-0.08	19.69	1.00	0.38	0.49	0.62	-0.12	0.39	0.47	0.61	-0.10	22.34
		1218	4	0.61	0.04	23.13	1.00	0.46	0.40	0.61	0.07	0.60	-0.04	19.65	1.00	0.40	0.45	0.60	-0.06	0.76	-0.18	32.59	1.00	0.41	0.67	0.78	-0.24	0.67	-0.02	20.91	1.00	0.46	0.49	0.67	-0.02	0.60	-0.14	17.22	1.00	0.32	0.52	0.61	-0.24	0.41	0.51	0.66	-0.10	22.70
		1220	4	0.85	-0.01	19.41	1.00	0.60	0.61	0.85	-0.01	0.59	-0.08	18.73	1.00	0.36	0.47	0.60	-0.13	0.69	-0.16	27.48	1.00	0.37	0.59	0.70	-0.23	0.76	-0.23	31.65	1.00	0.38	0.70	0.80	-0.29	0.57	0.01	25.90	1.00	0.41	0.40	0.57	0.01	0.42	0.55	0.70	-0.13	24.83
		1224	4	0.60	-0.00	17.44	1.00	0.42	0.43	0.60	-0.00	0.64	-0.10	28.80	1.00	0.38	0.52	0.64	-0.15	0.57	-0.08	21.03	1.00	0.36	0.48	0.58	-0.15	0.62	-0.12	25.11	1.00	0.36	0.52	0.63	-0.19	0.66	0.01	31.24	1.00	0.47	0.46	0.66	0.02	0.40	0.49	0.62	-0.09	24.34
		1230	4	0.59	-0.08	21.30	1.00	0.36	0.47	0.59	-0.14	0.60	-0.08	23.39	1.00	0.37	0.48	0.61	-0.13	0.58	-0.08	25.54	1.00	0.36	0.43	0.56	-0.10	0.53	-0.02	10.94	1.00	0.36	0.39	0.53	-0.04	0.50	-0.04	10.88	1.00	0.33	0.38	0.50	-0.07	0.35	0.43	0.56	-0.10	18.37
		1234	4	0.65	-0.10	21.21	1.00	0.39	0.53	0.66	-0.16	0.69	-0.08	34.12	1.00	0.43	0.55	0.70	-0.11	0.69	-0.10	33.98	1.00	0.42	0.55	0.69	-0.14	0.59	-0.06	28.12	1.00	0.37	0.45	0.59	-0.10	0.64	-0.12	27.02	1.00	0.36	0.54	0.65	-0.19	0.39	0.52	0.66	-0.14	28.69
		1238	4	0.56	-0.05	15.17	1.00	0.36	0.43	0.56	-0.09	0.62	-0.09	25.96	1.00	0.39	0.50	0.63	-0.14	0.58	-0.07	18.56	1.00	0.35	0.45	0.57	-0.12	0.60	0.04	28.19	1.00	0.45	0.39	0.60	0.07	0.65	-0.12	29.07	1.00	0.38	0.54	0.66	-0.18	0.38	0.46	0.60	-0.08	23.58
		1514	7	0.59	-0.06	19.58	1.00	0.38	0.46	0.59	-0.10	0.60	-0.06	22.78	1.00	0.36	0.49	0.61	-0.15	0.55	-0.06	14.86	1.00	0.35	0.44	0.56	-0.11	0.54	-0.08	27.19	1.00	0.33	0.44	0.55	-0.14	0.59	0.00	35.91	1.00	0.42	0.41	0.59	0.01	0.37	0.45	0.58	-0.10	24.08
		1520	7	0.50	0.04	10.87	1.00	0.38	0.33	0.50	0.08	0.49	0.03	8.44	1.00	0.37	0.33	0.50	0.05	0.64	0.10	28.24	1.00	0.52	0.39	0.65	0.15	0.55	0.01	28.71	1.00	0.39	0.39	0.55	0.01	0.54	0.02	24.83	1.00	0.39	0.37	0.54	0.03	0.41	0.38	0.55	0.06	20.44
		1526	7	0.52	0.04	15.20	1.00	0.39	0.34	0.52	0.08	0.48	-0.02	4.85	1.00	0.31	0.34	0.48	-0.04	0.52	0.03	19.81	1.00	0.39	0.34	0.52	0.07	0.54	0.07	21.44	1.00	0.43	0.33	0.54	0.12									0.39	0.34	0.51	0.08	15.32
		1534	7	0.56	0.08	23.34	1.00	0.45	0.34	0.56	0.13	0.49	0.02	8.23	1.00	0.36	0.33	0.49	0.04	0.49	0.01	10.48	1.00	0.35	0.34	0.49	0.01	0.50	0.01	10.04	1.00	0.36	0.35	0.50	0.01	0.55	0.03	32.67	1.00	0.41	0.37	0.55	0.05	0.39	0.35	0.52	0.05	16.95
8a	2	844	8	0.50	-0.06	10.76	1.00	0.31	0.40	0.51	-0.13	0.97	-0.25	94.23	1.00	0.51	0.86	1.00	-0.25	0.52	-0.10	14.82	1.00	0.30	0.43	0.53	-0.18	0.50	-0.06	14.98	1.00	0.32	0.40	0.51	-0.11	0.51	-0.05	11.45	1.00	0.32	0.40	0.51	-0.11	0.35	0.50	0.61	-0.18	29.25
		902	8	0.53	-0.08	20.84	1.00	0.32	0.43	0.54	-0.18	0.82	-0.11	35.97	1.08	0.36	0.51	0.62	-0.17	0.81	-0.04	38.55	1.00	0.40	0.46	0.61	-0.08	0.52	-0.11	12.41	1.00	0.29	0.44	0.53	-0.20	0.54	-0.10	18.01	1.00	0.31	0.45	0.55	-0.19	0.34	0.46	0.57	-0.18	25.18
		914	9	0.55	0.01	24.71	1.00	0.40	0.39	0.55	0.01	0.53	-0.10	15.67	1.00	0.30	0.45	0.54	-0.18	0.52	-0.10	17.08	1.00	0.30	0.44	0.53	-0.18	0.56	-0.18	21.05	1.00	0.29	0.51	0.59	-0.27	0.57	-0.05	33.13	1.00	0.37	0.44	0.58	-0.09	0.33	0.44	0.56	-0.15	22.33
		918	9	0.52	-0.06	25.67	1.00	0.32	0.41	0.53	-0.12	0.53	-0.14	12.89	1.00	0.27	0.47	0.54	-0.26	0.92	-0.18	83.07	1.00	0.52	0.77	0.93	-0.18	0.50	-0.08	10.04	1.00	0.30	0.42	0.51	-0.17	0.52	-0.10	14.66	1.00	0.30	0.44	0.53	-0.18	0.34	0.50	0.61	-0.18	31.28
		934	9	0.53	-0.11	16.78	1.00	0.30	0.45	0.54	-0.20	0.53	-0.10	23.29	1.00	0.31	0.44	0.54	-0.18	0.53	-0.11	14.15	1.00	0.29	0.45	0.54	-0.21	0.51	-0.08	11.30	1.00	0.30	0.42	0.51	-0.18	0.50	-0.05	8.39	1.00	0.32	0.38	0.50	-0.10	0.30	0.43	0.53	-0.17	14.98
		1000	9	0.81	-0.09	58.54	1.00	0.51	0.64	0.82	-0.11	0.53	-0.09	21.25	1.00	0.31	0.44	0.54	-0.17	0.50	-0.08	10.43	1.00	0.31	0.39	0.50	-0.12	0.87	-0.17	24.82	1.00	0.35	0.80	0.89	-0.25	0.53	-0.09	19.83	1.00	0.31	0.44	0.54	-0.18	0.38	0.50	0.62	-0.17	26.59
		1208	12	0.50	-0.06	10.44	1.00	0.31	0.40	0.50	-0.12	0.50	-0.08	12.78	1.00	0.30	0.41	0.51	-0.18	0.64	-0.22	25.88	1.00	0.30	0.81	0.88	-0.33	0.53	-0.10	17.90	1.00	0.30	0.45	0.54	-0.18	0.56	-0.15	22.14	1.00	0.29	0.50	0.58	-0.28	0.30	0.47	0.56	-0.21	17.69
		1212	12	0.65	-0.15	27.04	1.00	0.35	0.57	0.67	-0.23	0.61	-0.21	25.86	1.00	0.29	0.58	0.64	-0.33	0.58	-0.10	23.06	1.00	0.33	0.48	0.57	-0.17	0.88	-0.22	29.90	1.00	0.31	0.82	0.70	-0.32	0.61	-0.08	13.38	1.00	0.30	0.42	0.52	-0.18	0.31	0.53	0.62	-0.24	23.87
		1218	12	0.68	-0.17	30.94	1.00	0.36	0.60	0.71	-0.24	0.60	-0.21	24.25	1.00	0.28	0.58	0.64	-0.34	0.58	-0.17	20.81	1.00	0.29	0.53	0.61	-0.29	0.81	-0.12	32.84	1.00	0.34	0.52	0.62	-0.20	0.58	-0.12	27.08	1.00	0.33	0.49	0.59	-0.20	0.32	0.54	0.63	-0.25	27.16

TABLE [illegible]. INTERMEDIATE CROSSDRAFT DATA (CONTINUED)

Site	Day	Time	Interval	U (fps)	V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 78)	Vz (fps)	Vx (fps)	V (fps)	Angle (rad)	U (fps)	V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 78)	Vz (fps)	Vx (fps)	V (fps)	Angle (rad)
		1224	12	0.60	-0.09	25.90	1.00	0.36	0.49	0.60	-0.15	0.61	-0.04	26.30	1.00	0.40	0.46	0.61	-0.07
		1230	12	0.82	-0.18	25.04	1.00	0.32	0.55	0.84	-0.28	0.82	-0.19	25.86	1.00	0.30	0.57	0.84	-0.30
		1250	13	0.52	-0.03	20.91	1.00	0.34	0.39	0.57	-0.06	0.65	-0.08	32.00	1.00	0.40	0.52	0.65	-0.12
		1253	13	0.55	-0.06	23.06	1.00	0.35	0.44	0.58	-0.12	0.49	-0.02	8.34	1.00	0.33	0.36	0.49	-0.05
		1506	15	0.53	-0.07	16.86	1.00	0.32	0.42	0.53	-0.13	0.52	-0.09	19.18	1.00	0.31	0.42	0.53	-0.16
		1512	15	0.49	-0.04	8.57	1.00	0.31	0.37	0.48	-0.08	0.48	-0.03	8.72	1.00	0.31	0.36	0.48	-0.07
		1516	15	0.54	-0.11	12.42	1.00	0.31	0.46	0.55	-0.20	0.53	-0.09	20.59	1.00	0.31	0.44	0.54	-0.17
		1520	15	0.52	-0.07	14.06	1.00	0.32	0.41	0.52	-0.13	0.52	-0.09	15.40	1.00	0.31	0.43	0.53	-0.17
6c	1	910	1	0.55	-0.03	27.56	1.00	0.03	-0.55	0.55	-0.05	0.49	-0.08	8.81	1.00	0.08	-0.49	0.49	-0.16
		916	1	0.56	-0.03	35.99	1.00	0.03	-0.56	0.56	-0.05	0.85	-0.07	38.29	1.00	0.07	-0.85	0.85	-0.08
		928	1	0.51	-0.07	18.93	1.00	0.07	-0.51	0.52	-0.13	0.53	-0.10	18.80	1.00	0.10	-0.53	0.54	-0.18
		1002	2	0.58	-0.00	23.89	1.00	0.00	-0.58	0.58	-0.00	0.80	-0.00	32.80	1.00	0.00	-0.80	0.80	-0.00
		1008	2	0.53	-0.07	19.49	1.00	0.07	-0.53	0.53	-0.12	0.47	-0.05	5.96	1.00	0.05	-0.47	0.47	-0.10
		1018	2	0.68	-0.01	34.97	1.00	0.01	-0.68	0.68	-0.02	0.73	0.18	81.50	1.00	-0.18	-0.73	0.74	0.21
		1022	2	0.48	-0.06	7.18	1.00	0.06	-0.48	0.48	-0.13	0.84	0.08	31.19	1.00	-0.08	-0.84	0.85	0.12
		1026	2	0.46	-0.05	4.96	1.00	0.05	-0.46	0.47	-0.10	0.51	-0.05	30.99	1.00	0.05	-0.51	0.51	-0.11
		1032	3	0.59	-0.13	25.13	1.00	0.13	-0.59	0.61	-0.21	0.54	-0.08	19.19	1.00	0.08	-0.54	0.54	-0.10
		1106	3	0.63	0.02	81.58	1.00	-0.02	-0.63	0.63	0.03	0.51	-0.09	11.87	1.00	0.09	-0.51	0.52	-0.17
		1110	3	0.48	-0.06	14.80	1.00	0.06	-0.48	0.49	-0.13	0.48	-0.07	10.13	1.00	0.07	-0.48	0.49	-0.14
		1204	4	0.52	-0.01	23.04	1.00	0.01	-0.52	0.52	-0.01	0.83	-0.02	33.88	1.00	0.02	-0.83	0.83	-0.04
		1210	4	0.49	-0.07	15.72	1.00	0.07	-0.49	0.50	-0.14	0.48	-0.05	14.21	1.00	0.05	-0.48	0.49	-0.10
		1214	4	0.51	-0.10	18.05	1.00	0.10	-0.51	0.52	-0.18	0.50	-0.08	13.94	1.00	0.08	-0.50	0.51	-0.18
		1218	4	0.68	-0.08	33.98	1.00	0.08	-0.68	0.69	-0.12	1.20	0.12	42.28	1.00	-0.12	-1.20	1.21	0.10
		1222	4	0.58	-0.06	27.25	1.00	0.06	-0.58	0.58	-0.11	0.53	0.00	20.33	1.00	-0.00	-0.53	0.53	0.00
		1226	4	0.78	-0.10	29.18	1.00	0.10	-0.78	0.79	-0.12	0.52	-0.04	18.80	1.00	0.04	-0.52	0.52	-0.06
		1412	8	1.10	-0.00	39.75	1.00	0.00	-1.10	1.10	-0.00	0.57	-0.07	27.78	1.00	0.07	-0.57	0.57	-0.12
		1418	8	0.57	-0.09	29.06	1.00	0.09	-0.57	0.58	-0.16	0.58	-0.03	28.03	1.00	0.03	-0.58	0.58	-0.05
		1426	8	0.55	0.02	29.82	1.00	-0.02	-0.55	0.55	0.04	0.54	0.01	25.84	1.00	-0.01	-0.54	0.54	0.02
		1430	8																
		1432	8																
		816	8	0.56	-0.07	28.25	1.00	0.07	-0.56	0.56	-0.13	0.53	-0.01	24.05	1.00	0.01	-0.53	0.53	-0.03
		840	8	0.55	-0.06	21.31	1.00	0.06	-0.55	0.55	-0.11	0.51	-0.05	12.45	1.00	0.05	-0.51	0.51	-0.11
		850	8	0.55	-0.07	27.03	1.00	0.07	-0.55	0.56	-0.13	0.83	-0.08	35.25	1.00	0.08	-0.83	0.83	-0.09
		854	8	0.55	-0.06	28.56	1.00	0.06	-0.55	0.55	-0.11	0.55	0.03	27.82	1.00	-0.03	-0.55	0.55	0.05
		922	9	0.60	0.01	30.21	1.00	-0.01	-0.60	0.60	0.01	0.52	-0.12	17.18	1.00	0.12	-0.52	0.54	-0.23
		930	9	0.58	-0.14	39.26	1.00	0.14	-0.58	0.60	-0.24	0.52	-0.09	14.80	1.00	0.09	-0.52	0.52	-0.17
		1024	10	0.49	0.00	7.69	1.00	-0.00	-0.49	0.49	0.00	0.49	-0.03	8.87	1.00	0.03	-0.49	0.49	-0.06
		1044	10																
		1046	10																
		1050	10	0.52	-0.02	17.90	1.00	0.02	-0.52	0.52	-0.04	0.51	0.01	18.60	1.00	-0.01	-0.51	0.51	0.03
		1204	12	0.49	-0.01	8.82	1.00	0.01	-0.49	0.49	-0.02	0.50	-0.07	8.75	1.00	0.07	-0.50	0.51	-0.14
		1210	12	0.49	-0.00	7.43	1.00	0.00	-0.49	0.49	-0.01	0.54	-0.12	18.42	1.00	0.12	-0.54	0.55	-0.23
		1214	12	0.49	0.01	8.15	1.00	-0.01	-0.49	0.49	0.02								
		1216	12									0.49	0.01	10.64	1.00	-0.01	-0.49	0.49	0.03
		1222	12	0.49	-0.00	7.05	2.00	0.49	-0.00	0.48	-0.00	0.83	-0.08	33.74	1.00	0.08	-0.83	0.83	-0.09
		1338		0.48	0.01	7.82	2.00	0.48	0.01	0.48	0.02	0.50	-0.00	13.31	2.00	0.50	-0.00	0.50	-0.01
		1358		0.47	-0.02	8.19	1.00	0.02	-0.47	0.47	-0.03	0.57	0.04	32.00	2.00	0.57	0.04	0.57	0.07
		1404		0.49	-0.06	7.55	2.00	0.49	-0.06	0.50	-0.12	0.49	0.01	7.57	2.00	0.49	0.01	0.49	0.03
		1412		0.49	-0.07	8.21	2.00	0.49	-0.07	0.49	-0.14								
		1414										0.55	0.00	26.08	2.00	0.55	0.00	0.55	0.00
		1416																	
7a	1	850	2	0.51	-0.03	21.29	1.00	-0.03	-0.51	0.48	-0.05	0.82	0.05	31.17	1.00	0.05	-0.82	0.88	0.07
		1000	2	0.50	0.02	8.23	1.00	0.02	-0.50	0.51	0.03	0.47	-0.01	7.38	1.00	-0.01	-0.47	0.48	-0.02
		1008	2	0.54	0.02	21.13	1.00	0.02	-0.54	0.55	0.03	0.48	-0.00	10.14	1.00	-0.00	-0.48	0.48	-0.01
		1014	2	0.52	0.02	16.43	1.00	0.02	-0.52	0.54	0.04								
		1020	2									0.56	0.03	18.15	1.00	0.03	-0.56	0.59	0.06
		1022	2																
		1036	2	0.48	0.04	8.72	1.00	0.04	-0.48	0.52	0.08	0.48	-0.00	7.80	1.00	-0.00	-0.48	0.47	-0.00
		1054	3	0.47	-0.01	8.33	1.00	-0.01	-0.47	0.46	-0.03	0.49	0.00	7.84	1.00	0.00	-0.49	0.49	0.00
		1134	3	0.59	0.09	19.77	1.00	0.09	-0.58	0.66	0.13								
		1138	3									0.47	-0.02	5.83	1.00	-0.02	-0.47	0.44	-0.05
		1206	4	0.48	-0.00	8.00	1.00	-0.00	-0.48	0.47	-0.01	0.48	-0.00	8.06	1.00	-0.00	-0.48	0.48	-0.00
		1212	4	0.52	-0.04	19.09	1.00	-0.04	-0.52	0.47	-0.09	0.48	-0.01	8.41	1.00	-0.01	-0.48	0.47	-0.02
		1218	4	0.47	-0.02	8.47	1.00	-0.02	-0.47	0.45	-0.04	0.47	-0.01	8.52	1.00	-0.01	-0.47	0.45	-0.02
		1222	4	0.48	-0.01	7.51	1.00	-0.01	-0.48	0.47	-0.02	0.47	-0.03	5.73	1.00	-0.03	-0.47	0.44	-0.06
		1228	4	0.47	-0.02	7.88	1.00	-0.02	-0.47	0.48	-0.04	0.47	-0.02	8.21	1.00	-0.02	-0.47	0.45	-0.04
		1302	5	0.50	-0.07	12.58	1.00	-0.07	-0.50	0.43	-0.18								
		1402	8	0.73	0.28	44.45	1.00	0.28	-0.73	0.90	0.31	0.49	0.00	9.31	1.00	0.00	-0.49	0.48	0.01
		1550	8	0.50	-0.01	15.38	1.00	-0.01	-0.50	0.48	-0.03	0.48	-0.00	7.74	1.00	-0.00	-0.48	0.48	-0.00
		1556	8	0.48	0.00	8.04	1.00	0.00	-0.48	0.48	0.01	0.50	0.01	8.58	1.00	0.01	-0.50	0.51	0.03
		1602	8	0.51	0.03	18.14	1.00	0.03	-0.51	0.54	0.05	1.03	0.49	61.37	1.00	0.49	-1.03	1.24	0.40
		1608	8	0.49	-0.02	11.51	1.00	-0.02	-0.49	0.47	-0.05	0.51	0.01	9.43	1.00	0.01	-0.51	0.52	0.02
7a	2	844	8	0.50	0.02	222.83	1.00	0.02	-0.50	0.52	0.03	0.70	-0.01	37.15	1.00	-0.01	-0.70	0.69	-0.01
		850	8	0.51	-0.02	13.00	1.00	-0.02	-0.51	0.49	-0.04	0.47	-0.01	7.40	1.00	-0.01	-0.47	0.46	-0.02
		858																	
		904	9	0.47	-0.03	5.02	1.00	-0.03	-0.47	0.43	-0.07	0.48	-0.01	7.83	1.00	-0.01	-0.48	0.47	-0.02
		920	10									0.54	0.03	20.98	1.00	0.03	-0.54	0.57	0.08
		1008	11																
		1010	11	0.47	-0.01	8.36	1.00	-0.01	-0.47	0.48	-0.02								
		1026	11	0.53	0.06	24.25	1.00	0.06	-0.53	0.59	0.10								
		1042																	
		1202	13	0.53	-0.01	23.89	1.00	-0.01	-0.53	0.52	-0.02	0.54	0.05	18.44	1.00	0.05	-0.54	0.58	0.08
		1208	13	0.48	-0.01	7.31	1.00	-0.01	-0.48	0.46	-0.03	0.47	-0.02	8.89	1.00	-0.02	-0.47	0.45	-0.04
		1214	13	0.48	-0.02	7.07	1.00	-0.02	-0.48	0.47	-0.04	0.47	-0.02	6.15	1.00	-0.02	-0.47	0.45	-0.04
		1220	13	0.49	0.01	9.87	1.00	0.01	-0.49	0.49	0.01	0.54	0.02	19.73	1.00	0.02	-0.54	0.56	0.03
		1226	13	0.47	-0.02	5.32	1.00	-0.02	-0.47	0.44	-0.04	0.48	0.00	10.09	1.00	0.00	-0.48	0.48	0.00
		1230	13	0.56	0.03	18.32	1.00	0.03	-0.56	0.58	0.05	0.48	-0.02	7.02	1.00	-0.02	-0.48	0.46	-0.05
		1236	13	0.79	0.10	243.69	1.00	0.10	-0.79	0.85	0.12	0.56	0.04	27.58	1.00	0.04	-0.56	0.59	0.06
		1242	13	0.79	0.29	24.75	1.00	0.29	-0.78	0.86	0.31	0.49	-0.01	13.85	1.00	-0.01	-0.49	0.48	-0.02
		1248	13	0.53	-0.01	14.72	1.00	-0.01	-0.53	0.52	-0.01	0.49	-0.01	11.17	1.00	-0.01	-0.49	0.48	-0.02
6a	1	1218	2	1.98	0.18	24.18	1.00	1.98	0.18	1.98	0.08	1.90	0.28	21.86	1.00	1.90	0.28	1.82	0.14
		1220	2	1.78	0.84	22.86	1.00	1.78	0.84	1.97	0.44	2.03	0.38	35.80	1.00	2.03	0.38	2.08	0.18
		1224	2	1.85	-0.22	40.15	1.00	1.85	-0.22	1.86	-0.13	1.71	0.84	32.05	1.00	1.71	0.84	1.83	0.38

Site	Day	Time	Interval	U (fps)	V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 78)	Vz (fps)	Vx (fps)	V (fps)	Angle (rad)	U (fps)	V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 78)	Vz (fps)	Vx (fps)	V (fps)	Angle (rad)
		1224	12	0.54	-0.08	18.61	1.00	0.32	0.44	0.55	-0.16	0.52	-0.02	14.86	1.00	0.35	0.39	0.52	-0.03
		1230	12	0.83	-0.18	25.98	1.00	0.32	0.57	0.85	-0.28	0.78	-0.10	37.53	1.00	0.47	0.61	0.77	-0.13
		1250	13	0.51	-0.07	17.34	1.00	0.32	0.41	0.52	-0.13	0.52	-0.06	14.72	1.00	0.33	0.41	0.52	-0.11
		1253	13	0.50	-0.08	13.81	1.00	0.30	0.41	0.51	-0.15	0.56	-0.09	23.01	1.00	0.33	0.46	0.57	-0.18
		1506	15	0.53	-0.13	17.58	1.00	0.28	0.47	0.55	-0.24	0.52	-0.04	17.04	1.00	0.34	0.39	0.52	-0.08
		1512	15									0.49	-0.05	13.09	1.00	0.31	0.38	0.49	-0.11
		1516	15	0.48	-0.03	7.43	1.00	0.32	0.36	0.48	-0.05	0.52	-0.09	14.55	1.00	0.30	0.43	0.52	-0.17
		1520	15	0.51	-0.09	11.82	1.00	0.30	0.42	0.52	-0.17	0.49	-0.06	10.49	1.00	0.31	0.39	0.49	-0.11
6c	1	910	1	1.25	0.09	38.83	1.00	-0.08	-1.25	1.28	0.07	0.65	-0.11	44.49	1.00	0.11	-0.65	0.66	-0.17
		916	1	0.54	0.00	26.37	1.00	-0.00	-0.54	0.54	0.00	0.49	-0.05	10.56	1.00	0.05	-0.49	0.49	-0.10
		928	1	0.47	-0.05	5.87	1.00	0.05	-0.47	0.47	-0.10	0.47	-0.05	5.43	1.00	0.05	-0.47	0.47	-0.11
		1002	2	0.49	-0.04	14.58	1.00	0.04	-0.49	0.49	-0.09	0.59	-0.03	26.91	1.00	0.03	-0.59	0.59	-0.05
		1008	2	0.48	-0.05	10.82	1.00	0.06	-0.48	0.49	-0.11	0.54	-0.06	24.59	1.00	0.06	-0.54	0.54	-0.11
		1018	2	0.51	-0.04	15.29	1.00	0.04	-0.51	0.51	-0.08	0.53	-0.05	20.46	1.00	0.05	-0.53	0.53	-0.10
		1022	2	1.20	0.18	31.06	1.00	-0.18	-1.20	1.21	0.15	0.48	-0.06	10.39	1.00	0.06	-0.48	0.48	-0.12
		1026	2	0.92	0.06	49.50	1.00	-0.08	-0.92	0.93	0.06	0.83	-0.02	38.26	1.00	0.02	-0.83	0.83	-0.03
		1032	3	0.59	-0.04	33.52	1.00	0.04	-0.58	0.59	-0.07	0.58	-0.13	28.66	1.00	0.13	-0.58	0.59	-0.22
		1106	3	0.48	-0.06	7.01	1.00	0.08	-0.48	0.48	-0.12	0.78	-0.03	43.85	1.00	0.03	-0.78	0.78	-0.04
		1110	3	0.50	-0.09	12.19	1.00	0.09	-0.50	0.51	-0.17	0.50	-0.06	15.02	1.00	0.06	-0.50	0.51	-0.13
		1204	4	0.50	-0.07	12.34	1.00	0.07	-0.50	0.51	-0.15	0.85	-0.09	40.92	1.00	0.09	-0.85	0.85	-0.14
		1210	4	0.87	-0.11	33.01	1.00	0.11	-0.87	0.87	-0.17	0.54	-0.02	18.92	1.00	0.02	-0.54	0.54	-0.04
		1214	4	0.48	-0.04	12.51	1.00	0.04	-0.48	0.48	-0.08	0.58	-0.01	27.47	1.00	0.01	-0.58	0.59	-0.02
		1218	4	0.73	-0.13	37.71	1.00	0.13	-0.73	0.74	-0.17	0.77	0.04	38.48	1.00	-0.04	-0.77	0.77	0.08
		1222	4	0.50	-0.05	15.77	1.00	0.05	-0.50	0.50	-0.10	0.83	-0.00	33.01	1.00	0.00	-0.83	0.83	-0.01
		1226	4	0.48	-0.06	11.35	1.00	0.06	-0.48	0.49	-0.12	0.81	-0.07	35.07	1.00	0.07	-0.81	0.81	-0.12
		1412	8	0.79	0.04	41.58	1.00	-0.04	-0.79	0.79	0.05	1.59	0.83	28.08	1.00	-0.83	-1.59	1.80	0.48
		1418	8	0.47	-0.05	7.86	1.00	0.05	-0.47	0.47	-0.11	0.47	-0.05	7.39	1.00	0.05	-0.47	0.47	-0.11
		1426	8																
		1430	8	0.49	-0.02	15.42	1.00	0.02	-0.49	0.49	-0.05								
		1432	8									0.56	-0.00	28.81	1.00	0.00	-0.56	0.56	-0.00
		816	8	0.52	-0.01	16.00	1.00	0.01	-0.52	0.52	-0.03	0.55	-0.11	29.19	1.00	0.11	-0.55	0.56	-0.20
		840	8	0.58	-0.11	36.42	1.00	0.11	-0.58	0.59	-0.18	0.50	-0.03	11.24	1.00	0.03	-0.50	0.50	-0.06
		850	8	0.58	0.03	300.52	1.00	-0.03	-0.58	0.58	0.06	0.55	-0.05	24.87	1.00	0.05	-0.55	0.55	-0.09
		854	8	0.50	-0.02	8.31	1.00	0.02	-0.50	0.50	-0.05	0.51	-0.08	15.84	1.00	0.08	-0.51	0.51	-0.15
		922	9	0.49	-0.02	9.18	1.00	0.02	-0.49	0.49	-0.04	0.49	-0.01	8.02	1.00	0.01	-0.49	0.49	-0.02
		930	9	0.53	-0.06	20.87	1.00	0.06	-0.53	0.53	-0.11	0.50	-0.02	13.91	1.00	0.02	-0.50	0.50	-0.03
		1024	10																
		1044	10	0.49	-0.01	7.19	1.00	0.01	-0.49	0.49	-0.01	0.53	-0.05	18.85	1.00	0.05	-0.53	0.54	-0.09
		1046	10																
		1050	10	0.52	-0.03	15.85	1.00	0.03	-0.52	0.52	-0.08	0.54	-0.01	21.27	1.00	0.01	-0.54	0.54	-0.02
		1204	12	0.50	-0.01	10.34	1.00	0.01	-0.50	0.50	-0.02	0.49	-0.02	7.56	1.00	0.02	-0.49	0.48	-0.03
		1210	12	0.48	-0.02	7.83	1.00	0.02	-0.48	0.48	-0.04	0.51	-0.03	10.38	1.00	0.03	-0.51	0.51	-0.06
		1214	12																
		1216	12	0.49	0.00	8.33	1.00	-0.00	-0.49	0.49	0.00	0.48	0.01	8.39	1.00	-0.01	-0.48	0.48	0.02
		1222	12	0.50	-0.06	7.24	1.00	0.06	-0.50	0.50	-0.12	0.52	-0.10	11.62	2.00	0.52	-0.10	0.53	-0.18
		1338		0.48	0.01	7.37	2.00	0.48	0.01	0.48	0.01	0.48	0.01	7.40	2.00	0.48	0.01	0.48	0.02
		1358		0.49	0.01	7.39	2.00	0.49	0.01	0.49	0.02	0.55	-0.04	28.28	2.00	0.55	-0.04	0.55	-0.08
		1404		0.49	0.02	7.51	2.00	0.49	0.02	0.49	0.04	0.49	0.01	7.70	1.00	-0.01	-0.49	0.49	0.01
		1412																	
		1414																	
		1416		0.50	-0.05	12.55	2.00	0.50	-0.05	0.50	-0.09	0.48	-0.01	6.97	2.00	0.48	-0.01	0.48	-0.02
7a	1	850	2	0.52	0.04	13.43	1.00	0.04	-0.52	0.55	0.07	0.51	0.03	8.91	1.00	0.03	-0.51	0.53	0.05
		1000	2	0.54	0.05	16.05	1.00	0.05	-0.54	0.59	0.09	0.48	-0.01	8.59	1.00	-0.01	-0.48	0.46	-0.02
		1008	2	0.50	0.01	9.81	1.00	0.01	-0.50	0.51	0.02	0.52	-0.04	23.58	1.00	-0.04	-0.52	0.48	-0.07
		1014	2																
		1020	2																
		1022	2																
		1036	2	0.53	0.00	26.93	1.00	0.00	-0.53	0.54	0.00	0.49	-0.00	8.94	1.00	-0.00	-0.49	0.49	-0.00
		1054	3	0.54	0.08	30.63	1.00	0.08	-0.64	0.81	0.13	0.49	0.01	7.67	1.00	0.01	-0.49	0.50	0.03
		1134	3																
		1138	3	0.48	0.00	7.84	1.00	0.00	-0.48	0.48	0.00	0.47	-0.02	8.36	1.00	-0.02	-0.47	0.44	-0.05
		1206	4	0.47	-0.01	7.40	1.00	-0.01	-0.47	0.46	-0.02	0.48	-0.00	7.74	1.00	-0.00	-0.48	0.48	-0.00
		1212	4	0.49	0.01	8.38	1.00	0.01	-0.49	0.50	0.02	0.48	-0.02	7.40	1.00	-0.02	-0.48	0.46	-0.05
		1218	4	0.48	0.00	8.46	1.00	0.00	-0.48	0.48	0.00	0.49	0.02	9.68	1.00	0.02	-0.49	0.51	0.04
		1222	4	0.54	0.03	18.64	1.00	0.03	-0.54	0.57	0.05	0.49	-0.02	10.52	1.00	-0.02	-0.49	0.47	-0.05
		1228	4	0.49	-0.06	7.84	1.00	-0.06	-0.49	0.43	-0.13	0.48	0.00	8.82	1.00	0.00	-0.48	0.48	0.00
		1302	5									0.47	-0.01	7.14	1.00	-0.01	-0.47	0.46	-0.03
		1402	8	0.94	0.38	48.97	1.00	0.38	-0.94	1.13	0.35	1.18	0.62	44.23	1.00	0.62	-1.18	1.42	0.45
		1550	8	0.49	-0.01	9.08	1.00	-0.01	-0.49	0.48	-0.02	0.51	0.03	8.87	1.00	0.03	-0.51	0.54	0.06
		1556	8	0.47	-0.01	7.51	1.00	-0.01	-0.47	0.48	-0.03	0.47	-0.01	6.31	1.00	-0.01	-0.47	0.45	-0.03
		1602	8	0.69	0.23	48.29	1.00	0.23	-0.68	0.94	0.28	0.94	0.44	52.09	1.00	0.44	-0.94	1.15	0.39
		1608	8	0.47	-0.01	7.08	1.00	-0.01	-0.47	0.47	-0.01	0.49	0.00	8.55	1.00	0.00	-0.49	0.49	0.01
7a	2	844	8	0.60	0.08	25.38	1.00	0.08	-0.60	0.66	0.12	0.69	0.16	17.41	1.00	0.16	-0.69	0.80	0.21
		850	8	0.50	-0.02	15.81	1.00	-0.02	-0.50	0.48	-0.03								
		858																	
		904	9	0.47	-0.02	5.71	1.00	-0.02	-0.47	0.44	-0.05	0.49	0.02	11.63	1.00	0.02	-0.49	0.51	0.04
		920	10	0.61	0.01	24.10	1.00	0.01	-0.61	0.62	0.02								
		1008	11									0.55	0.07	23.72	1.00	0.07	-0.55	0.61	0.11
		1010	11	0.49	0.01	8.58	1.00	0.01	-0.49	0.49	0.01	0.47	-0.03	8.02	1.00	-0.03	-0.47	0.44	-0.06
		1026	11	0.48	-0.01	7.41	1.00	-0.01	-0.48	0.47	-0.02								
		1042																	
		1202	13	0.48	-0.01	7.78	1.00	-0.01	-0.48	0.47	-0.02	0.51	0.02	18.41	1.00	0.02	-0.51	0.53	0.04
		1208	13	0.51	0.05	10.63	1.00	0.05	-0.51	0.58	0.09	0.49	0.00	8.63	1.00	0.00	-0.49	0.49	0.01
		1214	13	0.48	-0.00	8.30	1.00	-0.00	-0.49	0.49	-0.00	0.48	-0.01	6.67	1.00	-0.01	-0.48	0.46	-0.02
		1220	13	0.49	-0.01	8.98	1.00	-0.01	-0.49	0.48	-0.02	0.55	0.08	25.78	1.00	0.08	-0.55	0.62	0.12
		1226	13	0.51	0.03	10.06	1.00	0.03	-0.51	0.54	0.05	0.47	-0.02	5.54	1.00	-0.02	-0.47	0.45	-0.05
		1230	13	0.50	0.02	16.83	1.00	0.02	-0.50	0.51	0.03	0.50	0.01	18.99	1.00	0.01	-0.50	0.50	0.02
		1236	13	0.48	-0.00	7.89	1.00	-0.00	-0.48	0.48	-0.01	0.53	0.05	24.95	1.00	0.05	-0.53	0.57	0.08
		1242	13	0.52	0.04	14.78	1.00	0.04	-0.52	0.55	0.07	0.50	-0.02	7.19	1.00	-0.02	-0.50	0.48	-0.03
		1248	13																
6a	1	1218	2	1.55	0.20	22.28	1.00	1.55	0.20	1.58	0.13	1.12	0.18	48.00	1.00	1.12	0.18	1.14	0.16
		1220	2	1.50	0.82	23.44	1.00	1.50	0.82	1.71	0.50	0.71	0.18	34.16	1.00	0.71	0.18	0.73	0.22
		1224	2	1.52	0.23	21.13	1.00	1.52	0.23	1.54	0.15	1.33	-0.20	37.90	1.00	1.33	-0.20	1.35	-0.15

Site	Day	Time	Interval	U (fps)	V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig. 78)	Vz (fps)	Vx (fps)	V (fps)	Angle (rad)	Average Velocity Vz (fps)	Average Velocity Vx (fps)	Average Velocity V (fps)	Average Angle (rad)	Average Turb Int (%)
		1224	12	0.68	-0.12	28.08	1.00	0.40	0.56	0.69	-0.17	0.37	0.47	0.59	-0.12	22.34
		1230	12	0.51	-0.07	15.25	1.00	0.31	0.42	0.52	-0.14	0.34	0.54	0.65	-0.22	25.85
		1250	13	0.51	-0.04	13.84	1.00	0.33	0.38	0.51	-0.07	0.34	0.42	0.54	-0.10	19.78
		1253	13	0.54	-0.10	22.43	1.00	0.31	0.45	0.55	-0.18	0.32	0.42	0.53	-0.13	18.13
		1506	15	0.50	-0.08	10.48	1.00	0.30	0.41	0.50	-0.15	0.31	0.42	0.52	-0.15	18.23
		1512	15	0.53	-0.13	18.81	1.00	0.28	0.46	0.54	-0.24	0.30	0.39	0.50	-0.12	11.30
		1516	15	0.52	-0.04	18.44	1.00	0.34	0.40	0.52	-0.07	0.32	0.41	0.52	-0.13	14.29
		1520	15	0.54	-0.13	20.82	1.00	0.28	0.48	0.56	-0.24	0.30	0.43	0.52	-0.18	14.48
6c	1	910	1	0.81	-0.03	31.04	1.00	0.03	-0.81	0.81	-0.04	0.03	-0.71	0.71	-0.07	30.14
		916	1	0.87	0.04	19.41	1.00	-0.04	-0.87	0.87	0.07	0.02	-0.82	0.82	-0.03	28.12
		928	1	0.48	-0.04	9.27	1.00	0.04	-0.48	0.48	-0.09	0.06	-0.49	0.50	-0.12	11.82
		1002	2	0.81	-0.06	37.08	1.00	0.06	-0.81	0.82	-0.10	0.03	-0.57	0.58	-0.05	27.05
		1008	2	0.48	-0.04	10.42	1.00	0.04	-0.48	0.48	-0.08	0.05	-0.50	0.50	-0.10	14.28
		1018	2	0.82	-0.02	32.01	1.00	0.02	-0.82	0.82	-0.04	-0.01	-0.81	0.82	-0.01	32.85
		1022	2	0.48	-0.05	4.80	1.00	0.05	-0.46	0.47	-0.10	-0.02	-0.85	0.86	-0.02	18.88
		1026	2	0.51	-0.05	15.59	1.00	0.05	-0.51	0.51	-0.09	0.02	-0.81	0.81	-0.05	27.84
		1032	3	0.77	-0.11	48.12	1.00	0.11	-0.77	0.78	-0.15	0.09	-0.81	0.82	-0.15	30.52
		1106	3	0.70	-0.09	40.25	1.00	0.09	-0.70	0.70	-0.12	0.05	-0.81	0.82	-0.08	32.87
		1110	3	0.55	-0.01	23.21	1.00	0.01	-0.55	0.55	-0.02	0.08	-0.51	0.61	-0.12	15.07
		1204	4	1.05	0.17	37.77	1.00	-0.17	-1.05	1.07	0.16	0.01	-0.87	0.89	-0.04	29.55
		1210	4	0.47	-0.04	8.85	1.00	0.04	-0.47	0.47	-0.08	0.06	-0.53	0.53	-0.11	17.94
		1214	4	0.48	-0.08	16.94	1.00	0.08	-0.49	0.49	-0.12	0.06	-0.51	0.52	-0.12	17.78
		1218	4	0.53	-0.05	26.97	1.00	0.05	-0.53	0.53	-0.09	0.02	-0.78	0.79	-0.04	35.86
		1222	4	0.58	0.02	53.89	1.00	-0.02	-0.58	0.58	0.03	0.02	-0.56	0.56	-0.04	30.01
		1226	4	0.57	-0.07	34.84	1.00	0.07	-0.57	0.57	-0.12	0.07	-0.59	0.60	-0.11	25.65
		1412	8	1.08	0.10	42.63	1.00	-0.10	-1.08	1.09	0.09	-0.18	-1.03	1.07	0.10	35.97
		1418	8	0.49	-0.04	16.80	1.00	0.04	-0.49	0.49	-0.08	0.05	-0.51	0.51	-0.10	17.55
		1426	8									-0.02	-0.55	0.55	0.03	27.83
		1430	8									0.02	-0.49	0.49	-0.05	15.42
		1432	8									0.00	-0.56	0.56	-0.00	28.91
		816	8	0.49	0.02	8.12	1.00	-0.02	-0.49	0.49	0.03	0.04	-0.53	0.54	-0.07	21.12
		840	8	0.80	-0.13	42.20	1.00	0.13	-0.80	0.82	-0.21	0.08	-0.55	0.56	-0.13	24.72
		850	8	0.55	-0.11	16.80	1.00	0.11	-0.55	0.56	-0.20	0.05	-0.57	0.57	-0.09	80.85
		854	8	0.48	0.00	7.85	1.00	-0.00	-0.48	0.48	0.00	0.03	-0.52	0.52	-0.05	17.80
		922	9	0.51	-0.02	15.31	1.00	0.02	-0.51	0.51	-0.04	0.03	-0.52	0.53	-0.06	15.98
		930	9	0.50	-0.03	8.43	1.00	0.03	-0.50	0.50	-0.06	0.07	-0.53	0.53	-0.12	19.45
		1024	10									0.01	-0.49	0.49	-0.03	8.18
		1044	10									0.03	-0.51	0.51	-0.05	13.02
		1046	10	0.56	0.04	28.28	1.00	-0.04	-0.56	0.57	0.07	-0.04	-0.56	0.57	0.07	29.28
		1050	10	0.51	0.01	13.40	1.00	-0.01	-0.51	0.51	0.03	0.01	-0.52	0.52	-0.01	16.86
		1204	12	0.49	-0.04	8.78	1.00	0.04	-0.49	0.49	-0.09	0.03	-0.50	0.50	-0.06	9.01
		1210	12	0.49	-0.05	11.21	1.00	0.05	-0.49	0.49	-0.10	0.05	-0.50	0.51	-0.09	11.22
		1214	12									-0.01	-0.49	0.49	0.02	8.15
		1216	12	0.50	0.02	9.07	1.00	-0.02	-0.50	0.50	0.04	-0.01	-0.48	0.48	0.02	6.45
		1222	12	0.49	-0.01	7.69	1.00	0.01	-0.49	0.49	-0.01	0.23	-0.34	0.53	-0.06	13.47
		1338		0.49	0.02	8.06	2.00	0.49	0.02	0.49	0.04	0.49	0.01	0.49	0.02	8.75
		1358		0.49	0.02	7.94	2.00	0.49	0.02	0.49	0.04	0.42	-0.09	0.52	0.01	16.36
		1404		0.57	0.05	30.96	2.00	0.57	0.05	0.57	0.09	0.41	-0.09	0.51	0.01	12.28
		1412										0.49	-0.07	0.49	-0.14	8.21
		1414										0.55	0.00	0.55	0.00	26.08
		1416		0.49	0.01	7.49	2.00	0.49	0.01	0.49	0.02	0.49	-0.02	0.49	-0.03	9.00
7a	1	850	2	0.48	-0.01	8.45	1.00	-0.01	-0.48	0.47	-0.02	0.01	-0.53	0.54	0.02	16.85
		1000	2	0.48	-0.01	7.74	1.00	-0.01	-0.48	0.47	-0.01	0.01	-0.49	0.50	0.01	9.60
		1008	2	0.49	-0.02	7.35	1.00	-0.02	-0.48	0.46	-0.04	-0.01	-0.50	0.49	0.02	14.40
		1014	2									0.02	-0.52	0.54	0.04	16.43
		1020	2									0.03	-0.58	0.59	0.06	18.15
		1022	2	0.48	-0.01	8.66	1.00	-0.01	-0.48	0.47	-0.03	-0.01	-0.48	0.47	-0.03	8.66
		1036	2	0.47	-0.02	8.06	1.00	-0.02	-0.47	0.45	-0.04	0.00	-0.49	0.49	0.01	11.89
		1054	3	0.48	-0.03	8.02	1.00	-0.03	-0.48	0.45	-0.06	0.01	-0.49	0.50	0.01	12.08
		1134	3									0.09	-0.59	0.66	0.13	19.77
		1138	3	0.60	0.07	25.64	1.00	0.07	-0.60	0.66	0.11	0.01	-0.50	0.51	0.00	11.37
		1206	4	0.49	0.02	9.23	1.00	0.02	-0.49	0.51	0.03	0.00	-0.49	0.49	-0.00	8.08
		1212	4	0.52	-0.01	17.12	1.00	-0.01	-0.52	0.51	-0.02	-0.02	-0.50	0.48	-0.03	12.08
		1218	4	0.47	-0.02	8.07	1.00	-0.02	-0.47	0.48	-0.03	-0.00	-0.48	0.47	-0.01	7.44
		1222	4	0.49	0.01	9.33	1.00	0.01	-0.49	0.50	0.02	-0.00	-0.49	0.49	-0.01	10.55
		1228	4	0.50	-0.00	9.73	1.00	-0.00	-0.50	0.50	-0.01	-0.02	-0.48	0.48	-0.04	8.02
		1302	5	0.48	-0.00	7.41	1.00	-0.00	-0.48	0.47	-0.01	-0.03	-0.48	0.45	-0.06	9.05
		1402	8	0.51	0.03	10.10	1.00	0.03	-0.51	0.53	0.05	0.28	-0.77	0.89	0.23	31.01
		1550	8	0.63	-0.05	33.62	1.00	-0.05	-0.63	0.58	-0.09	-0.01	-0.52	0.51	-0.02	14.94
		1556	8	0.52	0.03	15.78	1.00	0.03	-0.52	0.55	0.06	0.01	-0.49	0.49	0.01	9.44
		1602	8	0.53	0.01	21.57	1.00	0.01	-0.53	0.54	0.02	0.24	-0.74	0.86	0.23	39.89
		1608	8	0.52	0.02	15.38	1.00	0.02	-0.52	0.54	0.04	0.00	-0.50	0.50	0.00	10.39
7a	2	844	8	0.48	-0.02	8.05	1.00	-0.02	-0.48	0.45	-0.04	0.05	-0.59	0.63	0.06	62.16
		850	8									-0.01	-0.49	0.48	-0.03	12.07
		858														
		904	9	0.48	-0.01	7.27	1.00	-0.01	-0.48	0.47	-0.03	-0.01	-0.48	0.48	-0.03	7.49
		920	10									0.02	-0.58	0.60	0.04	22.53
		1008	11	0.60	0.03	31.06	1.00	0.03	-0.60	0.63	0.05	0.05	-0.57	0.62	0.08	27.39
		1010	11									-0.01	-0.48	0.46	-0.02	8.89
		1026	11									0.03	-0.51	0.53	0.04	15.83
		1042														
		1202	13	0.49	-0.01	6.18	1.00	-0.01	-0.49	0.48	-0.02	0.02	-0.54	0.55	0.03	21.17
		1208	13	0.50	0.02	15.19	1.00	0.02	-0.50	0.53	0.04	0.01	-0.49	0.50	0.01	9.73
		1214	13	0.47	-0.03	5.94	1.00	-0.03	-0.47	0.44	-0.06	-0.01	-0.48	0.46	-0.03	6.83
		1220	13	0.67	0.00	33.59	1.00	0.00	-0.67	0.67	0.00	0.02	-0.55	0.56	0.03	19.79
		1226	13	0.49	0.00	9.89	1.00	0.00	-0.49	0.49	0.00	-0.00	-0.48	0.48	-0.01	9.19
		1230	13	0.82	0.03	35.45	1.00	0.03	-0.82	0.85	0.05	0.01	-0.53	0.54	0.02	19.08
		1236	13	0.81	0.09	31.22	1.00	0.09	-0.81	0.86	0.13	0.05	-0.59	0.63	0.08	67.03
		1242	13	0.49	0.01	12.01	1.00	0.01	-0.49	0.50	0.02	0.06	-0.56	0.59	0.07	14.51
		1248	13									-0.00	-0.20	0.20	-0.01	5.18
6a	1	1218	2	1.82	0.51	38.98	1.00	1.82	0.51	1.89	0.27	1.87	0.28	1.70	0.16	30.81
		1220	2	1.99	0.71	20.98	1.00	1.99	0.71	2.12	0.34	1.60	0.58	1.72	0.34	27.40
		1224	2	1.79	-0.10	29.80	1.00	1.79	-0.10	1.79	-0.06	1.80	0.07	1.83	0.03	32.21

TABLE XXIX. INTERMEDIATE CROSSDRAFT DATA (CONTINUED)

Site	Day	Time	Interval	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)
		1250	3	2.82	-0.47	35.57	1.00	2.82	-0.47	2.88	-0.17	3.30	-0.68	34.96	1.00	3.30	-0.68	3.37	-0.21
		1300	3	2.13	-0.27	30.77	1.00	2.13	-0.27	2.14	-0.13	1.41	0.10	28.80	1.00	1.41	0.10	1.41	0.07
		1324	3																
8b	1	1406	4	0.84	0.08	27.47	1.00	0.84	-0.08	0.84	0.09	0.68	0.13	38.98	1.00	0.68	-0.13	0.70	0.19
		1418	4	1.05	0.50	81.48	3.00	-1.05	0.50	1.17	0.45	0.52	0.02	21.48	3.00	-0.52	0.02	0.52	0.03
		1442	5	0.54	-0.04	27.08	1.00	0.54	0.04	0.54	-0.07	0.72	-0.01	39.76	1.00	0.72	0.01	0.72	-0.02
		1448	5	0.71	-0.11	32.01	1.00	0.71	0.11	0.72	-0.15	1.18	0.19	46.47	1.00	1.19	-0.19	1.21	0.16
		1458	5	0.70	0.08	24.80	1.00	0.70	-0.08	0.70	0.09	1.08	0.31	35.38	1.00	1.08	-0.31	1.10	0.29
		1504	5	0.81	0.18	44.16	1.00	0.81	-0.18	0.82	0.20	0.78	0.17	41.58	1.00	0.79	-0.17	0.81	0.21
		1510	5	0.78	0.22	26.88	1.00	0.78	-0.22	0.79	0.28	0.68	0.13	25.97	1.00	0.66	-0.13	0.69	0.20
		1518	5	0.81	0.03	56.50	1.00	0.81	-0.03	0.81	0.03	0.77	0.25	35.66	1.00	0.77	-0.25	0.81	0.31
8b	2	810	6	0.72	0.24	40.48	1.00	0.72	-0.24	0.76	0.32	1.30	0.53	31.62	1.00	1.30	-0.53	1.40	0.39
		812	6																
		814	6	0.64	-0.02	23.86	1.00	0.64	0.02	0.64	-0.03	0.64	0.15	34.26	1.00	0.64	-0.15	0.66	0.23
		816	6																
		818	6																
		822	6	0.72	0.04	38.89	1.00	0.72	-0.04	0.72	0.06	0.80	-0.01	24.11	1.00	0.80	0.01	0.80	-0.02
		830	6	0.98	0.58	52.05	3.00	-0.98	0.58	1.13	0.53	1.01	0.55	51.56	3.00	-1.01	0.55	1.15	0.50
		844	6	0.57	0.13	26.56	3.00	-0.57	0.13	0.58	0.22	0.89	0.23	52.50	2.00	-0.23	0.89	0.92	0.26
		850	6	0.88	0.06	65.34	1.00	0.88	-0.06	0.88	0.07	1.29	0.29	40.32	1.00	1.29	-0.29	1.32	0.22
		918	7	0.52	0.05	12.20	3.00	-0.52	0.05	0.52	0.10	0.52	0.04	14.15	3.00	-0.52	0.04	0.52	0.08
		928	7	0.54	-0.01	35.37	3.00	-0.54	-0.01	0.54	-0.02	0.81	0.30	12.75	3.00	-0.81	0.30	0.88	0.45
		1026	8	0.47	-0.01	8.84	3.00	-0.47	-0.01	0.47	-0.03	0.52	0.07	11.90	3.00	-0.52	0.07	0.53	0.14
		1030	8	1.51	0.21	32.24	3.00	-1.51	0.21	1.52	0.14	1.02	0.31	58.09	3.00	-1.02	0.31	1.07	0.29
		1032	8																
		1102	8	0.58	0.09	28.03	3.00	-0.58	0.09	0.58	0.16	0.65	0.32	24.81	3.00	-0.65	0.32	0.73	0.45
		1218	10	0.70	0.01	37.85	1.00	0.70	-0.01	0.70	0.01	0.73	-0.06	51.11	1.00	0.73	0.05	0.73	-0.07
		1220	10	1.25	0.02	30.02	1.00	1.25	-0.02	1.25	0.02	1.02	0.08	38.57	1.00	1.02	-0.08	1.03	0.08
		1224		1.87	0.18	21.83	1.00	1.87	-0.18	1.88	0.10	20.87	0.87	38.99	1.00	20.87	-0.87	20.98	0.03
		1228	10	0.89	0.13	42.82	1.00	0.89	-0.13	0.90	0.15	1.38	0.27	39.57	1.00	1.36	-0.27	1.38	0.20
		1232	10	1.18	0.03	45.11	1.00	1.18	-0.03	1.18	0.02	1.35	0.48	50.03	1.00	1.35	-0.48	1.44	0.35
9a	1	1114	2	1.03	0.00	0.70	1.00	1.03	0.00	1.03	0.00	1.03	0.00	0.82	1.00	1.03	0.00	1.03	0.00
		1118	2	1.05	-0.00	1.24	1.00	1.05	-0.00	1.05	-0.00	1.04	0.00	1.13	1.00	1.04	0.00	1.04	0.00
		1126	2	1.04	0.01	0.50	1.00	1.04	0.01	1.04	0.01	1.05	0.01	0.78	1.00	1.05	0.01	1.05	0.01
		1208	3	1.04	-0.01	0.98	1.00	1.04	-0.01	1.04	-0.01	1.03	0.00	0.98	1.00	1.03	0.00	1.03	0.00
		1214	3	1.04	-0.00	1.05	1.00	1.04	-0.00	1.04	-0.00	1.03	0.00	0.71	1.00	1.03	0.00	1.03	0.00
		1218	3	1.04	-0.00	1.30	1.00	1.04	-0.00	1.04	-0.00	1.03	-0.00	0.83	1.00	1.03	-0.00	1.03	-0.00
		1224	3	1.05	0.00	2.08	1.00	1.05	0.00	1.05	0.00	1.04	-0.01	1.17	1.00	1.04	-0.01	1.04	-0.00
		1230	3	1.03	-0.00	0.80	1.00	1.03	-0.00	1.03	-0.00	1.04	-0.00	0.78	1.00	1.04	-0.00	1.04	-0.00
		1240	3	1.05	0.01	1.15	1.00	1.05	0.01	1.05	0.01	1.04	0.00	0.87	1.00	1.04	0.00	1.04	0.00
		1250	3	1.04	0.00	0.79	1.00	1.04	0.00	1.04	0.00	1.04	0.01	0.54	1.00	1.04	0.01	1.04	0.01
		1336	4	1.04	0.00	0.81	1.00	1.04	0.00	1.04	0.00	1.03	0.00	0.77	1.00	1.03	0.00	1.03	0.00
		1340	4	1.05	0.00	1.11	1.00	1.05	0.00	1.05	0.00	1.05	0.00	1.35	1.00	1.05	0.00	1.05	0.00
		1510	6	1.06	0.00	1.48	1.00	1.06	0.00	1.06	0.00	1.06	0.00	1.87	1.00	1.06	0.00	1.06	0.00
		1514	6	1.05	0.01	1.72	1.00	1.05	0.01	1.05	0.00	1.05	0.01	1.78	1.00	1.05	0.01	1.05	0.01
		1518	6	1.04	-0.00	1.30	1.00	1.04	-0.00	1.04	-0.00	1.05	0.00	1.45	1.00	1.05	0.00	1.05	0.00
		1522	6	1.07	0.00	2.18	1.00	1.07	0.00	1.07	0.00	1.06	-0.01	1.98	1.00	1.05	-0.01	1.05	-0.01
		1526	6	1.04	0.00	0.86	1.00	1.04	0.00	1.04	0.00	1.05	0.00	1.72	1.00	1.05	0.00	1.05	0.00
		1540	6	1.04	-0.00	1.24	1.00	1.04	-0.00	1.04	-0.00	1.03	0.00	0.63	1.00	1.03	0.00	1.03	0.00
9a	2	852	7	1.03	0.00	0.49	1.00	1.03	0.00	1.03	0.00	1.03	0.00	0.72	1.00	1.03	0.00	1.03	0.00
		858	7	1.06	0.01	2.57	1.00	1.06	0.01	1.06	0.01	1.04	0.01	0.38	1.00	1.04	0.01	1.04	0.01
		900	7	1.03	0.01	0.49	1.00	1.03	0.01	1.03	0.01	1.03	0.01	0.47	1.00	1.03	0.01	1.03	0.01
		906	7	1.03	0.01	0.38	1.00	1.03	0.01	1.03	0.01	1.02	0.01	0.37	1.00	1.02	0.01	1.02	0.01
		912	7	1.03	0.01	0.54	1.00	1.03	0.01	1.03	0.01	1.03	0.00	0.50	1.00	1.03	0.00	1.03	0.00
		918	7	1.03	0.01	0.41	1.00	1.03	0.01	1.03	0.01	1.03	0.01	0.45	1.00	1.03	0.01	1.03	0.01
		924	7	1.03	0.00	0.56	1.00	1.03	0.00	1.03	0.00	1.05	0.01	1.50	1.00	1.05	0.01	1.05	0.01
		930	7	1.03	0.01	0.59	1.00	1.03	0.01	1.03	0.01	1.03	0.01	0.63	1.00	1.03	0.01	1.03	0.00
		936	7	1.03	0.01	0.82	1.00	1.03	0.01	1.03	0.01	1.03	0.00	0.40	1.00	1.03	0.00	1.03	0.00
		944	7	1.03	0.01	0.83	1.00	1.03	0.01	1.03	0.01	1.03	0.00	1.01	1.00	1.03	0.00	1.03	0.00
		1016	8	1.03	0.00	0.85	1.00	1.03	0.00	1.03	0.00	1.07	0.01	2.55	1.00	1.07	0.01	1.07	0.01
		1022	8	1.03	0.63	0.48	1.00	1.03	0.63	1.21	0.55	1.02	0.00	0.44	1.00	1.02	0.00	1.02	0.00
		1024	8	1.03	0.00	0.57	1.00	1.03	0.00	1.03	0.00	1.03	0.01	0.50	1.00	1.03	0.01	1.03	0.01
		1030	8	1.03	0.00	1.00	1.00	1.03	0.00	1.03	0.00	1.03	0.00	1.10	1.00	1.03	0.00	1.03	0.00
		1038	8	1.03	0.01	0.82	1.00	1.03	0.01	1.03	0.01	1.02	0.00	0.52	1.00	1.02	0.00	1.02	0.00
		1054	8	1.02	0.00	0.39	1.00	1.02	0.00	1.02	0.00	1.03	0.01	0.55	1.00	1.03	0.01	1.03	0.01
		1058	8	1.03	0.01	0.74	1.00	1.03	0.01	1.03	0.01	1.03	0.00	0.58	1.00	1.03	0.00	1.03	0.00
		1172	8	1.05	0.01	0.77	1.00	1.05	0.01	1.05	0.01	1.03	0.01	1.08	1.00	1.03	0.01	1.03	0.01

Time	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)
1250	2.81	-0.09	26.84	1.00	2.81	-0.09	2.81	-0.04	1.58	-0.05	44.62	1.00	1.58	-0.05	1.58	-0.03
1300																
1324	1.65	0.21	42.61	1.00	1.65	0.21	1.66	0.13	1.98	-0.15	29.86	1.00	1.98	-0.15	1.99	-0.08
1406	0.56	0.07	26.29	1.00	0.56	-0.07	0.56	0.12	0.78	0.07	39.02	1.00	0.78	-0.07	0.79	0.08
1418	0.60	0.13	18.54	3.00	-0.60	0.13	0.62	0.21	0.59	-0.08	27.03	2.00	0.09	0.59	0.60	-0.16
1442	0.80	-0.03	39.87	1.00	0.80	0.03	0.80	-0.03	0.85	-0.11	39.72	1.00	0.85	0.11	0.85	-0.16
1448																
1458	0.87	0.28	34.39	1.00	0.87	-0.28	0.91	0.29	0.84	0.09	42.24	1.00	0.84	-0.09	0.84	0.14
1504	1.48	0.55	38.30	1.00	1.48	-0.55	1.57	0.35								
1510	0.83	0.00	39.22	1.00	0.83	-0.00	0.83	0.00	0.51	-0.02	18.80	1.00	0.51	0.02	0.51	-0.04
1518	0.87	-0.02	30.95	1.00	0.87	0.02	0.87	-0.03	1.27	0.66	20.24	1.00	1.27	-0.66	1.43	0.48
810	1.40	0.43	24.66	1.00	1.40	-0.43	1.47	0.30	1.55	0.38	31.85	1.00	1.55	-0.38	1.60	0.24
812																
814																
816	1.23	0.21	35.81	1.00	1.23	-0.21	1.25	0.17	1.24	0.08	36.78	1.00	1.24	-0.08	1.24	0.05
818																
822	1.05	0.24	45.32	1.00	1.05	-0.24	1.08	0.22	0.92	0.23	40.11	1.00	0.92	-0.23	0.95	0.24
830	0.90	0.47	35.41	3.00	-0.90	0.47	1.01	0.48	0.69	0.21	32.89	3.00	-0.69	0.21	0.72	0.30
844	1.18	-0.00	41.26	1.00	1.18	0.00	1.18	-0.00	1.22	0.01	42.56	1.00	1.22	-0.01	1.22	0.01
850	0.71	0.11	26.18	1.00	0.71	-0.11	0.71	0.15	0.56	0.01	21.71	1.00	0.56	-0.01	0.56	0.01
918	0.88	0.23	735.86	3.00	-0.88	0.23	0.81	0.25	0.79	0.33	37.56	3.00	-0.79	0.33	0.86	0.40
928	0.55	0.11	13.71	3.00	-0.56	0.11	0.56	0.20	0.56	0.13	15.25	3.00	-0.58	0.13	0.57	0.23
1026	0.64	0.31	13.78	3.00	-0.64	0.31	0.71	0.46	0.56	0.18	15.96	3.00	-0.56	0.18	0.59	0.27
1030																
1032	1.11	0.25	48.80	3.00	-1.11	0.25	1.14	0.22	0.78	0.32	38.00	3.00	-0.78	0.32	0.82	0.39
1102	0.81	0.18	20.82	3.00	-0.81	0.18	0.84	0.30	1.44	0.44	45.70	3.00	-1.44	0.44	1.50	0.30
1218	1.18	0.14	37.81	1.00	1.18	-0.14	1.18	0.12	1.95	0.43	28.83	1.00	1.95	-0.43	2.00	0.22
1220	0.81	0.13	37.03	1.00	0.81	-0.13	0.82	0.17	0.98	0.08	35.52	1.00	0.98	-0.08	1.00	0.08
1224	1.18	0.02	42.06	1.00	1.18	-0.02	1.18	0.02	1.78	0.45	25.21	1.00	1.78	-0.45	1.84	0.25
1228	0.98	0.30	28.00	1.00	0.98	-0.30	1.03	0.29	1.84	0.40	32.80	1.00	1.84	-0.40	1.89	0.24
1232	0.77	0.00	38.88	1.00	0.77	-0.00	0.77	0.00	1.44	0.10	32.63	1.00	1.44	-0.10	1.44	0.07
1114	1.05	-0.00	1.02	1.00	1.05	-0.00	1.05	-0.00	1.04	0.00	0.82	1.00	1.04	0.00	1.04	0.00
1118	1.04	0.01	0.71	1.00	1.04	0.01	1.04	0.01	1.03	0.00	0.80	1.00	1.03	0.00	1.03	0.00
1126	1.04	0.01	0.53	1.00	1.04	0.01	1.04	0.01	1.04	0.01	0.88	1.00	1.04	0.01	1.04	0.01
1208	1.04	-0.00	0.93	1.00	1.04	-0.00	1.04	-0.00	1.03	0.00	0.56	1.00	1.03	0.00	1.03	0.00
1214	1.04	-0.00	0.98	1.00	1.04	-0.00	1.04	-0.00	1.04	-0.00	1.00	1.00	1.04	-0.00	1.04	-0.00
1218	1.04	-0.00	0.90	1.00	1.04	-0.00	1.04	-0.00	1.04	0.01	0.64	1.00	1.04	0.01	1.04	0.01
1224	1.04	-0.00	1.24	1.00	1.04	-0.00	1.04	-0.00	1.03	-0.00	0.89	1.00	1.03	-0.00	1.03	-0.00
1230	1.03	-0.00	0.71	1.00	1.03	-0.00	1.03	-0.00	1.06	-0.00	2.09	1.00	1.06	-0.00	1.06	-0.00
1240	1.04	0.01	0.80	1.00	1.04	0.01	1.04	0.01	1.04	0.00	0.54	1.00	1.04	0.00	1.04	0.00
1250	1.05	0.01	0.45	1.00	1.05	0.01	1.05	0.01	1.04	0.01	0.43	1.00	1.04	0.01	1.04	0.01
1336	1.04	0.00	0.62	1.00	1.04	0.00	1.04	0.00	1.05	0.01	1.74	1.00	1.05	0.01	1.05	0.01
1340	1.05	0.00	1.08	1.00	1.05	0.00	1.05	0.00	1.06	0.00	1.74	1.00	1.06	0.00	1.06	0.00
1510	1.05	0.01	1.84	1.00	1.05	0.01	1.05	0.00	1.04	0.01	1.08	1.00	1.04	0.01	1.04	0.00
1514	1.05	0.00	1.40	1.00	1.05	0.00	1.05	0.00	1.04	-0.00	1.34	1.00	1.04	-0.00	1.04	-0.00
1518	1.05	-0.01	1.71	1.00	1.05	-0.01	1.05	-0.01	1.04	-0.00	1.25	1.00	1.04	-0.00	1.04	-0.00
1522	1.05	0.00	1.56	1.00	1.05	0.00	1.05	0.00	1.05	0.01	0.75	1.00	1.05	0.01	1.05	0.01
1526	1.04	0.00	1.15	1.00	1.04	0.00	1.04	0.00	1.04	0.01	0.82	1.00	1.04	0.01	1.04	0.01
1540	1.03	-0.00	0.56	1.00	1.03	-0.00	1.03	-0.00	1.03	0.00	0.48	1.00	1.03	0.00	1.03	0.00
852	1.04	0.01	0.65	1.00	1.04	0.01	1.04	0.01	1.04	0.01	0.80	1.00	1.04	0.01	1.04	0.00
858	1.04	0.01	0.37	1.00	1.04	0.01	1.04	0.01	1.03	0.01	0.54	1.00	1.03	0.01	1.03	0.01
900	1.04	0.01	0.37	1.00	1.04	0.01	1.04	0.01	1.03	0.00	0.48	1.00	1.03	0.00	1.03	0.00
906	1.07	0.01	0.38	1.00	1.02	0.01	1.02	0.00	1.03	0.01	0.84	1.00	1.03	0.01	1.03	0.01
912	1.03	0.00	0.51	1.00	1.03	0.00	1.03	0.00	1.03	0.01	0.45	1.00	1.03	0.01	1.03	0.01
918	1.04	0.01	0.38	1.00	1.04	0.01	1.04	0.01	1.04	0.01	0.38	1.00	1.04	0.01	1.04	0.01
924	1.03	0.00	0.49	1.00	1.03	0.00	1.03	0.00	1.03	0.00	0.54	1.00	1.03	0.00	1.03	0.00
930	1.04	0.01	0.72	1.00	1.04	0.01	1.04	0.01	1.04	0.01	0.59	1.00	1.04	0.01	1.04	0.01
936	1.03	0.01	0.53	1.00	1.03	0.01	1.03	0.01	1.03	0.00	0.63	1.00	1.03	0.00	1.03	0.00
944	1.04	0.01	0.46	1.00	1.04	0.01	1.04	0.01	1.04	0.01	0.49	1.00	1.04	0.01	1.04	0.01
1016	1.04	0.01	0.57	1.00	1.04	0.01	1.04	0.01	1.03	0.00	0.48	1.00	1.03	0.00	1.03	0.00
1022	1.03	0.00	0.35	1.00	1.03	0.00	1.03	0.00	1.04	0.01	0.57	1.00	1.04	0.01	1.04	0.01
1024	1.03	0.00	0.40	1.00	1.03	0.00	1.03	0.00	1.03	0.00	0.44	1.00	1.03	0.00	1.03	0.00
1030	1.03	0.00	0.40	1.00	1.03	0.00	1.03	0.00	1.03	0.00	0.43	1.00	1.03	0.00	1.03	0.00
1038	1.03	0.00	0.74	1.00	1.03	0.00	1.03	0.00	1.03	0.00	1.08	1.00	1.03	0.00	1.03	0.00
1054	1.03	0.00	0.49	1.00	1.03	0.00	1.03	0.00	1.04	0.01	0.43	1.00	1.04	0.01	1.04	0.01
1058	1.03	0.00	0.45	1.00	1.03	0.00	1.03	0.00	1.03	0.00	0.44	1.00	1.03	0.00	1.03	0.00
1172	1.04	0.01	0.52	1.00	1.04	0.01	1.04	0.01	1.03	0.00	0.80	1.00	1.03	0.00	1.03	0.00

Time	Velocity U (fps)	Velocity V (fps)	Turbulence Intensity U (%)	Quadrant Q (Fig 28)	Velocity Vz (fps)	Velocity Vx (fps)	Velocity V (fps)	Angle (rad)	Average Velocity Vz (fps)	Average Velocity Vx (fps)	Average Velocity V (fps)	Average Angle (rad)	Average Turb. Int (%)
1250	1.63	-0.07	50.85	1.00	1.63	-0.07	1.63	-0.04	2.38	-0.28	2.41	-0.10	38.57
1300									1.77	-0.09	1.78	-0.03	29.78
1324	2.75	0.43	11.34	1.00	2.75	0.43	2.78	0.15	2.12	0.16	2.14	0.07	27.87
1406	0.54	0.01	16.98	1.00	0.54	-0.01	0.54	0.01	0.84	-0.07	0.85	0.10	28.75
1418	0.68	-0.00	43.70	4.00	-0.68	-0.68	0.68	-0.00	-0.55	0.11	0.72	0.11	34.84
1442	0.69	0.03	54.52	1.00	0.69	-0.03	0.69	0.05	0.68	0.03	0.68	-0.05	40.21
1448									0.95	-0.04	0.97	0.00	38.24
1458	0.79	-0.10	43.29	1.00	0.79	0.10	0.79	-0.13	0.81	-0.12	0.83	0.13	36.02
1504									1.03	-0.29	1.07	0.28	41.35
1510	1.08	0.27	39.33	1.00	1.08	-0.27	1.11	0.25	0.73	-0.12	0.75	0.14	30.26
1518	0.74	0.08	38.34	1.00	0.74	-0.08	0.75	0.10	0.85	-0.20	0.89	0.18	36.34
810									1.24	-0.40	1.31	0.31	32.23
812	1.59	0.51	28.82	1.00	1.59	-0.51	1.67	0.31	1.59	-0.51	1.67	0.31	28.62
814									0.64	-0.07	0.65	0.10	28.96
816									1.23	-0.14	1.24	0.11	36.29
818	1.10	0.33	51.52	1.00	1.10	-0.33	1.15	0.29	1.10	-0.33	1.15	0.29	51.52
822	1.00	0.25	28.01	1.00	1.00	-0.25	1.03	0.24	0.86	-0.15	0.88	0.15	35.25
830	1.85	0.90	258.77	3.00	-1.85	0.90	2.06	0.45	-1.08	0.54	1.21	0.45	86.10
844	0.68	0.21	32.02	2.00	-0.21	0.68	0.72	0.30	0.27	0.34	0.82	0.16	38.98
850	0.91	0.05	31.17	1.00	0.91	-0.05	0.92	0.05	0.87	-0.10	0.89	0.10	38.94
918	0.53	0.08	14.83	3.00	-0.53	0.08	0.54	0.15	-0.65	0.15	0.67	0.20	62.86
928	0.61	0.20	24.80	3.00	-0.61	0.20	0.64	0.32	-0.57	0.15	0.60	0.24	20.34
1026	0.52	0.04	11.74	3.00	-0.52	0.04	0.53	0.08	-0.54	0.11	0.56	0.18	12.04
1030									-1.27	0.28	1.30	0.22	45.17
1032	0.58	0.17	13.83	3.00	-0.58	0.17	0.58	0.29	-0.81	0.25	0.85	0.30	33.61
1102	1.48	0.57	32.80	3.00	-1.48	0.57	1.57	0.37	-0.95	0.32	1.00	0.32	29.97
1218	1.21	0.12	30.43	1.00	1.21	-0.12	1.22	0.10	1.15	-0.13	1.17	0.08	36.79
1220	1.23	0.37	33.02	1.00	1.23	-0.37	1.28	0.29	1.06	-0.14	1.08	0.12	34.83
1224	1.24	0.08	44.56	1.00	1.24	-0.08	1.25	0.07	5.41	-0.28	5.43	0.09	34.55
1228	1.03	0.04	31.78	1.00	1.03	-0.04	1.03	0.04	1.18	-0.23	1.21	0.18	34.91
1232	1.38	0.11	31.83	1.00	1.38	-0.11	1.38	0.08	1.22	-0.14	1.24	0.10	39.70
1114	1.04	0.01	0.83	1.00	1.04	0.01	1.04	0.01	1.04	0.00	1.04	0.00	0.82
1118	1.05	0.00	1.58	1.00	1.05	0.00	1.05	0.00	1.04	0.00	1.04	0.00	1.05
1126	1.03	0.00	0.95	1.00	1.03	0.00	1.03	0.00	1.04	0.01	1.04	0.01	0.89
1208	1.03	-0.00	1.10	1.00	1.03	-0.00	1.03	-0.00	1.03	-0.00	1.03	-0.00	0.89
1214	1.04	-0.00	0.93	1.00	1.04	-0.00	1.04	-0.00	1.04	-0.00	1.04	-0.00	0.93
1218	1.04	0.00	0.82	1.00	1.04	0.00	1.04	0.00	1.04	0.00	1.04	0.00	0.90
1224	1.03	-0.00	0.78	1.00	1.03	-0.00	1.03	-0.00	1.04	-0.00	1.04	-0.00	1.19
1230	1.06	0.00	2.35	1.00	1.06	0.00	1.06	0.00	1.04	-0.00	1.04	-0.00	1.31
1240	1.04	0.01	0.41	1.00	1.04	0.01	1.04	0.01	1.04	0.01	1.04	0.01	0.71
1250	1.04	0.00	0.87	1.00	1.04	0.00	1.04	0.00	1.04	0.01	1.04	0.01	0.57
1336	1.03	0.00	0.88	1.00	1.03	0.00	1.03	0.00	1.04	0.00	1.04	0.00	0.98
1340	1.06	0.00	1.83	1.00	1.06	0.00	1.06	0.00	1.05	0.00	1.05	0.00	1.42
1510	1.05	0.00	1.72	1.00	1.05	0.00	1.05	0.00	1.05	0.00	1.05	0.00	1.55
1514	1.05	0.01	1.84	1.00	1.05	0.01	1.05	0.01	1.05	0.00	1.05	0.00	1.62
1518	1.05	0.01	1.82	1.00	1.05	0.01	1.05	0.01	1.04	-0.00	1.04	-0.00	1.47
1522	1.04	0.00	1.20	1.00	1.04	0.00	1.04	0.00	1.05	0.00	1.05	0.00	1.53
1526	1.05	0.01	1.05	1.00	1.05	0.01	1.05	0.01	1.05	0.00	1.05	0.00	1.14
1540	1.04	-0.01	1.49	1.00	1.04	-0.01	1.04	-0.01	1.04	-0.00	1.04	-0.00	0.87
852	1.03	0.01	0.54	1.00	1.03	0.01	1.03	0.01	1.03	0.01	1.03	0.01	0.80
858	1.03	0.01	0.43	1.00	1.03	0.01	1.03	0.01	1.04	0.01	1.04	0.01	0.86
900	1.03	0.00	0.42	1.00	1.03	0.00	1.03	0.00	1.03	0.01	1.03	0.01	0.45
906	1.03	0.01	0.41	1.00	1.03	0.01	1.03	0.01	1.03	0.01	1.03	0.01	0.44
912	1.03	0.01	0.48	1.00	1.03	0.01	1.03	0.01	1.03	0.01	1.03	0.01	0.50
918	1.03	0.01	0.48	1.00	1.03	0.01	1.03	0.01	1.03	0.01	1.03	0.01	0.42
924	1.03	0.01	0.42	1.00	1.03	0.01	1.03	0.01	1.03	0.01	1.03	0.01	0.70
930	1.04	0.01	0.43	1.00	1.04	0.01	1.04	0.01	1.04	0.01	1.04	0.01	0.59
936	1.03	0.00	0.38	1.00	1.03	0.00	1.03	0.00	1.03	0.01	1.03	0.01	0.55
944	1.04	0.01	0.50	1.00	1.04	0.01	1.04	0.01	1.04	0.01	1.04	0.01	0.62
1016	1.03	0.00	0.48	1.00	1.03	0.00	1.03	0.00	1.04	0.01	1.04	0.00	0.94
1022	1.03	0.00	0.39	1.00	1.03	0.00	1.03	0.00	1.03	0.13	1.07	0.11	0.44
1024	1.02	0.00	0.50	1.00	1.02	0.00	1.02	0.00	1.03	0.00	1.03	0.00	0.48
1030	1.03	0.00	0.83	1.00	1.03	0.00	1.03	0.00	1.03	0.00	1.03	0.00	0.71
1038	1.02	0.01	0.39	1.00	1.02	0.01	1.02	0.01	1.03	0.00	1.03	0.00	0.87
1054	1.03	0.00	0.39	1.00	1.03	0.00	1.03	0.00	1.03	0.00	1.03	0.00	0.45
1058	1.04	0.01	0.70	1.00	1.04	0.01	1.04	0.01	1.03	0.00	1.03	0.00	0.58
1172	1.04	0.00	0.48	1.00	1.04	0.00	1.04	0.00	1.04	0.01	1.04	0.01	0.73

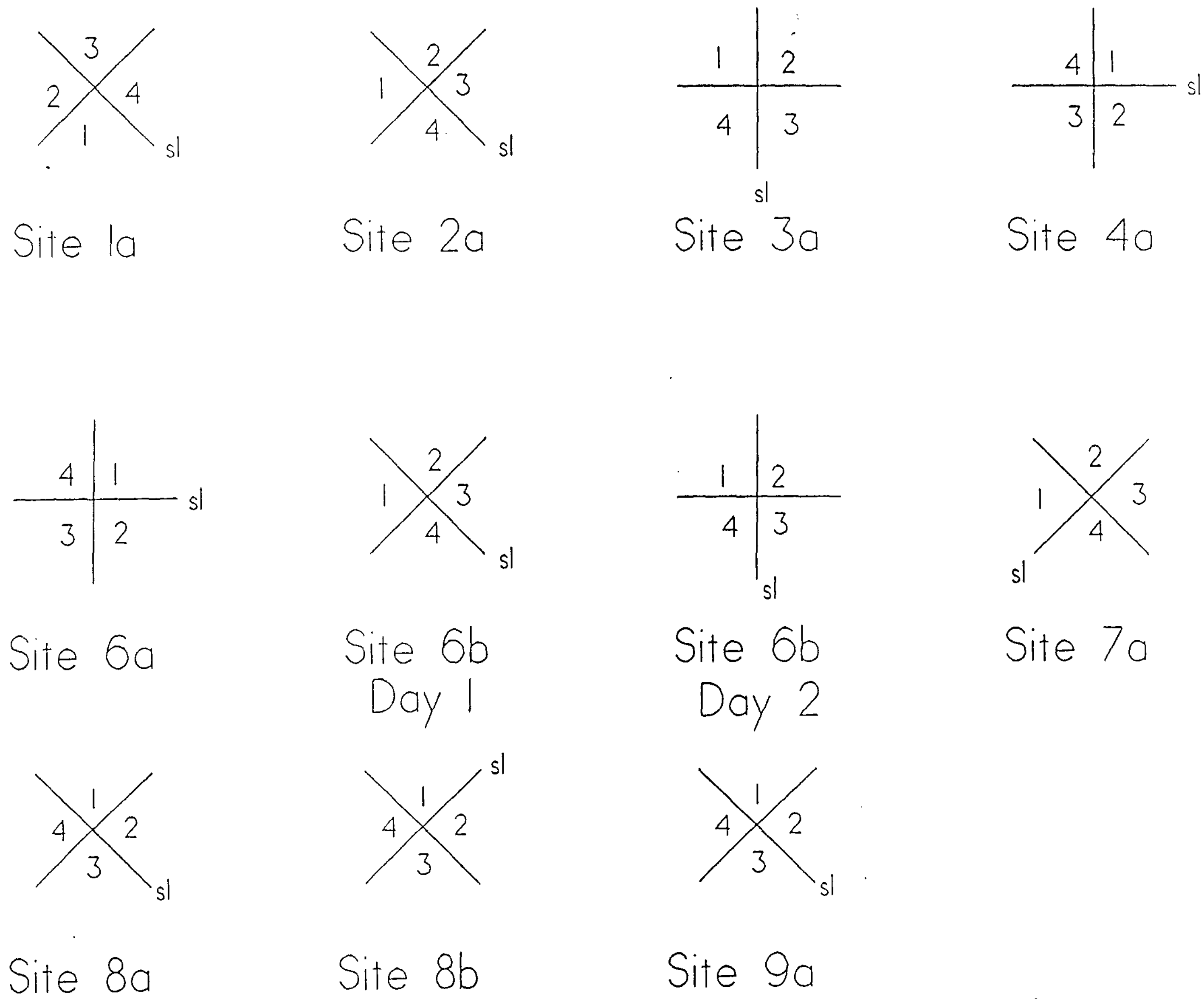

Figure 28. Anemometer probe orientations for each site.

5.5 Appendix E

Intermediate Data for Predicted Capture Efficiency Calculations

TABLE XXX. BASIC COMPUTER CODE.

```
11 L=48
20 W0=1.5
30 open "cd7a.prn" for input as #1
40 open "eff7a.prn" for output as #2
45 for num=1 to 37 step 1
47 input#1,num,time,vzc1,vxc1,xa,xb,xc,xd
50 VXC=VXC1*60
60 VZC=VZC1*60
70 SL=48
80 SW=30
90 SWS=0
100 SLN=100
110 SWN=SW*100/SL
120 W=W0
130 AREA=L*W0
140 Q=230.5*144/2
150 PI=3.1416
160 B=W/2
170 A=L/2
180 DELTAS=.5
190 Y=0
200 SCREEN 1
210 WINDOW (-70.08,-48)-(70.08,48)
220 LINE (0,L/2)-(0,L/2+5)
230 LINE (0,L/2)-(-1,L/2)
240 LINE (0,-L/2)-(0,-L/2-5)
250 LINE (0,-L/2)-(-1,-L/2)
260 LINE(-2!,0)-(SW,0)
270 LINE (-2!,-L/2)-(-2!,L/2)
280 FOR Z=-2 TO (SW+.1) STEP 1
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
290 LINE (Z,.1)-(Z,-.1)
300 NEXT
310 FOR X=-L/2 TO (L/2+.1) STEP 1
320 LINE (-2.2,X)-(-1.8 ,X)
330 NEXT
340 LINE (SW,L/2)-(SW,L/2+5)
350 LINE (SW,L/2)-(SW+1,L/2)
360 LINE (SW,-L/2)-(SW,-L/2-5)
370 LINE (SW,-L/2)-(SW+1,-L/2)
380 LINE (0,L/2)-(SW,L/2)
390 LINE (SW,L/2)-(SW,-L/2)
400 LINE (SW,-L/2)-(0,-L/2)
410 LINE (0,-L/2)-(0,L/2)
415 print num
420 Z0=0
440 FOR K2=0 TO 30 STEP 2
445 X=-30
450 Z1=K2
460 Z2=SW-Z1
470 PSET(Z1,X)
480 P1=A^2+B^2-X^2-Y^2-Z1^2
490 P2=A^2+B^2-X^2-Y^2-Z2^2
500 Q1A=A^2*B^2-X^2*B^2-Y^2*A^2-Z1^2*A^2-Z1^2*B^2
510 Q1B=A^2*B^2-X^2*B^2-Y^2*A^2-Z2^2*A^2-Z2^2*B^2
520 R1=-Z1^2*A^2*B^2
530 R2=-Z2^2*A^2*B^2
540 D1=(3*Q1A-P1^2)/3
550 D2=(3*Q1B-P2^2)/3
560 E1A=(2*P1^3-9*P1*Q1A+27*R1)/27
570 E1B=(2*P2^3-9*P2*Q1B+27*R2)/27
580 M1=2*((-D1/3)^.5)
590 M2=2*((-D2/3)^.5)
600 N1=3*E1A/(D1*M1)
610 N2=3*E1B/(D2*M2)
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
620 IF ABS(N1)>.9999999999999# THEN GOTO 970
630 THETA1=(-ATN(N1/SQR(-N1*N1+1))+1.5708)/3
640 IF ABS(N2)>.9999999999999# THEN GOTO 970
650 THETA2=(-ATN(N2/SQR(-N2*N2+1))+1.5708)/3
660 S1A=M1*COS(THETA1)
670 S1B=M2*COS(THETA2)
680 L0A=S1A-P1/3
690 IF L0A<=0 GOTO 970
700 L0B=S1B-P2/3
710 IF L0B<=0 GOTO 970
720  E1=X^2*L0A^2*(B^2+L0A)^2+Y^2*L0A^2*(A^2+L0A)^2+Z1^2*(A^2+L0A)
^2*(B^2+L0A)^2
725 IF E1=0 GOTO 970
730  E2=X^2*L0B^2*(B^2+L0B)^2+Y^2*L0B^2*(A^2+L0B)^2+Z2^2*(A^2+L0B)^
2*(B^2+L0B)^2
735 IF E2=0 GOTO 970
740 VXH1=Q*X*(A^2+L0A)^.5*(B^2+L0A)^1.5*L0A^1.5/(2*PI*E1)
750 VXH2=Q*X*(A^2+L0B)^.5*(B^2+L0B)^1.5*L0B^1.5/(2*PI*E2)
760 VZE1=Q*Z1*(A^2+L0A)^1.5*(B^2+L0A)^1.5*L0A^.5/(2*PI*E1)
770 VZE2=Q*Z2*(A^2+L0B)^1.5*(B^2+L0B)^1.5*L0B^.5/(2*PI*E2)
780 VZH1=VZE1*((LOG(L0A)-11.81)/-10.6553)
790 VZH2=VZE2*((LOG(L0B)-11.81)/-10.6553)
800 VX=VXH1+VXH2+VXC
810 VZ=VZH1-VZH2+VZC
820 IF ABS(VZ)<1E-10 THEN GOTO 970
830 ALPHA=ATN(VX/VZ)
840 IF VZ<0 THEN GOTO 880
850 DELTAX=-DELTAS*SIN(ALPHA)
860 DELTAZ=-DELTAS*COS(ALPHA)
870 GOTO 900
880 DELTAX=DELTAS*SIN(ALPHA)
890 DELTAZ=DELTAS*COS(ALPHA)
900 X=X+DELTAX
910 Z1=Z1+DELTAZ
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
920 Z2=SW-Z1930 PSET(Z1,X)
940 IF Z1<=.01 GOTO 970
950 IF Z2<=.01 GOTO 970
960 IF X<40 GOTO 480
970 NEXT
980 ETA1=0
990 COUNT1=0
1000 FOR XN=(-SL/2) TO (XA) STEP (L/SLN)
1010 IF XN=L/2 THEN XN=XN-.2
1020 X=XA
1030 Z1=.01
1040 Z2=29.99
1045 PSET(Z1,X)
1050 P1=A^2+B^2-X^2-Y^2-Z1^2
1060 P2=A^2+B^2-X^2-Y^2-Z2^2
1070 Q1A=A^2*B^2-X^2*B^2-Y^2*A^2-Z1^2*A^2-Z1^2*B^2
1080 Q1B=A^2*B^2-X^2*B^2-Y^2*A^2-Z2^2*A^2-Z2^2*B^2
1090 R1=-Z1^2*A^2*B^2
1100 R2=-Z2^2*A^2*B^2
1110 D1=(3*Q1A-P1^2)/3
1120 D2=(3*Q1B-P2^2)/3
1130 E1A=(2*P1^3-9*P1*Q1A+27*R1)/27
1140 E1B=(2*P2^3-9*P2*Q1B+27*R2)/27
1150 M1=2*((-D1/3)^.5)
1160 M2=2*((-D2/3)^.5)
1170 N1=3*E1A/(D1*M1)
1180 N2=3*E1B/(D2*M2)
1190 IF ABS(N1)>.9999999999999# THEN GOTO 1590
1200 THETA1=(-ATN(N1/SQR(-N1*N1+1))+1.5708)/3
1210 IF ABS(N2)>.9999999999999# THEN GOTO 1590
1220 THETA2=(-ATN(N2/SQR(-N2*N2+1))+1.5708)/3
1230 S1A=M1*COS(THETA1)
1240 S1B=M2*COS(THETA2)
1250 L0A=S1A-P1/3
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
1260 IF L0A<=0 THEN GOTO 1590
1270 L0B=S1B-P2/3
1280 IF L0B<=0 THEN GOTO 1590
1290 E1=X^2*L0A^2*(B^2+L0A)^2+Y^2*L0A^2*(A^2+L0A)^2+Z1^2*(A^2+L0A
)^2*(B^2+L0A)^2
1300 E2=X^2*L0B^2*(B^2+L0B)^2+Y^2*L0B^2*(A^2+L0B)^2+Z2^2*(A^2+L0B)
^2*(B^2+L0B)^2
1310 VXH1=Q*X*(A^2+L0A)^.5*(B^2+L0A)^1.5*L0A^1.5/(2*PI*E1)
1320 VXH2=Q*X*(A^2+L0B)^.5*(B^2+L0B)^1.5*L0B^1.5/(2*PI*E2)
1330 VZE1=Q*Z1*(A^2+L0A)^1.5*(B^2+L0A)^1.5*L0A^.5/(2*PI*E1)
1340 VZE2=Q*Z2*(A^2+L0B)^1.5*(B^2+L0B)^1.5*L0B^.5/(2*PI*E2)
1350 VZH1=VZE1*((LOG(L0A)-11.81)/-10.6553)
1360 VZH2=VZE2*((LOG(L0B)-11.81)/-10.6553)
1370 VX=VXH1+VXH2+VXC
1380 VZ=VZH1-VZH2+VZC
1390 IF ABS(VZ)<1E-10 THEN GOTO 1590
1400 ALPHA=ATN(VX/VZ)
1410 IF VZ<0 THEN GOTO 1450
1420 DELTAX=DELTAS*SIN(ALPHA)
1430 DELTAZ=DELTAS*COS(ALPHA)
1440 GOTO 1470
1450 DELTAX=-DELTAS*SIN(ALPHA)
1460 DELTAZ=-DELTAS*COS(ALPHA)
1470 X=X+DELTAX
1480 Z1=Z1+DELTAZ
1490 Z2=SW-Z1
1495 PSET(Z1,X)
1500 IF ABS(X-XN)<.25 THEN GOTO 1520
1510 IF X>-60 GOTO 1050
1520 ZC=Z1
1530 FOR Z1=SWS TO (SW+SWS) STEP (SW/SWN)
1540 MU=.832786*ZC
1550 OMEGA=-.14604*ZC+.175852
1560 ETAP1=(EXP((Z1-MU)/OMEGA))/(1+EXP((Z1-MU)/OMEGA))
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
1570 ETA1=ETA1+ETAP1
1580 COUNT1=COUNT1+1
1590 NEXT
1600 NEXT
1610 ETAOVER1=ETA1*(sl/2+XA)/(count1*sl)
1630 if xb>=24 goto 2620
1980 ETA2=0
1990 COUNT2=0
1995 if sl/2<=xb goto 2620
2000 FOR XN=(SL/2) TO (XB) STEP -(L/SLN)
2010 IF XN=L/2 THEN XN=XN-.2
2020 X=xb
2030 Z1=.01
2040 Z2=29.99
2045 PSET(Z1,X)
2050 P1=A^2+B^2-X^2-Y^2-Z1^2
2060 P2=A^2+B^2-X^2-Y^2-Z2^2
2070 Q1A=A^2*B^2-X^2*B^2-Y^2*A^2-Z1^2*A^2-Z1^2*B^2
2080 Q1B=A^2*B^2-X^2*B^2-Y^2*A^2-Z2^2*A^2-Z2^2*B^2
2090 R1=-Z1^2*A^2*B^2
2100 R2=-Z2^2*A^2*B^2
2110 D1=(3*Q1A-P1^2)/3
2120 D2=(3*Q1B-P2^2)/3
2130 E1A=(2*P1^3-9*P1*Q1A+27*R1)/27
2140 E1B=(2*P2^3-9*P2*Q1B+27*R2)/27
2150 M1=2*((-D1/3)^.5)
2160 M2=2*((-D2/3)^.5)
2170 N1=3*E1A/(D1*M1)
2180 N2=3*E1B/(D2*M2)
2190 IF ABS(N1)>.9999999999999# THEN GOTO 2590
2200 THETA1=(-ATN(N1/SQR(-N1*N1+1))+1.5708)/3
2210 IF ABS(N2)>.9999999999999# THEN GOTO 2590
2220 THETA2=(-ATN(N2/SQR(-N2*N2+1))+1.5708)/3
2230 S1A=M1*COS(THETA1)
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
2240 S1B=M2*COS(THETA2)
2250 L0A=S1A-P1/3
2260 IF L0A<=0 THEN GOTO 2590
2270 L0B=S1B-P2/3
2280 IF L0B<=0 THEN GOTO 2590
2290 E1=X^2*L0A^2*(B^2+L0A)^2+Y^2*L0A^2*(A^2+L0A)^2+Z1^2*(A^2+L0A
)^2*(B^2+L0A)^2
2300 E2=X^2*L0B^2*(B^2+L0B)^2+Y^2*L0B^2*(A^2+L0B)^2+Z2^2*(A^2+L0B)
^2*(B^2+L0B)^2
2310 VXH1=Q*X*(A^2+L0A)^.5*(B^2+L0A)^1.5*L0A^1.5/(2*PI*E1)
2320 VXH2=Q*X*(A^2+L0B)^.5*(B^2+L0B)^1.5*L0B^1.5/(2*PI*E2)
2330 VZE1=Q*Z1*(A^2+L0A)^1.5*(B^2+L0A)^1.5*L0A^.5/(2*PI*E1)
2340 VZE2=Q*Z2*(A^2+L0B)^1.5*(B^2+L0B)^1.5*L0B^.5/(2*PI*E2)
2350 VZH1=VZE1*((LOG(L0A)-11.81)/-10.6553)
2360 VZH2=VZE2*((LOG(L0B)-11.81)/-10.6553)
2370 VX=VXH1+VXH2+VXC
2380 VZ=VZH1-VZH2+VZC
2390 IF ABS(VZ)<1E-10 THEN GOTO 2590
2400 ALPHA=ATN(VX/VZ)
2410 IF VZ<0 THEN GOTO 2450
2420 DELTAX=DELTAS*SIN(ALPHA)
2430 DELTAZ=DELTAS*COS(ALPHA)
2440 GOTO 2470
2450 DELTAX=-DELTAS*SIN(ALPHA)
2460 DELTAZ=-DELTAS*COS(ALPHA)
2470 X=X+DELTAX
2480 Z1=Z1+DELTAZ
2490 Z2=SW-Z1
2495 PSET(Z1,X)
2500 IF ABS(X-XN)<.25 THEN GOTO 2520
2510 IF X>-60 GOTO 2050
2520 ZC=Z1
2530 FOR Z1=SWS TO (SW+SWS) STEP (SW/SWN)
2540 MU=.832786*ZC
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
2550 OMEGA=-.14604*ZC+.175852
2560 ETAP2=(EXP((Z1-MU)/OMEGA))/(1+EXP((Z1-MU)/OMEGA))
2570 ETA2=ETA2+ETAP2
2580 COUNT2=COUNT2+1
2590 NEXT
2600 NEXT
2610 ETAOVER2=ETA2*(sl/2-xB)/(count2*sl)
2620 ETA3=0
2630 COUNT3=0
2640 FOR XN=(-SL/2) TO (XC) STEP (L/SLN)
2650 IF XN=L/2 THEN XN=XN-.2
2660 Z1=29.99
2670 Z2=.01
2680 X=XC
2685 PSET(Z1,X)
2690 P1=A^2+B^2-X^2-Y^2-Z1^2
2700 P2=A^2+B^2-X^2-Y^2-Z2^2
2710 Q1A=A^2*B^2-X^2*B^2-Y^2*A^2-Z1^2*A^2-Z1^2*B^2
2720 Q1B=A^2*B^2-X^2*B^2-Y^2*A^2-Z2^2*A^2-Z2^2*B^2
2730 R1=-Z1^2*A^2*B^2
2740 R2=-Z2^2*A^2*B^2
2750 D1=(3*Q1A-P1^2)/3
2760 D2=(3*Q1B-P2^2)/3
2770 E1A=(2*P1^3-9*P1*Q1A+27*R1)/27
2780 E1B=(2*P2^3-9*P2*Q1B+27*R2)/27
2790 M1=2*((-D1/3)^.5)
2800 M2=2*((-D2/3)^.5)
2810 N1=3*E1A/(D1*M1)
2820 N2=3*E1B/(D2*M2)
2830 IF ABS(N1)>.9999999999999# THEN GOTO 3230
2840 THETA1=(-ATN(N1/SQR(-N1*N1+1))+1.5708)/3
2850 IF ABS(N2)>.9999999999999# THEN GOTO 3230
2860 THETA2=(-ATN(N2/SQR(-N2*N2+1))+1.5708)/3
2870 S1A=M1*COS(THETA1)
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
2880 S1B=M2*COS(THETA2)
2890 L0A=S1A-P1/3
2900 IF L0A<=0 THEN GOTO 3230
2910 L0B=S1B-P2/3
2920 IF L0B<=0 THEN GOTO 3230
2930 E1=X^2*L0A^2*(B^2+L0A)^2+Y^2*L0A^2*(A^2+L0A)^2+Z1^2*(A^2+L0A
)^2*(B^2+L0A)^2
2940 E2=X^2*L0B^2*(B^2+L0B)^2+Y^2*L0B^2*(A^2+L0B)^2+Z2^2*(A^2+L0B)
^2*(B^2+L0B)^2
2950 VXH1=Q*X*(A^2+L0A)^.5*(B^2+L0A)^1.5*L0A^1.5/(2*PI*E1)
2960 VXH2=Q*X*(A^2+L0B)^.5*(B^2+L0B)^1.5*L0B^1.5/(2*PI*E2)
2970 VZE1=Q*Z1*(A^2+L0A)^1.5*(B^2+L0A)^1.5*L0A^.5/(2*PI*E1)
2980 VZE2=Q*Z2*(A^2+L0B)^1.5*(B^2+L0B)^1.5*L0B^.5/(2*PI*E2)
2990 VZH1=VZE1*((LOG(L0A)-11.81)/-10.6553)
3000 VZH2=VZE2*((LOG(L0B)-11.81)/-10.6553)
3010 VX=VXH1+VXH2+VXC
3020 VZ=VZH1-VZH2+VZC
3030 IF ABS(VZ)<1E-10 THEN GOTO 3230
3040 ALPHA=ATN(VX/VZ)
3050 IF VZ<0 THEN GOTO 3090
3060 DELTAX=-DELTAS*SIN(ALPHA)
3070 DELTAZ=-DELTAS*COS(ALPHA)
3080 GOTO 3110
3090 DELTAX=DELTAS*SIN(ALPHA)
3100 DELTAZ=DELTAS*COS(ALPHA)
3110 X=X-DELTAX
3120 Z1=Z1-DELTAZ
3130 Z2=SW-Z1
3135 PSET(Z1,X)
3140 IF ABS(X-XN)<.25 THEN GOTO 3160
3150 IF X>-31 GOTO 2690
3160 ZC=Z2
3170 FOR Z2=(SWS) TO (SW+SWS) STEP (SW/SWN)
3180 MU=.832786*ZC
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
3190 OMEGA=-.14604*ZC+.175852
3200 ETAP3=(EXP((Z2-MU)/OMEGA))/(1+EXP((Z2-MU)/OMEGA))
3210 ETA3=ETA3+ETAP3
3220 COUNT3=COUNT3+1
3230 NEXT
3240 NEXT
3250 ETAOVER3=ETA3*(sl/2+xC)/(count3*sl)
3300 if xd>=24 goto 4260
3620 ETA4=0
3630 COUNT4=0
3635 if sl/2<=xd goto 4260
3640 FOR XN=(SL/2) TO (XD) STEP -(SL/SLN)
3650 IF XN=SL/2 THEN XN=XN-.2
3660 Z1=29.99
3670 Z2=.01
3680 X=XD
3685 PSET(Z1,X)
3690 P1=A^2+B^2-X^2-Y^2-Z1^2
3700 P2=A^2+B^2-X^2-Y^2-Z2^2
3710 Q1A=A^2*B^2-X^2*B^2-Y^2*A^2-Z1^2*A^2-Z1^2*B^2
3720 Q1B=A^2*B^2-X^2*B^2-Y^2*A^2-Z2^2*A^2-Z2^2*B^2
3730 R1=-Z1^2*A^2*B^2
3740 R2=-Z2^2*A^2*B^2
3750 D1=(3*Q1A-P1^2)/3
3760 D2=(3*Q1B-P2^2)/3
3770 E1A=(2*P1^3-9*P1*Q1A+27*R1)/27
3780 E1B=(2*P2^3-9*P2*Q1B+27*R2)/27
3790 M1=2*((-D1/3)^.5)
3800 M2=2*((-D2/3)^.5)
3810 N1=3*E1A/(D1*M1)
3820 N2=3*E1B/(D2*M2)
3830 IF ABS(N1)>.9999999999999# THEN GOTO 4230
3840 THETA1=(-ATN(N1/SQR(-N1*N1+1))+1.5708)/3
3850 IF ABS(N2)>.9999999999999# THEN GOTO 4230
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
3860 THETA2=(-ATN(N2/SQR(-N2*N2+1))+1.5708)/3
3870 S1A=M1*COS(THETA1)
3880 S1B=M2*COS(THETA2)
3890 L0A=S1A-P1/3
3900 IF L0A<=0 THEN GOTO 4230
3910 L0B=S1B-P2/3
3920 IF L0B<=0 THEN GOTO 4230
3930 E1=X^2*L0A^2*(B^2+L0A)^2+Y^2*L0A^2*(A^2+L0A)^2+Z1^2*(A^2+L0A
)^2*(B^2+L0A)^2
3940 E2=X^2*L0B^2*(B^2+L0B)^2+Y^2*L0B^2*(A^2+L0B)^2+Z2^2*(A^2+L0B)
^2*(B^2+L0B)^2
3950 VXH1=Q*X*(A^2+L0A)^.5*(B^2+L0A)^1.5*L0A^1.5/(2*PI*E1)
3960 VXH2=Q*X*(A^2+L0B)^.5*(B^2+L0B)^1.5*L0B^1.5/(2*PI*E2)
3970 VZE1=Q*Z1*(A^2+L0A)^1.5*(B^2+L0A)^1.5*L0A^.5/(2*PI*E1)
3980 VZE2=Q*Z2*(A^2+L0B)^1.5*(B^2+L0B)^1.5*L0B^.5/(2*PI*E2)
3990 VZH1=VZE1*((LOG(L0A)-11.81)/-10.6553)
4000 VZH2=VZE2*((LOG(L0B)-11.81)/-10.6553)
4010 VX=VXH1+VXH2+VXC
4020 VZ=VZH1-VZH2+VZC
4030 IF ABS(VZ)<1E-10 THEN GOTO 4230
4040 ALPHA=ATN(VX/VZ)
4050 IF VZ<0 THEN GOTO 4090
4060 DELTAX=-DELTAS*SIN(ALPHA)
4070 DELTAZ=-DELTAS*COS(ALPHA)
4080 GOTO 4110
4090 DELTAX=DELTAS*SIN(ALPHA)
4100 DELTAZ=DELTAS*COS(ALPHA)
4110 X=X-DELTAX
4120 Z1=Z1-DELTAZ
4130 Z2=SW-Z1
4135 PSET(Z1,X)
4140 IF ABS(X-XN)<.25 THEN GOTO 4160
4150 IF X<39 GOTO 3690
4160 ZC=Z2
```

TABLE XXX. BASIC COMPUTER CODE (CONTINUED).

```
4170 FOR Z2=(SWS) TO (SW+SWS) STEP (SW/SWN)
4180 MU=.832786*ZC
4190 OMEGA=-.14604*ZC+.175852
4200 ETAP4=(EXP((Z2-MU)/OMEGA))/(1+EXP((Z2-MU)/OMEGA))
4210 ETA4=ETA4+ETAP4
4220 COUNT4=COUNT4+1
4230 NEXT
4240 NEXT
4250 ETAOVER4=ETA4*(sl/2-xD)/(count4*sl)
4260 ETAOVER=ETAOVER1+ETAOVER2+ETAOVER3+ETAOVER4
4265 print#2,num,time,etaover1,etaover2,etaover3,etaover4,etaover,count1,count2,cou
nt3,count4
4270 cls
4290 next
4300 END
```

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES

Site	Number	Interval	Time	Crossdraft Velocity z-component fps	Crossdraft Velocity x-component fps	Capture Efficiency
1a	1	7	816	-0.16	0.41	0.72
	2	7	820	0.08	0.38	0.72
	3	7	824	0.17	0.76	0.56
	4	8	846	0.48	0.82	0.66
	5	8	850	0.17	0.66	0.60
	6	8	854	0.24	0.78	0.58
	7	8	858	0.33	0.57	0.70
	8	8	902	0.34	0.65	0.66
	9	8	906	0.44	0.62	0.71
	10	9	918	0.18	0.53	0.67
	11	9	922	0.47	0.86	0.64
	12	9	926	0.62	1.08	0.61
	13	9	930	0.50	0.94	0.62
	14	9	934	0.31	0.51	0.72
	15	9	938	0.39	0.48	0.75
	16	9	948	0.28	0.86	0.56
	17	9	952	0.58	1.13	0.58
	18	9	956	0.51	1.13	0.56
	19	9	1000	0.63	0.49	0.79
	20	9	1004	0.40	0.65	0.68
	21	9	1008	0.95	0.31	1.65
	22	9	1012	0.92	0.27	0.80
	23	9	1020	0.67	0.45	0.82
	24	9	1024	0.51	0.58	0.75
	25	10	1028	0.24	0.80	0.59
	26	10	1032	0.24	0.66	0.65
	27	10	1048	0.53	0.51	0.77
	28	10	1052	0.52	0.58	0.75
	29	10	1056	0.87	0.47	0.82
	30	10	1100	0.74	0.58	0.77
	31	11	1136	0.21	0.53	0.68
	32	11	1140	0.16	0.75	0.58
	33	11	1152	0.25	0.85	0.57
	34	11	1156	0.38	0.99	0.57
	35	13	1328	0.39	0.51	0.76
	36	13	1332	0.10	0.70	0.60
	37	13	1336	0.21	0.85	0.56
	38	13	1340	0.13	0.73	0.58
	39	13	1344	0.35	0.84	0.61
	40	13	1348	0.26	0.59	0.68
	41	13	1352	0.37	0.92	0.59

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES (CONTINUED)

Site	Number	Interval	Time	Crossdraft Velocity z-component fps	Crossdraft Velocity x-component fps	Capture Efficiency
	42	13	1356	0.31	0.69	0.67
2a	1	1	956	0.45	1.57	0.62
	2	1	1002	0.16	1.77	0.57
	3	1	1006	0.19	2.14	0.53
	4	1	1010	0.05	1.86	0.55
	5	1	1014	0.21	1.93	0.55
	6	2	1054	0.22	1.05	0.69
	7	2	1058	0.05	1.58	0.59
	8	2	1102	0.11	1.99	0.54
	9	2	1106	0.13	1.63	0.58
	10	2	1110	-0.07	1.33	0.62
	11	3	1210	0.04	1.95	0.54
	12	3	1214	-0.07	1.47	0.60
	13	3	1218	0.05	1.52	0.59
	14	3	1222	0.02	1.40	0.61
	15	3	1226	-0.04	0.67	0.76
	16	5	1400	-0.00	1.15	0.65
	17	5	1406	0.17	1.52	0.60
	18	5	1412	0.03	0.97	0.69
	19	7	848	0.02	0.68	0.76
	20	7	852	-0.03	0.86	0.71
	21	7	856	0.03	0.78	0.73
	22	8	902	0.05	1.26	0.64
	23	8	908	0.06	1.03	0.68
	24	8	914	0.07	0.74	0.75
	25	8	934	0.03	0.52	0.80
	26	9	1022	0.09	1.26	0.64
	27	9	1026	0.18	0.94	0.71
	28	9	1032	-0.03	0.91	0.70
	29	9	1036	-0.01	1.07	0.67
	30	10	1132	0.04	0.52	0.80
	31	10	1140	0.04	0.42	0.82
	32	11	1206	0.00	0.69	0.75
	33	11	1210	0.03	0.70	0.75
	34	11	1216	0.08	0.92	0.70
	35	11	1220	0.02	0.82	0.72
	36	11	1224	0.13	1.19	0.65
	37	11	1228	0.07	0.99	0.69
	38	12	1254	0.14	0.84	0.73
	39	12	1258	-0.08	0.94	0.70

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES (CONTINUED)

Site	Number	Interval	Time	Crossdraft Velocity z-component fps	Crossdraft Velocity x-component fps	Capture Efficiency
	40	12	1304	-0.10	1.31	0.63
	41	12	1326	-0.05	0.72	0.75
	42	12	1332	0.08	0.81	0.73
	43	12	1336	-0.02	0.83	0.72
	44	13	1420	0.01	0.71	0.75
	45	13	1424	0.05	0.58	0.79
	46	13	1428	0.04	0.61	0.78
	47	14	1530	0.17	0.48	0.82
	48	14	1534	-0.01	1.02	0.68
	49	14	1538	0.13	1.00	0.69
	50	14	1544	0.11	0.95	0.70
	51	14	1548	0.11	1.03	0.69
	52	14	1552	0.05	0.56	0.79
3a	1	2	1038	0.33	-0.43	0.84
	2	3	1042	0.34	-0.43	0.83
	3	3	1046	0.33	-0.44	0.83
	4	3	1052	0.32	-0.45	0.82
	5	3	1056	0.31	-0.48	0.81
	6	3	1102	0.32	-0.47	0.81
	7	3	1108	0.31	-0.49	0.82
	8	4	1156	0.33	-0.44	0.83
	9	4	1200	0.33	-0.45	0.82
	10	4	1206	0.32	-0.44	0.83
	11	4	1210	0.32	-0.44	0.83
	12	4	1214	0.32	-0.45	0.83
	13	5	1232	0.33	-0.44	0.83
	14	5	1236	0.32	-0.43	0.84
	15	5	1240	0.33	-0.44	0.84
	16	5	1244	0.32	-0.43	0.84
	17	5	1248	0.31	-0.47	0.81
	18	5	1300	0.31	-0.47	0.81
	19	5	1308	0.31	-0.46	0.81
	20	6	1356	0.32	-0.47	0.81
	21	6	1400	0.34	-0.49	0.81
	22	6	1404	0.32	-0.48	0.81
	23	6	1408	0.31	-0.46	0.81
	24	6	1412	0.32	-0.49	0.81
	25	6	1416	0.32	-0.49	0.81
	26	6	1420	0.34	-0.48	0.81
	27	6	1424	0.33	-0.49	0.81

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES (CONTINUED)

Site	Number	Interval	Time	Crossdraft Velocity z-component fps	Crossdraft Velocity x-component fps	Capture Efficiency
	28	7	852	0.42	-0.46	0.82
	29	8	856	0.41	-0.47	0.83
	30	8	900	0.35	-0.46	0.82
	31	8	904	0.37	-0.44	0.83
	32	9	1108	0.38	-0.46	0.83
	33	9	1112	0.34	-0.46	0.82
	34	9	1118	0.34	-0.43	0.83
	35	10	1158	0.35	-0.44	0.84
	36	10	1202	0.39	-0.48	0.82
	37	10	1206	0.38	-0.48	0.82
	38	10	1210	0.34	-0.43	0.82
	39	10	1216	0.38	-0.43	0.83
	40	12	1506	0.38	-0.34	0.86
	41	13	1600	0.38	-0.33	0.85
	42	13	1604	0.37	-0.33	0.85
	43	13	1608	0.36	-0.34	0.84
	44	13	1612	0.25	-0.23	0.86
4a	1	1	1018	0.58	0.53	0.83
	2	1	1022	0.61	0.56	0.81
	3	1	1026	0.60	0.58	0.82
	4	1	1030	0.61	0.63	0.81
	5	1	1034	0.64	0.66	0.79
	6	2	1114	0.60	0.57	0.83
	7	2	1118	0.65	0.59	0.82
	8	2	1126	0.58	0.61	0.81
	9	3	1146	0.58	0.52	0.84
	10	3	1150	0.77	0.68	0.81
	11	3	1154	0.58	0.57	0.82
	12	3	1158	0.69	0.66	0.81
6a	1	1	954	0.46	0.53	0.83
	2	1	958	0.33	0.48	0.84
	3	1	1000	0.43	0.52	0.84
	4	1	1004	0.37	0.44	0.86
	5	2	1008	0.37	0.49	0.84
	6	2	1012	0.38	0.51	0.85
	7	4	1158	0.36	0.43	0.86
	8	4	1202	0.39	0.52	0.85
	9	4	1206	0.38	0.41	0.85
	10	4	1210	0.36	0.46	0.84
	11	4	1214	0.39	0.47	0.86

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES (CONTINUED)

Site	Number	Interval	Time	Crossdraft Velocity z-component fps	Crossdraft Velocity x-component fps	Capture Efficiency
	12	4	1216	0.41	0.51	0.84
	13	4	1220	0.42	0.55	0.83
	14	4	1224	0.40	0.48	0.86
	15	4	1230	0.35	0.43	0.86
	16	4	1234	0.39	0.52	0.85
	17	4	1238	0.38	0.46	0.84
	18	7	1514	0.37	0.45	0.85
	19	7	1520	0.41	0.36	0.84
	20	7	1526	0.38	0.34	0.85
	21	7	1534	0.39	0.35	0.86
	22	8	844	0.35	0.50	0.85
	23	8	902	0.34	0.46	0.86
	24	9	914	0.33	0.44	0.84
	25	9	916	0.34	0.50	0.85
	26	9	934	0.30	0.43	0.84
	27	9	1000	0.36	0.50	0.85
	28	12	1206	0.30	0.47	0.85
	29	12	1212	0.31	0.53	0.84
	30	12	1218	0.32	0.54	0.82
	31	12	1224	0.37	0.47	0.86
	32	12	1230	0.34	0.54	0.84
	33	13	1250	0.34	0.42	0.84
	34	13	1253	0.32	0.42	0.86
	35	15	1506	0.31	0.42	0.86
	36	15	1512	0.30	0.39	0.85
	37	15	1516	0.32	0.41	0.84
	38	15	1520	0.30	0.43	0.85
6b	1	1	910	0.03	-0.71	0.61
	2	1	916	0.02	-0.62	0.64
	3	1	926	0.06	-0.49	0.70
	4	2	1002	0.03	-0.57	0.66
	5	2	1008	0.05	-0.50	0.69
	6	2	1018	-0.01	-0.61	0.64
	7	2	1022	-0.02	-0.65	0.63
	8	2	1026	0.02	-0.61	0.65
	9	3	1032	0.09	-0.61	0.65
	10	3	1106	0.05	-0.61	0.65
	11	3	1110	0.06	-0.51	0.69
	12	4	1204	0.01	-0.67	0.62
	13	4	1210	0.06	-0.53	0.68

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES (CONTINUED)

Site	Number	Interval	Time	Crossdraft Velocity z-component fps	Crossdraft Velocity x-component fps	Capture Efficiency
	14	4	1214	0.06	-0.51	0.69
	15	4	1218	0.02	-0.78	0.59
	16	4	1222	0.02	-0.56	0.66
	17	4	1226	0.07	-0.59	0.66
	18	6	1412	-0.18	-1.03	0.55
	19	6	1418	0.05	-0.51	0.69
	20	6	1426	-0.02	-0.55	0.67
	21	6	1430	0.02	-0.49	0.69
	22	6	1432	0.00	-0.56	0.66
	23	8	816	0.04	-0.53	0.68
	24	8	840	0.08	-0.55	0.67
	25	8	850	0.05	-0.57	0.66
	26	8	854	0.03	-0.52	0.68
	27	9	922	0.03	-0.52	0.68
	28	9	930	0.07	-0.53	0.68
	29	10	1024	0.01	-0.49	0.69
	30	10	1044	0.03	-0.51	0.68
	31	10	1046	-0.04	-0.56	0.66
	32	10	1050	0.01	-0.52	0.68
	33	12	1204	0.03	-0.50	0.69
	34	12	1210	0.05	-0.50	0.69
	35	12	1214	-0.01	-0.49	0.69
	36	12	1216	-0.01	-0.49	0.69
	37	12	1222	0.23	-0.34	0.81
7a	1	2	950	0.01	-0.53	0.54
	2	2	1000	0.01	-0.49	0.55
	3	2	1008	-0.01	-0.50	0.55
	4	2	1014	0.02	-0.52	0.54
	5	2	1020	0.03	-0.56	0.53
	6	2	1022	-0.01	-0.48	0.56
	7	2	1036	0.00	-0.49	0.55
	8	3	1054	0.01	-0.49	0.55
	9	3	1134	0.09	-0.59	0.53
	10	3	1138	0.01	-0.50	0.55
	11	4	1206	0.00	-0.48	0.56
	12	4	1212	-0.02	-0.50	0.55
	13	4	1218	-0.00	-0.48	0.56
	14	4	1222	-0.00	-0.49	0.55
	15	4	1228	-0.02	-0.48	0.56
	16	5	1302	-0.03	-0.48	0.56

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES (CONTINUED)

				Crossdraft Velocity		Capture
				z-component	x-component	Efficiency
Site	Number	Interval	Time	fps	fps	
	17	6	1402	0.26	-0.77	0.53
	18	8	1550	-0.01	-0.52	0.54
	19	8	1556	0.01	-0.49	0.55
	20	8	1602	0.24	-0.74	0.53
	21	8	1608	0.00	-0.50	0.55
	22	9	844	0.05	-0.59	0.52
	23	9	850	-0.01	-0.49	0.55
	24	9	904	-0.01	-0.48	0.56
	25	10	920	0.02	-0.58	0.52
	26	11	1008	0.05	-0.57	0.53
	27	11	1010	-0.01	-0.48	0.56
	28	11	1026	0.03	-0.51	0.55
	29	13	1202	0.02	-0.54	0.54
	30	13	1208	0.01	-0.49	0.55
	31	13	1214	-0.01	-0.48	0.56
	32	13	1220	0.02	-0.55	0.53
	33	13	1226	-0.00	-0.48	0.56
	34	13	1230	0.01	-0.53	0.54
	35	13	1236	0.05	-0.59	0.52
	36	13	1242	0.06	-0.56	0.53
	37	13	1248	-0.00	-0.20	0.74
8a	1	2	1216	1.67	0.26	0.81
	2	2	1220	1.60	0.58	0.88
	3	2	1224	1.60	0.07	1.00
	4	3	1250	2.39	-0.28	0.82
	5	3	1300	1.77	-0.09	0.82
	6	3	1324	2.12	0.16	0.82
8b	1	4	1406	0.64	-0.07	0.84
	2	4	1416	-0.55	0.11	0.85
	3	5	1442	0.68	0.03	0.84
	4	5	1446	0.95	-0.04	0.84
	5	5	1458	0.81	-0.12	0.84
	6	5	1504	1.03	-0.29	0.83
	7	5	1510	0.73	-0.12	0.85
	8	5	1516	0.85	-0.20	0.84
	9	6	810	1.24	-0.40	0.83
	10	6	812	1.59	-0.51	0.82
	11	6	814	0.64	-0.07	0.84
	12	6	816	1.23	-0.14	0.83
	13	6	818	1.10	-0.33	0.84

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES (CONTINUED)

				Crossdraft Velocity		Capture
				z-component	x-component	Efficiency
Site	Number	Interval	Time	fps	fps	
	14	6	822	0.86	-0.15	0.83
	15	6	830	-1.08	0.54	0.92
	16	6	844	0.27	0.34	0.94
	17	6	850	0.87	-0.10	0.84
	18	7	918	-0.65	0.15	0.85
	19	7	926	-0.57	0.15	0.84
	20	8	1026	-0.54	0.11	0.85
	21	8	1030	-1.27	0.26	0.84
	22	8	1032	-0.81	0.25	0.84
	23	8	1102	-0.95	0.32	0.82
	24	10	1216	1.15	-0.13	0.84
	25	10	1220	1.06	-0.14	0.83
	27	10	1228	1.18	-0.23	0.83
	28	10	1232	1.22	-0.14	0.83
9a	1	2	1114	1.04	0.00	0.83
	2	2	1118	1.04	0.00	0.84
	3	2	1126	1.04	0.01	0.84
	4	3	1208	1.03	-0.00	0.83
	5	3	1214	1.04	-0.00	0.83
	6	3	1218	1.04	0.00	0.83
	7	3	1224	1.04	-0.00	0.84
	8	3	1230	1.04	-0.00	0.84
	9	3	1240	1.04	0.01	0.83
	10	3	1250	1.04	0.01	0.84
	11	4	1336	1.04	0.00	0.84
	12	4	1340	1.05	0.00	0.84
	13	6	1510	1.05	0.00	0.83
	14	6	1514	1.05	0.00	0.84
	15	6	1518	1.04	-0.00	0.83
	16	6	1522	1.05	0.00	0.83
	17	6	1526	1.05	0.00	0.83
	18	6	1540	1.04	-0.00	0.83
	19	7	852	1.03	0.01	0.84
	20	7	856	1.04	0.01	0.83
	21	7	900	1.03	0.01	0.83
	22	7	906	1.03	0.01	0.83
	23	7	912	1.03	0.01	0.83
	24	7	918	1.03	0.01	0.83
	25	7	924	1.03	0.01	0.84
	26	7	930	1.04	0.01	0.84

TABLE XXXI: CROSSDRAFT VELOCITIES AND PREDICTED CAPTURE EFFICIENCIES (CONTINUED)

				Crossdraft Velocity		Capture
Site	Number	Interval	Time	z-component fps	x-component fps	Efficiency
	27	7	936	1.03	0.01	0.84
	28	7	944	1.04	0.01	0.83
	29	8	1016	1.04	0.01	0.84
	30	8	1022	1.03	0.13	0.83
	31	8	1024	1.03	0.00	0.84
	32	8	1030	1.03	0.00	0.84
	33	8	1038	1.03	0.00	0.83
	34	8	1054	1.03	0.00	0.83
	35	8	1058	1.03	0.00	0.83
	36	8	1122	1.04	0.01	0.84

5.6 Appendix F

Activity Data Set and Spearman Correlation Coefficients

TABLE XXXII. ACTIVITY DATA SET.

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED
1	1	1	60	79.90	23.970	20.700	20.700	23.970	18.4385	.	.	.	.	.	.	.
2	1	2	74	28.40	8.520	40.200	.	8.520	6.5538	.	.	.	.	.	.	.
3	1	3	60	65.60	19.680	.	.	19.680	15.1385	117.2	90.1539	0.85622	.	.	0.85622	.
4	1	4	58	22.80	6.840	3.210	.	6.840	5.2615	37.4	28.7692	0.84539	0.92096	.	0.84539	.
5	1	5	60	58.20	17.460	15.100	.	17.460	13.4308	16.7	12.8462	0.48888	0.52516	.	0.48888	.
6	1	6	60	14.10	4.230	3.490	2.960	4.230	3.2538	.	.	.	.	.	.	.
7	1	7	60	10.80	3.240	.	.	3.240	2.4923	4.7	3.6154	0.59194	.	.	0.59194	0.66861
8	1	8	26	3.89	1.167	.	.	1.167	0.8977	1.6	1.2308	0.57824	.	.	0.57824	0.65066
9	1	9	60	79.70	23.910	40.600	8.350	23.910	18.3923	8.3	6.3846	0.25768	0.16973	0.49850	0.25768	0.74669
10	1	10	32	22.60	6.780	15.700	2.120	6.780	5.2154	2.9	2.2308	0.29959	0.15591	0.57769	0.29959	0.72518
11	1	11	52	91.90	27.570	.	.	27.570	21.2077	13.8	10.6154	0.33358	.	.	0.33358	0.60325
12	1	12	56	35.60	10.680	.	.	10.680	8.2154	2.8	2.1538	0.20772	.	.	0.20772	.
13	1	13	30	24.50	7.350	.	.	7.350	5.6538	2.3	1.7692	0.23834	.	.	0.23834	0.63252
14	2	1	72	11.90	3.570	1.340	2.190	3.570	4.1034	17.7	20.3448	0.83216	0.92962	0.88989	0.83216	0.56363
15	2	2	70	11.10	3.330	1.680	.	3.330	3.8276	16.1	18.5058	0.82862	0.90551	.	0.82862	0.60426
16	2	3	36	2.66	0.798	0.105	.	0.798	0.9172	14.6	16.7816	0.94818	0.99286	.	0.94818	0.62321
17	2	4	66	9.64	2.892	0.362	0.972	2.892	3.3241	13.6	15.6322	0.82464	0.97407	0.93330	0.82464	.

OBS	TANKL	TANKW	TANKA	HOODL	HOODW	QHM3S	QHCFM	QDM3S	QDCFM	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY
1	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.05000	0.13333	0.0000	0.00000	0.00000	.
2	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.08108	0.16216	0.1081	0.06757	0.00000	.
3	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.05000	0.11667	0.2833	0.01667	0.00000	.
4	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.10345	0.18966	0.1724	0.00000	0.00000	.
5	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.11667	0.31667	0.0000	0.10000	0.00000	.
6	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.10000	0.26667	0.0000	0.08333	0.00000	.
7	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.00000	0.00000	0.0000	0.00000	0.00000	.
8	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.00000	0.00000	0.0000	0.00000	0.00000	.
9	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.08333	0.16667	0.0000	0.08333	0.00000	.
10	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.09375	0.15625	0.1563	0.12500	0.00000	.
11	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.00000	0.00000	0.0000	0.00000	0.00000	.
12	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.03571	0.05357	0.0000	0.00000	0.00000	.
13	140	92.7	1.30	140	4.45	0.24	499	0.33	697	72	3.9	0.00000	0.00000	0.0000	0.00000	0.00000	.
14	122	71.1	0.87	122	4.45	0.36	757	0.22	467	162	6.6	0.16667	0.13889	2.1111	0.00000	0.00000	0.08333
15	122	71.1	0.87	122	4.45	0.36	757	0.22	467	162	6.6	0.22857	0.00000	2.6429	0.00000	0.00000	0.11429
16	122	71.1	0.87	122	4.45	0.36	757	0.22	467	162	6.6	0.00000	0.00000	0.0000	0.00000	0.00000	0.00000
17	122	71.1	0.87	122	4.45	0.36	757	0.22	467	162	6.6	0.18182	0.00000	1.8485	0.00000	0.00000	0.01515

OBS	CO	END	PLAT	SHELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
1	0.01667	0.05000	0.00000	0.00000	.	.	0.00000	.	0.10000	.	.	.	.	.
2	0.06757	0.02703	0.05405	0.10811	.	.	0.00000	.	0.10811	.	.	.	.	.
3	0.01667	0.05000	0.00000	0.00000	.	.	0.00000	.	0.10000	.	.	.	.	.
4	0.08621	0.10345	0.00000	0.34483	.	.	0.00000	.	0.20690	.	.	.	.	.
5	0.10000	0.11667	0.00000	0.00000	.	.	0.00000	.	0.23333	.	.	.	.	.
6	0.10000	0.05000	0.00000	0.00000	.	.	0.00000	.	0.15000	.	.	.	.	.
7	0.00000	0.01667	0.00000	0.00000	.	.	0.00000	.	0.01667	0.02890	0.51440	0.82570	-0.25662	32.7943
8	0.00000	0.00000	0.00000	0.00000	.	.	0.00000	.	0.00000	0.33177	0.68541	0.84055	-0.48364	39.5234
9	0.10000	0.10000	0.10000	0.00000	.	.	0.00000	.	0.18333	0.52771	0.68530	0.98545	-0.39252	46.6404
10	0.09375	0.09375	0.12500	0.06250	.	.	0.00000	.	0.18750	0.52196	0.60059	0.91025	-0.28726	56.6591
11	0.00000	0.00000	0.00000	0.00000	.	.	0.00000	.	0.00000	0.24998	0.78077	0.84847	-0.24025	31.4563
12	0.03571	0.03571	0.00000	0.00000	.	.	0.00000	.	0.07143	.	.	.	.	.
13	0.00000	0.00000	0.00000	0.00000	.	.	0.00000	.	0.00000	0.26744	0.72851	0.81959	-0.25898	36.8170
14	0.00000	0.09722	.	.	0.01389	.	0.00000	.	0.26389	0.21407	1.85325	1.92970	0.07792	43.8460
15	0.00000	0.27143	.	.	0.14286	.	0.00000	.	0.50000	0.08757	1.51553	1.55200	0.02416	45.5795
16	0.00000	0.00000	.	.	0.00000	.	0.00000	.	0.00000	-0.00101	1.40306	1.43707	-0.04685	44.2108
17	0.00000	0.21212	.	.	0.19697	.	0.00000	.	0.39394	.	.	.	.	.

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW	TANKA	HOODL	HOODW	QHM3S	QHCFM	QDM3S
18	2	5	62	16.400	4.920	4.510	.	4.920	5.655	21.0	24.1379	0.81019	0.82321	.	0.81019	0.64714	122	71.1	0.87	122	4.45	0.36	757	0.22
19	2	6	56	10.400	3.120	0.283	.	3.120	3.586	31.9	36.6667	0.91091	0.99121	.	0.91091	.	122	71.1	0.87	122	4.45	0.36	757	0.22
20	2	7	54	18.900	5.670	0.223	0.26	5.670	6.517	32.4	37.2414	0.85106	0.99316	0.99204	0.85106	0.73571	122	71.1	0.87	122	4.45	0.36	757	0.22
21	2	8	60	13.700	4.110	1.640	0.14	4.110	4.724	16.2	18.6207	0.79764	0.90807	0.99137	0.79764	0.71530	122	71.1	0.87	122	4.45	0.36	757	0.22
22	2	9	58	7.500	2.250	0.085	0.09	2.250	2.586	5.2	5.9770	0.69799	0.98392	0.98392	0.69799	0.67883	122	71.1	0.87	122	4.45	0.36	757	0.22
23	2	10	36	6.110	1.833	.	.	1.833	2.107	22.3	25.6322	0.92405	.	.	0.92405	0.81481	122	71.1	0.87	122	4.45	0.36	757	0.22
24	2	11	34	5.040	1.512	0.059	0.06	1.512	1.738	11.0	12.6437	0.87916	0.99467	0.99467	0.87916	0.71150	122	71.1	0.87	122	4.45	0.36	757	0.22
25	2	12	58	13.900	4.170	0.688	.	4.170	4.793	20.9	24.0230	0.83367	0.96813	.	0.83367	0.70993	122	71.1	0.87	122	4.45	0.36	757	0.22
26	2	13	84	11.600	3.480	.	.	3.480	4.000	70.6	81.1494	0.95302	.	.	0.95302	0.77277	122	71.1	0.87	122	4.45	0.36	757	0.22
27	2	14	36	8.390	2.517	0.471	0.62	2.517	2.893	22.2	25.5172	0.89817	0.97923	0.97279	0.89817	0.72871	122	71.1	0.87	122	4.45	0.36	757	0.22
28	3	1	.	16.400	4.920	0.751	50.00	4.920	4.205	6.6	5.6410	0.57292	0.89784	0.11661	0.57292	.	154	76.2	1.17	158	4.45	0.30	646	0.30
29	3	2	.	14.800	4.440	2.450	0.57	4.440	3.795	13.7	11.7094	0.75524	0.84830	0.96026	0.75524	0.83730	154	76.2	1.17	158	4.45	0.30	646	0.30
30	3	3	56	25.100	7.530	.	.	7.530	6.436	18.1	15.4701	0.70620	.	.	0.70620	0.82180	154	76.2	1.17	158	4.45	0.30	646	0.30
31	3	4	30	13.700	4.110	0.520	0.52	4.110	3.513	5.9	5.0427	0.58941	0.91900	0.91900	0.58941	0.83153	154	76.2	1.17	158	4.45	0.30	646	0.30
32	3	5	60	18.300	5.490	1.550	0.41	5.490	4.692	15.5	13.2479	0.73845	0.90909	0.97429	0.73845	0.82429	154	76.2	1.17	158	4.45	0.30	646	0.30
33	3	6	62	8.060	2.418	0.571	0.36	2.418	2.067	8.3	7.0940	0.77440	0.93563	0.95898	0.77440	0.80997	154	76.2	1.17	158	4.45	0.30	646	0.30
34	3	7	66	11.600	3.480	0.863	.	3.480	2.974	12.7	10.8547	0.78492	0.93637	.	0.78492	0.82159	154	76.2	1.17	158	4.45	0.30	646	0.30
35	3	8	58	14.500	4.350	.	.	4.350	3.718	10.5	8.9744	0.70707	.	.	0.70707	0.82888	154	76.2	1.17	158	4.45	0.30	646	0.30
36	3	9	76	14.800	4.440	1.440	.	4.440	3.795	10.7	9.1453	0.70674	0.88138	.	0.70674	0.82930	154	76.2	1.17	158	4.45	0.30	646	0.30
37	3	10	36	13.800	4.140	18.100	.	4.140	3.538	8.2	7.0085	0.66451	0.31179	.	0.66451	0.82630	154	76.2	1.17	158	4.45	0.30	646	0.30
38	3	11	86	13.400	4.020	0.924	0.92	4.020	3.436	13.5	11.5385	0.77055	0.93594	0.93594	0.77055	.	154	76.2	1.17	158	4.45	0.30	646	0.30
39	3	12	74	17.300	5.190	1.480	0.59	5.190	4.436	14.1	12.0513	0.73095	0.90501	0.95984	0.73095	0.85716	154	76.2	1.17	158	4.45	0.30	646	0.30

OBS	QDCFM	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY	CO	END	PLAT	SHELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
18	467	162	6.6	0.25807	0	1.9839	0.00000	0.00000	0.01613	0.00000	0.25807	.	.	0.20968	.	0.00000	.	0.51613	0.06356	1.21480	1.22202	0.04098	53.2332
19	467	162	6.6	0.07143	0	0.6071	0.00000	0.00000	0.03571	0.00000	0.10714	.	.	0.07143	.	0.00000	.	0.17857	.	.	.	.	.
20	467	162	6.6	0.22222	0	2.2593	0.00000	0.00000	0.00000	0.00000	0.18519	.	.	0.18519	.	0.00000	.	0.40741	0.00603	0.77045	0.77224	-0.00170	39.6304
21	467	162	6.6	0.15000	0	1.1667	0.00000	0.00000	0.00000	0.00000	0.10000	.	.	0.10000	.	0.00000	.	0.25000	0.05362	0.88669	0.88951	0.05811	36.4691
22	467	162	6.6	0.10345	0	1.3793	0.00000	0.00000	0.00000	0.00000	0.12069	.	.	0.12069	.	0.00000	.	0.22414	0.05666	1.04347	1.05854	0.05387	42.5936
23	467	162	6.6	0.16667	0	1.7778	0.00000	0.00000	0.00000	0.00000	0.16667	.	.	0.16667	.	0.00000	.	0.33333	0.03762	0.47018	0.47254	0.12601	26.3898
24	467	162	6.6	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	0.00000	.	0.00000	.	0.00000	0.05600	0.88524	0.88891	0.06369	42.0784
25	467	162	6.6	0.18966	0	0.9655	0.00000	0.00000	0.01724	0.00000	0.13793	.	.	0.12069	.	0.00000	.	0.32759	-0.00427	0.90772	0.94685	-0.03641	42.0909
26	467	162	6.6	0.09524	0	1.4048	0.00000	0.00000	0.01191	0.03571	0.10714	.	.	0.07143	.	0.00000	.	0.20238	0.03618	0.63278	0.64037	0.06278	27.5967
27	467	162	6.6	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	0.00000	.	0.00000	.	0.00000	0.09368	0.83855	0.85553	0.15456	40.6786
28	630	103	4.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
29	630	103	4.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.33070	-0.43234	0.54436	0.13242	18.5044
30	630	103	4.3	0.07143	0	0.1429	0.08929	0.07143	0.01786	0.01786	0.05357	.	.	.	.	0.00000	.	0.12500	0.32066	-0.45958	0.56089	0.17544	22.8566
31	630	103	4.3	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.32419	-0.44396	0.54980	0.15467	15.7898
32	630	103	4.3	0.03333	0	0.1500	0.03333	0.03333	0.03333	0.00000	0.03333	.	.	.	.	0.00000	.	0.06667	0.31855	-0.44959	0.55134	0.16855	14.8140
33	630	103	4.3	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.32470	-0.48109	0.58060	0.19196	43.3062
34	630	103	4.3	0.04546	0	0.2121	0.01515	0.04546	0.03030	0.00000	0.03030	.	.	.	.	0.00000	.	0.07576	0.42255	-0.45593	0.62272	0.04225	20.7289
35	630	103	4.3	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.37978	-0.45940	0.59641	0.09564	21.1444
36	630	103	4.3	0.05263	0	0.2632	0.03947	0.03947	0.03947	0.00000	0.03947	.	.	.	.	0.00000	.	0.09211	0.35215	-0.44951	0.57200	0.11983	17.8669
37	630	103	4.3	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.36801	-0.44978	0.58140	0.09959	18.4972
38	630	103	4.3	0.05814	0	0.5349	0.02326	0.02326	0.03488	0.00000	0.04651	.	.	.	.	0.00000	.	0.10465	.	.	.	.	.
39	630	103	4.3	0.06757	0	0.2568	0.06757	0.02703	0.04054	0.00000	0.05405	.	.	.	.	0.00000	.	0.12162	0.38452	-0.33717	0.51150	-0.06575	20.9735

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW	TANKA	HOODL	HOODW	QHMS3	QHCFM	QDMS3
40	3	13	34	8.650	2.595	2.000	.	2.595	2.218	7.7	6.5812	0.74794	0.79381	.	0.74794	0.85100	154	76.2	1.17	158	4.45	0.30	646	0.30
41	4	1	66	16.100	4.830	1.170	1.17	4.830	4.979	17.7	18.2474	0.78562	0.93800	0.93800	0.78562	0.81260	112	86.4	0.97	112	5.08	0.40	838	0.24
42	4	2	26	30.400	9.120	3.000	3.00	9.120	9.402	28.1	28.9691	0.75497	0.90354	0.90354	0.75497	0.82097	112	86.4	0.97	112	5.08	0.40	838	0.24
43	4	3	68	3.120	0.936	.	.	0.936	0.965	8.4	8.6598	0.89974	.	.	0.89974	0.81896	112	86.4	0.97	112	5.08	0.40	838	0.24
44	5	1	56	8.010	2.403	.	.	2.403	2.427	0.7	0.7071	0.22559	.	.	0.22559	0.84175	122	81.3	0.99	125	4.45	0.41	869	0.25
45	5	2	56	11.000	3.300	0.276	0.31	3.300	3.333	0.7	0.7071	0.17500	0.71721	0.69513	0.17500	0.84400	122	81.3	0.99	125	4.45	0.41	869	0.25
46	5	3	40	5.920	1.776	0.216	0.27	1.776	1.794	1.5	1.5152	0.45788	0.87413	0.84746	0.45788	.	122	81.3	0.99	125	4.45	0.41	869	0.25
47	5	4	52	11.400	3.420	0.662	1.06	3.420	3.455	1.5	1.5152	0.30488	0.69380	0.58525	0.30488	0.84782	122	81.3	0.99	125	4.45	0.41	869	0.25
48	5	5	70	4.220	1.266	0.145	0.30	1.266	1.279	1.3	1.3131	0.50663	0.89965	0.81149	0.50663	.	122	81.3	0.99	125	4.45	0.41	869	0.25
49	5	6	52	1.270	0.381	0.059	0.12	0.381	0.385	0.3	0.3030	0.44053	0.83566	0.71599	0.44053	.	122	81.3	0.99	125	4.45	0.41	869	0.25
50	5	7	24	1.530	0.459	.	.	0.459	0.464	3.7	3.7374	0.88964	.	.	0.88964	0.84700	122	81.3	0.99	125	4.45	0.41	869	0.25
51	5	8	60	6.530	1.959	0.115	0.12	1.959	1.979	2.5	2.5253	0.56066	0.95602	0.95602	0.56066	0.85350	122	81.3	0.99	125	4.45	0.41	869	0.25
52	5	9	56	23.100	6.930	0.483	0.50	6.930	7.000	6.5	6.5657	0.48399	0.93083	0.92857	0.48399	0.84575	122	81.3	0.99	125	4.45	0.41	869	0.25
53	5	10	54	10.500	3.150	0.482	0.17	3.150	3.182	5.5	5.5556	0.63584	0.91943	0.97070	0.63584	.	122	81.3	0.99	125	4.45	0.41	869	0.25
54	5	11	56	1.460	0.438	0.539	.	0.438	0.442	.	.	.	.	.	.	.	122	81.3	0.99	125	4.45	0.41	869	0.25
55	5	12	30	3.870	1.161	.	.	1.161	1.173	2.1	2.1212	0.64397	.	.	0.64397	0.84080	122	81.3	0.99	125	4.45	0.41	869	0.25
56	5	13	64	5.640	1.692	0.207	0.25	1.692	1.709	.	.	.	.	.	.	0.85000	122	81.3	0.99	125	4.45	0.41	869	0.25
57	5	14	56	5.360	1.608	0.105	0.08	1.608	1.624	1.1	1.1111	0.40620	0.91286	0.92905	0.40620	.	122	81.3	0.99	125	4.45	0.41	869	0.25
58	5	15	28	1.820	0.546	0.092	0.11	0.546	0.552	15.3	15.4546	0.96554	0.99402	0.99273	0.96554	0.85125	122	81.3	0.99	125	4.45	0.41	869	0.25
59	6	1	58	11.700	3.510	.	.	3.510	3.857	15.6	17.1429	0.81633	.	.	0.81633	0.65062	119	76.2	0.91	122	2.54	0.20	416	0.23
60	6	2	50	13.700	4.110	1.250	1.25	4.110	4.516	21.1	23.1868	0.83697	0.94407	0.94407	0.83697	0.65476	119	76.2	0.91	122	2.54	0.20	416	0.23
61	6	3	82	28.400	8.520	0.171	0.17	8.520	9.363	31.2	34.2857	0.78550	0.99455	0.99455	0.78550	0.66255	119	76.2	0.91	122	2.54	0.20	416	0.23

OBS	QDCFM	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY	CO	END	PLAT	SHELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
40	630	103	4.3	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.33929	-0.30688	0.45766	-0.04581	14.3729
41	519	161	7.0	0.21212	0	0.4545	0.19697	0.19697	0.19697	0.00000	0.19697	.	.	.	.	0.00000	.	0.40909	0.60660	0.59366	0.85147	0.01241	37.2610
42	519	161	7.0	0.23077	0	0.8077	0.26923	0.23077	0.26923	0.00000	0.26923	.	.	.	.	0.00000	.	0.50000	0.60888	0.58869	0.85036	0.02240	34.9802
43	519	161	7.0	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.65098	0.60696	0.89083	0.03540	35.0761
44	533	163	7.4	0.05357	0	2.5357	0.00000	0.05357	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.05357	0.40031	0.49288	0.63729	-0.10998	34.9249
45	533	163	7.4	0.05357	0	1.8214	0.00000	0.05357	0.19643	0.00000	0.14286	.	.	.	.	0.82143	.	0.19643	0.37455	0.49628	0.62224	-0.13860	30.8782
46	533	163	7.4	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.92500	.	0.00000	.	.	.	.	.
47	533	163	7.4	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.38507	0.47748	0.61554	-0.10395	21.9710
48	533	163	7.4	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.84286	.	0.00000	.	.	.	.	.
49	533	163	7.4	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.80769	.	0.00000	.	.	.	.	.
50	533	163	7.4	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.38733	0.37326	0.53996	0.01895	19.1941
51	533	163	7.4	0.13333	0	4.2333	0.00000	0.13333	0.00000	0.00000	0.00000	.	.	.	.	0.95000	.	0.13333	0.34279	0.47867	0.58974	-0.15666	27.2015
52	533	163	7.4	0.07143	0	7.2143	0.00000	0.07143	0.14286	0.00000	0.08929	.	.	.	.	0.87500	.	0.16071	0.33359	0.46917	0.57685	-0.16629	23.7929
53	533	163	7.4	0.25926	0	7.5926	0.00000	0.25926	0.00000	0.00000	0.25926	.	.	.	.	0.94444	.	0.51852	.	.	.	.	.
54	533	163	7.4	0.03571	0	2.0000	0.00000	0.03571	0.25000	0.00000	0.12500	.	.	.	.	0.92857	.	0.16071	.	.	.	.	.
55	533	163	7.4	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.32909	0.51130	0.61005	-0.20902	23.4240
56	533	163	7.4	0.07813	0	1.4063	0.00000	0.07813	0.07813	0.00000	0.07813	.	.	.	.	0.96875	.	0.15625	0.33411	0.42237	0.53897	-0.11473	18.9480
57	533	163	7.4	0.25000	0	3.7857	0.00000	0.17857	0.25000	0.00000	0.14286	.	.	.	.	0.83929	.	0.39286	.	.	.	.	.
58	533	163	7.4	0.00000	0	0.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.21429	.	0.00000	0.30855	0.41455	0.51769	-0.14326	14.0723
59	490	85	6.5	1.25862	0	12.8966	0.00000	0.36207	0.00000	0.68966	0.87931	.	.	.	.	0.00000	.	2.13793	0.03743	-0.60671	0.60995	-0.07514	22.6298

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

60	490	85	6.5	0.84000	0	44.8800	0.00000	0.00000	0.00000	0.66000	0.28000	.	.	.	.	0.00000	.	1.12000	0.01576	-0.58905	0.59221	-0.04561	23.7756
61	490	85	6.5	1.95122	0	20.9512	0.00000	0.00000	0.00000	0.92683	2.43902	.	.	.	.	0.00000	.	4.39024	0.06649	-0.57760	0.58276	-0.11661	26.1554

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW	TANKA	HOODL	HOODW	QHM3S	QHCFM	QDM3S
62	6	4	40	0.332	0.100	0.003	0.00	0.100	0.109	13.5	14.835	0.99268	0.99978	0.99978	0.99268	0.65033	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
63	6	5	58	7.040	2.112	0.684	0.68	2.112	2.321	14.6	16.044	0.87362	0.95525	0.95525	0.87362	.	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
64	6	6	64	9.910	2.973	0.286	0.29	2.973	3.267	24.4	26.813	0.89139	0.98841	0.98841	0.89139	0.65192	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
65	6	7	52	16.400	4.920	0.759	0.76	4.920	5.407	22.5	24.725	0.82057	0.96737	0.96737	0.82057	.	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
66	6	8	58	478.000	143.400	86.900	160.00	143.400	157.582	15.1	16.593	0.09527	0.14804	0.08624	0.09527	0.67421	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
67	6	9	62	609.000	182.700	172.000	328.00	182.700	200.769	18.4	20.220	0.09150	0.09664	0.05312	0.09150	0.68146	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
68	6	10	60	704.000	211.200	339.000	660.00	211.200	232.088	21.2	23.297	0.09122	0.05886	0.03112	0.09122	0.68047	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
69	6	11	48	332.000	99.600	894.000	1780.00	99.600	109.451	.	.	.	.	.	.	.	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
70	6	12	40	168.000	50.400	22.500	40.90	50.400	55.385	18.9	20.769	0.27273	0.45652	0.31605	0.27273	0.71437	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
71	6	13	66	155.000	46.500	10.100	17.80	46.500	51.099	.	.	.	.	.	.	.	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
72	6	14	62	185.000	55.500	245.600	488.00	55.500	60.989	22.4	24.615	0.28755	0.08358	0.04389	0.28755	.	119.0	76.2	0.91	122.0	2.54	0.20	416	0.23
73	7	1	66	5.610	1.683	.	.	1.683	1.810	12.1	13.011	0.87789	.	.	0.87789	.	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
74	7	2	56	8.210	2.463	.	.	2.463	2.648	14.4	15.484	0.85394	.	.	0.85394	0.54607	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
75	7	3	72	8.030	2.409	.	.	2.409	2.590	12.4	13.333	0.83733	.	.	0.83733	0.54210	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
76	7	4	34	2.650	0.795	0.533	.	0.795	0.855	5.3	5.699	0.86957	0.90862	.	0.86957	0.55583	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
77	7	5	62	9.290	2.787	.	.	2.787	2.997	10.6	11.398	0.79181	.	.	0.79181	0.55786	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
78	7	6	60	7.620	2.286	.	.	2.286	2.458	6.8	7.312	0.74840	.	.	0.74840	0.52573	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
79	7	7	58	7.210	2.163	.	.	2.163	2.326	12.2	13.118	0.84941	.	.	0.84941	.	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
80	7	8	32	4.760	1.428	0.422	0.42	1.428	1.535	4.2	4.516	0.74627	0.90870	0.90870	0.74627	0.54364	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
81	7	9	62	2.220	0.666	.	.	0.666	0.716	6.1	6.559	0.90157	.	.	0.90157	0.54399	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
82	7	10	60	6.420	1.926	.	.	1.926	2.071	9.6	10.323	0.83290	.	.	0.83290	0.52176	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24
83	7	11	56	11.100	3.330	.	.	3.330	3.581	15.3	16.452	0.82126	.	.	0.82126	0.54488	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24

OBS	QDCFM	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY	CO	END	PLAT	SHELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
62	490	85	6.5	0.55000	0.00000	15.9000	0.00000	0.00000	0.00000	0.00000	0.17500	.	.	.	.	0.00000	.	0.72500	0.03790	-0.60849	0.61238	-0.07518	26.1322
63	490	85	6.5	2.51724	0.00000	28.6552	0.17241	0.00000	0.00000	1.06897	1.68966	.	.	.	.	0.00000	.	4.20690	.	.	.	.	.
64	490	85	6.5	1.48438	0.00000	21.0000	0.00000	0.00000	0.12500	0.87500	1.57813	.	.	.	.	0.00000	.	3.06250	-0.02335	-0.62768	0.63690	-0.00490	24.7347
65	490	85	6.5	1.30769	0.00000	24.4615	0.00000	0.00000	0.00000	0.86539	1.71154	.	.	.	.	0.00000	.	3.01923	.	.	.	.	.
66	490	85	6.5	1.70690	0.00000	26.4138	0.00000	0.00000	0.00000	0.55172	1.10345	.	.	.	.	0.00000	.	2.81035	0.04855	-0.54209	0.54606	-0.08678	36.0734
67	490	85	6.5	1.58065	0.00000	34.7258	0.00000	0.00000	0.00000	0.74194	0.74194	.	.	.	.	0.00000	.	2.32258	0.04991	-0.52406	0.52844	-0.09279	17.7190
68	490	85	6.5	2.88333	0.00000	90.3333	0.00000	0.00000	0.00000	1.13333	3.53333	.	.	.	.	0.00000	.	6.41667	0.00225	-0.52165	0.52245	-0.00584	16.6042
69	490	85	6.5	2.35417	0.00000	69.9583	0.00000	0.00000	0.00000	0.93750	2.02083	.	.	.	.	0.00000	.	4.37500	.	.	.	.	.
70	490	85	6.5	0.32500	0.00000	52.5000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.32500	0.05570	-0.46487	0.50264	-0.03701	9.6570
71	490	85	6.5	1.45455	0.00000	56.7273	0.00000	0.00000	0.00000	0.00000	1.42424	.	.	.	.	0.00000	.	2.87879	.	.	.	.	.
72	490	85	6.5	1.53226	0.00000	83.2581	0.00000	0.00000	0.00000	0.00000	1.27419	.	.	.	.	0.00000	.	2.80645	.	.	.	.	.
73	500	46	2.4	0.03030	0.00000	0.8182	0.00000	0.00000	0.00000	0.01515	0.01515	.	.	.	.	0.00000	.	0.04546	.	.	.	.	.
74	500	46	2.4	0.03571	0.00000	1.0357	0.00000	0.00000	0.00000	0.03571	0.03571	.	.	.	.	0.00000	.	0.07143	0.00888	-0.51069	0.51795	0.01361	13.6834
75	500	46	2.4	0.02778	0.00000	1.0000	0.00000	0.00000	0.00000	0.02778	0.02778	.	.	.	.	0.00000	.	0.05556	0.03561	-0.53067	0.55769	0.05039	14.4050
76	500	46	2.4	0.00000	0.00000	1.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	-0.00868	-0.48603	0.47642	-0.02024	9.2335
77	500	46	2.4	0.01613	0.00000	1.0000	0.00000	0.00000	0.00000	0.01613	0.01613	.	.	.	.	0.00000	.	0.03226	-0.02800	-0.48463	0.45469	-0.06436	9.0460
78	500	46	2.4	0.00000	0.00000	1.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.26280	-0.76982	0.89466	0.23434	31.0126

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

79	500	46	2.4	0.03448	0.00000	1.0345	0.00000	0.00000	0.00000	0.03448	0.03448	.	.	.	.	0.00000	.	0.06897	.	.	.	.	.
80	500	46	2.4	0.00000	0.00000	1.0000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	.	0.00000	0.05905	-0.56089	0.59075	0.05520	18.6626
81	500	46	2.4	0.01613	0.00000	1.0000	0.00000	0.00000	0.00000	0.01613	0.01613	.	.	.	.	0.00000	.	0.03226	0.00664	-0.52041	0.52182	0.00087	27.2408
82	500	46	2.4	0.03333	0.00000	0.9667	0.00000	0.00000	0.00000	0.03333	0.03333	.	.	.	.	0.00000	.	0.06667	0.02130	-0.57670	0.59539	0.03660	22.5320
83	500	46	2.4	0.05357	0.00000	1.0000	0.00000	0.00000	0.00000	0.07143	0.07143	.	.	.	.	0.00000	.	0.12500	0.02202	-0.51859	0.53657	0.03381	16.7354

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED
84	7	12	52	6.140	1.8420	.	.	1.8420	1.9806	2.8	3.011	0.60319	.	.	0.60319	.
85	7	13	52	10.500	3.1500	0.961	0.961	3.1500	3.3871	12.0	12.903	0.79208	0.92585	0.92585	0.79208	0.56292
86	8	1	62	0.678	0.2034	.	.	0.2034	0.1312	28.8	18.581	0.99299	.	.	0.99299	.
87	8	2	50	0.269	0.0807	.	.	0.0807	0.0521	26.2	16.903	0.99693	.	.	0.99693	0.83654
88	8	3	44	0.181	0.0543	.	.	0.0543	0.0350	1.4	0.903	0.96266	.	.	0.96266	0.83391
89	8	4	62	0.158	0.0474	0.309	0.540	0.0474	0.0306	6.6	4.258	0.99287	0.95528	0.92437	0.99287	0.83656
90	8	5	54	0.129	0.0387	0.081	0.082	0.0387	0.0250	9.1	5.871	0.99577	0.99118	0.99107	0.99577	.
91	8	6	30	0.493	0.1479	0.486	0.422	0.1479	0.0954	39.3	25.355	0.99625	0.98779	0.98938	0.99625	0.83097
92	8	7	58	0.130	0.0390	.	.	0.0390	0.0252	2.2	1.419	0.98258	.	.	0.98258	0.83410
93	8	8	92	0.285	0.0855	.	.	0.0855	0.0552	26.6	17.161	0.99680	.	.	0.99680	0.83292
94	9	1	52	.	.	0.014	0.014	0.0140	0.0737	4.7	24.737	.	0.99703	0.99703	0.99703	.
95	9	2	60	.	.	0.004	0.004	0.0040	0.0211	9.7	51.053	.	0.99959	0.99959	0.99959	.
96	9	3	60	.	.	0.023	0.000	0.0230	0.1211	8.7	45.789	.	0.99736	1.00000	0.99736	.
97	9	4	28	.	.	0.002	0.002	0.0020	0.0105	9.6	50.526	.	0.99979	0.99979	0.99979	.
98	9	5	58	.	.	8.020	23.400	8.0200	42.2105	13.9	73.158	.	0.63412	0.37265	0.63412	.
99	9	6	58	.	.	0.004	0.005	0.0040	0.0211	16.2	85.263	.	0.99975	0.99969	0.99975	.
100	9	7	58	.	.	.	.	.	.	11.3	59.474	.	.	.	.	.

OBS	TANKL	TANKW	TANKA	HOODL	HOODW	QHM3S	QHCFM	QDM3S	QDCFM	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY
84	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24	500	46	2.4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
85	122.0	76.2	0.93	122.0	3.81	0.11	231	0.24	500	46	2.4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
86	152.0	102.0	1.55	158.0	2.54	0.38	810	0.39	833	97	9.5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
87	152.0	102.0	1.55	158.0	2.54	0.38	810	0.39	833	97	9.5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
88	152.0	102.0	1.55	158.0	2.54	0.38	810	0.39	833	97	9.5	0.00000	0.00000	0.95455	0.00000	0.00000	0.02273
89	152.0	102.0	1.55	158.0	2.54	0.38	810	0.39	833	97	9.5	0.01613	0.00000	0.32258	0.00000	0.01613	0.00000
90	152.0	102.0	1.55	158.0	2.54	0.38	810	0.39	833	97	9.5	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000
91	152.0	102.0	1.55	158.0	2.54	0.38	810	0.39	833	97	9.5	0.03333	0.00000	0.86667	0.00000	0.00000	0.03333
92	152.0	102.0	1.55	158.0	2.54	0.38	810	0.39	833	97	9.5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
93	152.0	102.0	1.55	158.0	2.54	0.38	810	0.39	833	97	9.5	0.02174	0.00000	0.30435	0.01087	0.02174	0.02174
94	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
95	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
96	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
97	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
98	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.06897	0.00000	0.00000	0.00000	0.06897	0.00000
99	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
100	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.01724	0.00000	0.03448	0.00000	0.01724	0.00000

OBS	CO	END	PLAT	SHELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
84	0.000000	0.00000	.	.	.	.	0.00000	.	0.00000	.	.	.	.	.
85	0.000000	0.00000	.	.	.	.	0.00000	.	0.00000	0.01748	-0.49155	0.50344	0.022086	19.0541
86	0.000000	0.00000	.	.	.	.	0.00000	.	0.00000	.	.	.	.	.
87	0.000000	0.00000	.	.	.	.	0.00000	.	0.00000	1.03959	0.00401	1.03960	0.003858	0.8502
88	0.000000	0.00000	.	.	.	.	0.00000	.	0.00000	1.03914	0.00097	1.03915	0.000926	0.9297
89	0.000000	0.01613	.	.	.	.	0.00000	.	0.03226	1.04597	0.00351	1.04598	0.003342	1.1929
90	0.000000	0.00000	.	.	.	.	0.00000	.	0.00000	.	.	.	.	.
91	0.000000	0.00000	.	.	.	.	0.00000	.	0.03333	1.04612	0.00228	1.04613	0.002169	1.3639
92	0.000000	0.00000	.	.	.	.	0.00000	.	0.00000	1.03380	0.00615	1.03382	0.005947	0.5724
93	0.021739	0.02174	.	.	.	.	0.00000	.	0.04348	1.03238	0.01975	1.03686	0.017584	0.6255
94	0.000000	0.00000	.	.	.	0.00000	.	.	0.00000	.	.	.	.	.
95	0.000000	0.00000	.	.	.	0.00000	0.00000	.	0.00000	.	.	.	.	.

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

96	0.000000	0.00000	.	.	.	0.00000	.	.	0.00000	.	.	.	.	.
97	0.000000	0.00000	.	.	.	0.00000	.	.	0.00000	.	.	.	.	.
98	0.000000	0.06897	.	.	.	0.06897	.	.	0.13793	.	.	.	.	.
99	0.000000	0.00000	.	.	.	0.00000	.	.	0.00000	.	.	.	.	.
100	0.000000	0.01724	.	.	.	0.01724	.	.	0.03448	.	.	.	.	.

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED
101	9	8	56	.	.	0.120	.	0.120	0.6316	2.60	13.684	.	0.95588	.	0.95588	.
102	9	9	58	.	.	.	.	.	.	1.20	6.316	.	.	.	.	.
103	9	10	86	.	.	0.140	0.170	0.140	0.7368	5.30	27.895	.	0.97427	0.96892	0.97427	.
104	9	11	30	.	.	.	.	.	.	19.60	103.158	.	.	.	.	.
105	9	12	60	.	.	0.329	0.188	0.329	1.7316	9.00	47.368	.	0.96473	0.97954	0.96473	.
106	9	13	56	.	.	0.629	0.965	0.629	3.3105	12.10	63.684	.	0.95059	0.92614	0.95059	.
107	10	1	60	4.75	1.425	0.011	0.002	1.425	2.0357	0.30	0.429	0.17391	0.96463	0.99338	0.17391	.
108	10	2	60	3.01	0.903	0.008	0.001	0.903	1.2900	0.20	0.286	0.18132	0.96154	0.99503	0.18132	.
109	10	3	60	6.33	1.899	0.010	0.002	1.899	2.7129	1.40	2.000	0.42437	0.99291	0.99857	0.42437	.
110	10	4	30	10.40	3.120	0.032	0.004	3.120	4.4571	10.30	14.714	0.76751	0.99690	0.99961	0.76751	.
111	10	5	30	20.40	6.120	0.113	0.010	6.120	8.7429	3.80	5.429	0.38307	0.97112	0.99738	0.38307	.
112	10	6	60	12.40	3.720	0.019	0.002	3.720	5.3143	0.80	1.143	0.17699	0.97680	0.99751	0.17699	.
113	10	7	60	44.20	13.260	0.245	0.490	13.260	18.9429	3.90	5.571	0.22727	0.94089	0.88838	0.22727	.
114	10	8	60	4.35	1.305	0.001	0.002	1.305	1.8643	0.40	0.571	0.23460	0.99751	0.99503	0.23460	.
115	10	9	60	2.51	0.753	0.017	0.000	0.753	1.0757	0.30	0.429	0.28490	0.94637	1.00000	0.28490	.
116	10	10	60	2.34	0.702	0.029	0.000	0.702	1.0029	0.20	0.286	0.22173	0.87336	1.00000	0.22173	.
117	10	11	60	2.31	0.693	0.000	0.000	0.693	0.9900	1.80	2.571	0.72202	0.99989	0.99989	0.72202	.

OBS	TANKL	TANKW	TANKA	HOODL	HOODW	QHM3S	QHCFM	QDM3S	QDCFM	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY
101	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.08929	0.00000	0.00000	0.00000	0.08929	0.00000
102	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
103	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.16279	0.04651	0.00000	0.00000	0.16279	0.00000
104	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
105	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.15000	0.03333	0.00000	0.00000	0.15000	0.00000
106	76.0	25.0	0.19	84.0	3.50	0.17	359	0.05	103	349	5.8	0.08929	0.00000	0.00000	0.00000	0.08929	0.00000
107	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.05000	0.33333	0.36667	0.00000	0.00000	0.00000
108	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
109	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.03333	0.23333	0.26667	0.00000	0.00000	0.00000
110	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
111	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
112	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.01667	0.23333	0.10000	0.00000	0.00000	0.00000
113	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
114	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.00000	0.00000	0.30000	0.00000	0.00000	0.00000
115	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
116	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
117	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18	379	139	5.0	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

OBS	CO	END	PLAT	SHELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
101	0.000000	0.08929	.	.	.	0.12500	.	.	0.17857	.	.	.	.	.
102	0.000000	0.00000	.	.	.	0.00000	.	.	0.00000	.	.	.	.	.
103	0.000000	0.16279	.	.	.	0.16279	0.26744	.	0.32558	.	.	.	.	.
104	0.000000	0.00000	.	.	.	0.00000	0.00000	.	0.00000	.	.	.	.	.
105	0.000000	0.15000	.	.	.	0.15000	0.00000	.	0.30000	.	.	.	.	.
106	0.089286	0.08929	.	.	.	0.08929	0.00000	.	0.17857	.	.	.	.	.
107	0.000000	0.05000	.	.	.	.	0.88333	.	0.10000	.	.	.	.	.
108	0.000000	0.00000	.	.	.	.	1.00000	.	0.00000	.	.	.	.	.
109	0.000000	0.03333	.	.	.	.	0.88333	.	0.06667	.	.	.	.	.
110	0.000000	0.00000	.	.	.	.	1.00000	.	0.00000	.	.	.	.	.
111	0.000000	0.00000	.	.	.	.	0.96667	.	0.00000	.	.	.	.	.
112	0.000000	0.01667	.	.	.	.	0.95000	.	0.03333	.	.	.	.	.

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

113	0.000000	0.00000	.	.	.	.	0.96667	.	0.00000	.	.	.	.	.
114	0.000000	0.01667	.	.	.	.	0.95000	.	0.01667	.	.	.	.	.
115	0.000000	0.00000	.	.	.	.	1.00000	.	0.00000	.	.	.	.	.
116	0.000000	0.00000	.	.	.	.	1.00000	.	0.00000	.	.	.	.	.
117	0.000000	0.00000	.	.	.	.	1.00000	.	0.00000	.	.	.	.	.

OBS	SITE	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW	TANKA	HOODL	HOODW	QHM3S	QHCFM	QDM3S
118	10	12 46	2.89	0.867	0.003	0.001	0.867	1.2386	7.20	10.2857	0.89253	0.99958	0.99986	0.89253	.	198.0	35.6	0.70	198.0	2.54	0.25	526	0.18
119	11	1 58	25.00	7.500	22.100	65.900	7.500	13.3929	0.80	1.4286	0.09639	0.03493	0.01199	0.09639	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
120	11	2 58	34.10	10.230	49.000	146.000	10.230	18.2679	0.80	1.4286	0.07253	0.01606	0.00545	0.07253	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
121	11	3 52	40.20	12.060	81.600	244.000	12.060	21.5357	1.30	2.3214	0.09731	0.01568	0.00530	0.09731	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
122	11	4 58	47.20	14.160	265.800	796.000	14.160	25.2857	1.30	2.3214	0.08409	0.00487	0.00163	0.08409	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
123	11	5 60	33.40	10.020	44.900	134.000	10.020	17.8929	1.10	1.9643	0.09892	0.02391	0.00814	0.09892	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
124	11	6 58	80.30	24.090	3.350	.	24.090	43.0179	1.30	2.3214	0.05120	0.27957	.	0.05120	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
125	11	7 58	47.80	14.340	49.800	148.000	14.340	25.6071	0.70	1.2500	0.04654	0.01386	0.00471	0.04654	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
126	11	8 56	47.90	14.370	76.300	227.000	14.370	25.6607	0.90	1.6071	0.05894	0.01166	0.00395	0.05894	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
127	11	9 58	72.40	21.720	300.100	895.000	21.720	38.7857	1.10	1.9643	0.04820	0.00365	0.00123	0.04820	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
128	11	10 24	10.80	3.240	1.040	2.810	3.240	5.7857	0.30	0.5357	0.08475	0.22388	0.09646	0.08475	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
129	11	11 58	14.90	4.470	0.732	1.950	4.470	7.9821	0.40	0.7143	0.08214	0.35336	0.17021	0.08214	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
130	11	12 54	21.00	6.300	3.090	8.850	6.300	11.2500	1.10	1.9643	0.14865	0.26253	0.11055	0.14865	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
131	11	13 62	25.00	7.500	106.700	318.000	7.500	13.3929	1.70	3.0357	0.18478	0.01568	0.00532	0.18478	.	91.4	61.0	0.56	91.4	4.45	0.05	108	0.14
132	12	1 58	7.91	2.373	2.800	2.820	2.373	2.0457	14.70	12.6724	0.86101	0.84000	0.83904	0.86101	.	175.0	66.0	1.16	175.0	4.13	0.28	595	0.29
133	12	2 55	9.40	2.820	0.510	0.153	2.820	2.4310	17.00	14.6552	0.85772	0.97087	0.99108	0.85772	.	175.0	66.0	1.16	175.0	4.13	0.28	595	0.29
134	12	3 50	15.00	4.500	0.454	0.209	4.500	3.8793	23.10	19.9138	0.83696	0.98073	0.99103	0.83696	.	175.0	66.0	1.16	175.0	4.13	0.28	595	0.29
135	12	4 54	3.52	1.056	.	.	1.056	0.9103	24.50	21.1207	0.95868	.	.	0.95868	.	175.0	66.0	1.16	175.0	4.13	0.28	595	0.29
136	12	5 56	12.60	3.780	0.374	0.159	3.780	3.2586	17.40	15.0000	0.82153	0.97896	0.99095	0.82153	.	175.0	66.0	1.16	175.0	4.13	0.28	595	0.29
137	12	6 54	13.10	3.930	0.410	0.168	3.930	3.3879	18.20	15.6897	0.82241	0.97797	0.99085	0.82241	.	175.0	66.0	1.16	175.0	4.13	0.28	595	0.29
138	12	7 60	14.30	4.290	0.424	0.164	4.290	3.6983	22.90	19.7414	0.84222	0.98182	0.99289	0.84222	.	175.0	66.0	1.16	175.0	4.13	0.28	595	0.29
139	12	8 50	9.12	2.736	0.441	0.138	2.736	2.3586	19.70	16.9828	0.87805	0.97810	0.99304	0.87805	.	175.0	66.0	1.16	175.0	4.13	0.28	595	0.29

OBS	QDCFM	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY	CO	END	PLAT	SHELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
118	379	139	5.0	0.02174	0.34783	0.13044	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	1.26087	.	0.02174	.	.	.	.	.
119	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
120	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
121	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
122	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
123	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
124	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
125	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
126	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
127	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
128	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
129	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
130	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
131	300	36	1.2	.	.	.	.	.	.	.	.	.	.	.	.	0.00000	.	.	.	.	.	.	.
132	623	96	3.9	0.18966	0.46552	0.43103	0.15517	0.00000	0.18966	0.03448	0.20690	.	.	.	.	0.00000	0.08621	0.39655	.	.	.	.	.

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

133	623	96	3.9	0.21818	0.00000	0.25455	0.21818	0.00000	0.21818	0.05455	0.20000	.	.	.	.	0.00000	0.16364	0.41818	.	.	.	.	.
134	623	96	3.9	0.28000	0.04000	0.38000	0.20000	0.00000	0.22000	0.00000	0.26000	.	.	.	.	0.00000	0.22000	0.54000	.	.	.	.	.
135	623	96	3.9	0.09259	0.01852	0.09259	0.05556	0.00000	0.09259	0.00000	0.09259	.	.	.	.	0.00000	0.05556	0.18519	.	.	.	.	.
136	623	96	3.9	0.03571	0.23214	0.03571	0.00000	0.00000	0.03571	0.00000	0.03571	.	.	.	.	0.00000	0.00000	0.07143	.	.	.	.	.
137	623	96	3.9	0.25926	0.03704	0.31482	0.11111	0.00000	0.25926	0.05556	0.27778	.	.	.	.	0.00000	0.18519	0.53704	.	.	.	.	.
138	623	96	3.9	0.25000	0.03333	0.23333	0.20000	0.00000	0.23333	0.05000	0.23333	.	.	.	.	0.00000	0.20000	0.48333	.	.	.	.	.
139	623	96	3.9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0.00000	0.00000	0.00000	.	.	.	.	.

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW	TANKA	HOODL	HOODW	QHM3S	QHCFM	QDM3S
140	12	9	56	8.41	2.523	0.748	0.120	2.523	2.1750	10.80	9.3103	0.81063	0.93523	0.98901	0.81063	.	175	66.0	1.16	175	4.13	0.28	595	0.29
141	12	10	56	9.92	2.976	0.383	0.127	2.976	2.5655	15.80	13.6207	0.84150	0.97633	0.99203	0.84150	.	175	66.0	1.16	175	4.13	0.28	595	0.29
142	12	11	58	11.20	3.360	0.897	0.139	3.360	2.8966	15.30	13.1897	0.81994	0.94462	0.99100	0.81994	.	175	66.0	1.16	175	4.13	0.28	595	0.29
143	12	12	56	12.30	3.690	0.453	0.157	3.690	3.1810	13.80	11.8966	0.78902	0.96822	0.98875	0.78902	.	175	66.0	1.16	175	4.13	0.28	595	0.29
144	12	13	58	10.60	3.180	0.430	0.135	3.180	2.7414	16.60	14.3103	0.83923	0.97475	0.99193	0.83923	.	175	66.0	1.16	175	4.13	0.28	595	0.29
145	12	14	56	3.23	0.969	.	.	0.969	0.8353	9.70	8.3621	0.90918	.	.	0.90918	.	175	66.0	1.16	175	4.13	0.28	595	0.29
146	12	15	56	10.50	3.150	0.558	0.138	3.150	2.7155	13.00	11.2069	0.80495	0.95884	0.98950	0.80495	.	175	66.0	1.16	175	4.13	0.28	595	0.29
147	12	16	50	7.11	2.133	2.210	0.125	2.133	1.8388	8.60	7.4138	0.80127	0.79556	0.98567	0.80127	.	175	66.0	1.16	175	4.13	0.28	595	0.29
148	13	1	46	.	.	0.487	0.487	0.487	0.1255	103.00	26.5464	.	0.99529	0.99529	0.99529	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
149	13	2	22	.	.	0.520	0.520	0.520	0.1340	7.26	1.8711	.	0.93316	0.93316	0.93316	0.89903	315	123.0	3.88	315	6.35	0.96	2024	0.99
150	13	3	62	.	.	.	.	.	.	11.30	2.9124	.	.	.	.	0.81879	315	123.0	3.88	315	6.35	0.96	2024	0.99
151	13	4	36	.	.	0.494	0.494	0.494	0.1273	68.10	17.5516	.	0.99280	0.99280	0.99280	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
152	13	5	52	.	.	0.160	0.160	0.160	0.0412	2.20	0.5670	.	0.93220	0.93220	0.93220	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
153	13	6	64	.	.	0.356	0.356	0.356	0.0918	103.60	26.7010	.	0.99658	0.99658	0.99658	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
154	13	7	64	.	.	0.398	0.398	0.398	0.1026	118.60	30.5670	.	0.99666	0.99666	0.99666	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
155	13	8	54	.	.	0.387	0.387	0.387	0.0997	107.90	27.8093	.	0.99643	0.99643	0.99643	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
156	13	9	58	.	.	0.468	0.468	0.468	0.1206	166.80	42.9897	.	0.99720	0.99720	0.99720	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
157	13	10	32	.	.	1.160	1.160	1.160	0.2990	163.80	42.2165	.	0.99297	0.99297	0.99297	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
158	13	11	52	.	.	0.325	0.325	0.325	0.0838	112.40	28.9691	.	0.99712	0.99712	0.99712	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
159	13	12	58	.	.	0.290	0.290	0.290	0.0747	166.60	42.9381	.	0.99826	0.99826	0.99826	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
160	13	13	42	.	.	15.200	15.200	15.200	3.9175	116.90	30.1289	.	0.88494	0.88494	0.88494	.	315	123.0	3.88	315	6.35	0.96	2024	0.99
161	14	1	48	.	.	.	.	.	.	107.60	28.9247	.	.	.	.	.	305	122.0	3.72	305	2.54	0.73	1556	0.94

OBS	QDCFM	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY	CO	END	PLAT	SHELF	WIP	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
140	623	96	3.9	0.05357	0.05357	0.05357	0.01786	0.00000	0.05357	0.00000	0.05357	.	.	.	.	0	0.000000	0.10714	.	.	.	.	.
141	623	96	3.9	0.07143	0.94643	0.05357	0.00000	0.00000	0.07143	0.00000	0.05357	.	.	.	.	0	0.017857	0.12500	.	.	.	.	.
142	623	96	3.9	0.05172	0.34483	0.05172	0.00000	0.00000	0.05172	0.01724	0.08621	.	.	.	.	0	0.000000	0.13793	.	.	.	.	.
143	623	96	3.9	0.01786	0.01786	0.01786	0.00000	0.00000	0.01786	0.00000	0.01786	.	.	.	.	0	0.000000	0.03571	.	.	.	.	.
144	623	96	3.9	0.08621	0.12069	0.17241	0.01724	0.00000	0.06897	0.00000	0.05172	.	.	.	.	0	0.000000	0.13793	.	.	.	.	.
145	623	96	3.9	0.08929	0.94643	0.12500	0.08929	0.00000	0.08929	0.00000	0.08929	.	.	.	.	0	0.000000	0.17857	.	.	.	.	.
146	623	96	3.9	0.07143	0.12500	0.14286	0.05357	0.00000	0.08929	0.05357	0.10714	.	.	.	.	0	0.035714	0.17857	.	.	.	.	.
147	623	96	3.9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	0.000000	0.00000	.	.	.	.	.
148	2088	97	4.8	0.06522	0.02174	0.34783	0.00000	0.02174	0.04348	0.00000	0.04348	.	.	.	.	0	.	0.10870	.	.	.	.	.
149	2088	97	4.8	0.00000	0.00000	1.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	1.62556	0.30588	1.68303	0.17666	30.0747
150	2088	97	4.8	0.04839	0.00000	1.74194	0.00000	0.06452	0.03226	0.01613	0.04839	.	.	.	.	0	.	0.09677	2.09271	-0.06626	2.10969	-0.01868	32.1066
151	2088	97	4.8	0.02778	0.00000	1.83333	0.00000	0.05556	0.02778	0.02778	0.02778	.	.	.	.	0	.	0.05556	.	.	.	.	.
152	2088	97	4.8	0.00000	0.00000	2.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	.	.	.	.	.

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

153	2088	97	4.8	0.06250	0.00000	1.68750	0.00000	0.00000	0.04688	0.00000	0.04688	.	.	.	.	0	.	0.10938	.	.	.	.	.
154	2088	97	4.8	0.03125	0.00000	1.84375	0.00000	0.03125	0.03125	0.00000	0.03125	.	.	.	.	0	.	0.06250	.	.	.	.	.
155	2088	97	4.8	0.03704	0.00000	1.81482	0.00000	0.03704	0.03704	0.00000	0.03704	.	.	.	.	0	.	0.07407	.	.	.	.	.
156	2088	97	4.8	0.03448	0.00000	1.93103	0.00000	0.06897	0.03448	0.00000	0.03448	.	.	.	.	0	.	0.06897	.	.	.	.	.
157	2088	97	4.8	0.00000	0.00000	1.81250	0.00000	0.00000	0.03125	0.00000	0.03125	.	.	.	.	0	.	0.03125	.	.	.	.	.
158	2088	97	4.8	0.03846	0.00000	1.88462	0.00000	0.00000	0.03846	0.01923	0.03846	.	.	.	.	0	.	0.07692	.	.	.	.	.
159	2088	97	4.8	0.03448	0.00000	1.98276	0.00000	0.03448	0.01724	0.01724	0.03448	.	.	.	.	0	.	0.06897	.	.	.	.	.
160	2088	97	4.8	0.00000	0.00000	2.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	.	.	.	.	.
161	2000	78	9.4	0.02083	0.00000	0.02083	0.00000	0.02083	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.02083	.	.	.	.	.

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW	TANKA	HOODL	HOODW	QHMS3	QHCFM	QDMS3	QDCFM
162	14	2	18	.	.	.	.	.	.	128.5	34.5430	.	.	.	.	.	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
163	14	3	64	.	.	.	.	.	.	163.6	43.9785	.	.	.	.	.	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
164	14	4	28	.	.	.	.	.	.	170.3	45.7796	.	.	.	.	0.84718	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
165	14	5	48	.	.	.	.	.	.	75.4	20.2688	.	.	.	.	0.84082	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
166	14	6	64	.	.	2.620	2.620	2.620	0.7043	128.6	34.5699	.	0.98003	0.98003	0.98003	0.85505	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
167	14	7	56	.	.	233.000	233.000	233.000	62.6344	97.0	26.0753	.	.	0.29394	0.29394	0.84457	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
168	14	8	62	.	.	.	.	.	.	102.5	27.5538	.	.	.	.	0.83544	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
169	14	9	58	.	.	1.740	1.740	1.740	0.4677	94.8	25.4839	.	0.98198	0.98198	0.98198	.	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
170	14	10	38	.	.	4.210	4.210	4.210	1.1317	60.0	16.1290	.	0.93443	0.93443	0.93443	0.83423	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
171	14	11	54	.	.	0.790	0.790	0.790	0.2124	145.5	39.1129	.	0.99460	0.99460	0.99460	.	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
172	14	12	60	.	.	123.000	123.000	123.000	33.0645	78.5	21.1022	.	.	0.38958	0.38958	.	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
173	14	13	38	.	.	.	.	.	.	65.3	17.5538	.	.	.	.	.	305	122.0	3.72	305	2.54	0.73	1556	0.94	2000
174	15	1	56	.	.	.	.	.	.	3.3	3.5484	.	.	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
175	15	2	58	.	.	0.261	0.376	0.376	0.4043	1.3	1.3978	.	0.83280	0.77566	0.77566	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
176	15	3	32	.	.	0.260	0.581	0.581	0.6247	1.6	1.7204	.	0.86022	0.73361	0.73361	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
177	15	4	60	.	.	0.665	.	.	.	8.1	8.7097	.	0.92413	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
178	15	5	50	.	.	274.000	.	.	.	7.4	7.9570	.	0.02630	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
179	15	6	58	.	.	1.110	3.130	3.130	3.3656	5.0	5.3763	.	0.81833	0.61501	0.61501	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
180	15	7	65	.	.	.	.	.	.	.	.	.	.	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
181	15	8	57	.	.	.	.	.	.	2.8	3.0108	.	.	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
182	15	9	59	.	.	0.485	0.485	0.485	0.5215	5.7	6.1290	.	0.92158	0.92158	0.92158	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
183	15	10	51	.	.	.	.	.	.	5.9	6.3441	.	.	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500

OBS	QHD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY	CO	END	PLAT	SHELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
162	78	9.4	0.00000	0.00000	1.00000	0.00000	0.00000	0.05556	0.00000	0.05556	.	.	.	.	0	.	0.05556	.	.	.	.	.
163	78	9.4	0.12500	0.00000	1.95313	0.00000	0.06250	0.01563	0.00000	0.12500	.	.	.	.	0	.	0.25000	.	.	.	.	.
164	78	9.4	.	.	0.00000	0.00000	0.00000	.	0.00000	.	.	.	.	.	0	.	.	0.04593	0.02284	0.68334	0.10415	32.1952
165	78	9.4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	0.84204	-0.12452	0.86452	0.11018	37.2354
166	78	9.4	0.12500	0.00000	1.78125	0.00000	0.07813	0.10938	0.06250	0.14063	.	.	.	.	0	.	0.26563	0.74680	-0.09028	1.10040	0.22083	41.6541
167	78	9.4	0.08929	0.00000	1.76786	0.00000	0.03571	0.08929	0.07143	0.08929	.	.	.	.	0	.	0.17857	-0.61159	0.14686	0.63503	0.21684	41.6101
168	78	9.4	0.12903	0.00000	1.83871	0.00000	0.06452	0.12903	0.06452	0.12903	.	.	.	.	0	.	0.25807	-0.89227	0.23581	0.92866	0.25466	30.1982
169	78	9.4	0.06897	0.00000	1.72414	0.00000	0.10345	0.06897	0.06897	0.06897	.	.	.	.	0	.	0.13793	.	.	.	.	.
170	78	9.4	0.00000	0.00000	2.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	1.15542	-0.15941	1.17338	0.12151	36.5564
171	78	9.4	0.09259	0.00000	1.85185	0.00000	0.05556	0.07407	0.05556	0.07407	.	.	.	.	0	.	0.16667	.	.	.	.	.

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

172	78	9.4	0.05000	0.00000	2.00000	0.00000	0.06667	0.03333	0.03333	0.03333	.	.	.	.	0	.	0.08333	.	.	.	.	.
173	78	9.4	0.00000	0.00000	3.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	.	.	.	.	.
174	77	1.9	0.25000	0.28571	0.37500	0.23214	0.25000	0.01786	0.23214	0.25000	.	.	.	.	0	.	0.50000	.	.	.	.	.
175	77	1.9	0.05172	0.10345	0.10345	0.01724	0.06897	0.01724	0.06897	0.06897	.	.	.	.	0	.	0.12069	.	.	.	.	.
176	77	1.9	0.21875	0.21875	0.25000	0.15625	0.15625	0.03125	0.15625	0.15625	.	.	.	.	0	.	0.37500	.	.	.	.	.
177	77	1.9	0.43333	0.31667	0.23333	0.38333	0.41667	0.33333	0.53333	0.66667	.	.	.	.	0	.	1.10000	.	.	.	.	.
178	77	1.9	0.34000	0.26000	0.22000	0.06000	0.30000	0.24000	0.24000	0.34000	.	.	.	.	0	.	0.68000	.	.	.	.	.
179	77	1.9	0.18966	0.13793	0.13793	0.03448	0.24138	0.13793	0.18966	0.18966	.	.	.	.	0	.	0.37931	.	.	.	.	.
180	77	1.9	0.06154	0.10769	0.12308	0.00000	0.13846	0.04615	0.06154	0.06154	.	.	.	.	0	.	0.12308	.	.	.	.	.
181	77	1.9	0.05263	0.17544	0.15790	0.01754	0.15790	0.10526	0.12281	0.12281	.	.	.	.	0	.	0.17544	.	.	.	.	.
182	77	1.9	0.11864	0.15254	0.18644	0.00000	0.20339	0.01695	0.11864	0.11864	.	.	.	.	0	.	0.23729	.	.	.	.	.
183	77	1.9	0.19608	0.35294	0.37255	0.03922	0.37255	0.07843	0.21569	0.21569	.	.	.	.	0	.	0.41177	.	.	.	.	.

OBS	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMS3	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW	TANKA	HOODL	HOODW	QHMS3	QHCFM	QDMS3	QDCFM
184	15	11	29	.	.	.	.	.	.	5.4	5.8065	.	.	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
185	15	12	59	.	.	.	.	.	.	1.1	1.1828	.	.	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
186	15	13	35	.	.	.	.	.	.	8.0	8.6022	.	.	.	.	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
187	15	14	37	.	.	0.119	0.119	0.119	0.1280	5.2	5.5914	.	0.97763	0.97763	0.97763	.	122	76.2	0.93	122	7.62	0.18	385	0.24	500
188	16	1	56	.	.	0.592	0.592	0.592	0.6366	0.0	0.0000	.	0.00000	0.00000	0.00000	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
189	16	2	56	.	.	0.403	0.403	0.403	0.4333	4.2	4.5161	.	0.91245	0.91245	0.91245	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
190	16	3	30	.	.	0.093	0.093	0.093	0.1000	1.9	2.0430	.	0.95334	0.95334	0.95334	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
191	16	4	60	.	.	2.520	2.710	2.710	2.9140	2.3	2.4731	.	0.47718	0.45908	0.45908	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
192	16	5	62	.	.	0.797	0.830	0.830	0.8925	1.7	1.8280	.	0.68082	0.67194	0.67194	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
193	16	6	58	.	.	0.458	0.445	0.445	0.4785	1.7	1.8280	.	0.78777	0.79254	0.79254	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
194	16	7	30	.	.	0.525	0.675	0.675	0.7258	0.8	0.8602	.	0.60377	0.54237	0.54237	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
195	16	8	62	.	.	3.420	5.880	5.880	6.3226	2.9	3.1183	.	0.45886	0.33030	0.33030	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
196	16	9	54	.	.	5.490	5.490	5.490	5.9032	1.8	1.9355	.	0.24691	0.24691	0.24691	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
197	16	10	58	.	.	1.530	1.530	1.530	1.6452	1.3	1.3978	.	0.45936	0.45936	0.45936	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
198	16	11	48	.	.	6.380	6.380	6.380	6.8602	1.2	1.2903	.	0.15831	0.15831	0.15831	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
199	16	12	31	.	.	0.882	0.916	0.916	0.9849	1.5	1.6129	.	0.62972	0.62086	0.62086	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
200	16	13	58	.	.	0.069	0.069	0.069	0.0742	.	.	.	.	.	.	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
201	16	14	41	.	.	0.230	0.230	0.230	0.2473	3.2	.	.	0.93295	0.93295	0.93295	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500
202	16	15	29	.	.	21.100	21.100	21.100	22.6882	24.7	26.5591	.	0.53930	0.53930	0.53930	.	122	76.2	0.93	122	7.62	0.35	743	0.24	500

OBS	QHQD	VFACE	START	LIQ	VAP	SHAKE	SPRAY	DRY	CO	END	SPLAT	HELF	WIPE	DRYCA	COVER	POUR	INOUT	VZ	VX	V	THETA	TI
184	77	1.9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	.	.	.	.	.
185	77	1.9	0.22034	0.30509	0.45763	0.05085	0.37288	0.10170	0.22034	0.22034	.	.	.	.	0	.	0.44068	.	.	.	.	.
186	77	1.9	0.14286	0.22857	0.22857	0.08571	0.20000	0.00000	0.11429	0.11429	.	.	.	.	0	.	0.25714	.	.	.	.	.
187	77	1.9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	.	.	.	.	.
188	149	3.8	0.37500	0.42857	0.48214	0.10714	0.33929	0.14286	0.33929	0.30357	.	.	.	.	0	.	0.67857	.	.	.	.	.
189	149	3.8	0.17857	0.25000	0.35714	0.01786	0.33929	0.10714	0.10714	0.14286	.	.	.	.	0	.	0.32143	.	.	.	.	.
190	149	3.8	0.03333	0.03333	0.06667	0.00000	0.06667	0.03333	0.00000	0.00000	.	.	.	.	0	.	0.03333	.	.	.	.	.
191	149	3.8	0.61667	0.23333	0.20000	0.58333	0.61667	0.06667	0.60000	0.60000	.	.	.	.	0	.	1.21667	.	.	.	.	.
192	149	3.8	0.35484	0.45161	0.53226	0.14516	0.35484	0.11290	0.35484	0.35484	.	.	.	.	0	.	0.70968	.	.	.	.	.
193	149	3.8	0.31035	0.51724	0.53448	0.13793	0.32759	0.15517	0.31035	0.31035	.	.	.	.	0	.	0.62069	.	.	.	.	.
194	149	3.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	.	.	.	.	.

TABLE XXXII. ACTIVITY DATA SET (CONTINUED).

195	149	3.8	0.22581	0.21774	0.38710	0.04839	0.61290	0.04839	0.20968	0.20968	.	.	.	.	0	.	0.43548	.	.	.	.	.
196	149	3.8	0.18519	0.24074	0.18519	0.01852	0.37037	0.09259	0.18519	0.18519	.	.	.	.	0	.	0.37037	.	.	.	.	.
197	149	3.8	0.06897	0.06897	0.10345	0.03448	0.15517	0.01724	0.06897	0.06897	.	.	.	.	0	.	0.13793	.	.	.	.	.
198	149	3.8	0.12500	0.11458	0.14583	0.00000	0.25000	0.02083	0.12500	0.12500	.	.	.	.	0	.	0.25000	.	.	.	.	.
199	149	3.8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	.	.	.	.	0	.	0.00000	.	.	.	.	.
200	149	3.8	0.06897	0.04310	0.02586	0.00000	0.06897	0.05172	0.06897	0.08621	.	.	.	.	0	.	0.15517	.	.	.	.	.
201	149	3.8	0.12195	0.13415	0.10976	0.00000	0.19512	0.00000	0.12195	0.12195	.	.	.	.	0	.	0.24390	.	.	.	.	.
202	149	3.8	0.20690	0.12069	0.22414	0.00000	0.31035	0.10345	0.20690	0.20690	.	.	.	.	0	.	0.41379	.	.	.	.	.

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS.

Correlation Analysis- Spearman

47 'VAR' Variables: SITE INT TIME ERCMSK1 ERCMSK3 ER2PTA ER2PTC ERUSED ERUSEDM ERLEV ERLEVM CECMSK3 CE2PTA CE2PTC CEUSED CEPRED TANKL TANKW TANKA HOODL HOODW QHM3S QHCFM QDM3S QDCFM QHQD VFACE START LIQ VAP SHAKE SPRAY DRY CO END PLAT SHELF WIPE DRYCA COVER POUR INOUT VZ VX V THETA TI

Simple Statistics

Variable	N	Mean	Std Dev	Median	Minimum	Maximum
SITE	202	8.8069	4.7102	9.0000	1.0000	16.0000
INT	202	7.1683	4.0163	7.0000	1.0000	16.0000
TIME	200	53.3800	13.0170	57.5000	18.0000	92.0000
ERCMSK1	134	34.4147	95.1529	10.9000	0.1290	704.0
ERCMSK3	134	10.3244	28.5459	3.2700	0.0387	211.2
ER2PTA	152	24.3228	91.5011	0.5485	0.0002	894.0
ER2PTC	134	52.4980	201.4	0.4860	0	1780.0
ERUSED	182	10.0571	31.0561	2.7230	0.00200	233.0
ERUSEDM	182	9.6824	27.9175	2.6194	0.0105	232.1
ERLEV	193	23.1770	37.7813	9.7000	0	170.3
ERLEVM	192	15.5914	17.4862	11.3024	0	103.2
CECMSK3	127	0.6276	0.3043	0.7705	0.0465	0.9969
CE2PTA	142	0.7736	0.3239	0.9331	0	0.9999
CE2PTC	128	0.7596	0.3461	0.9487	0	1.0000
CEUSED	174	0.6731	0.3045	0.7923	0	0.9998
CEPRED	74	0.7404	0.1125	0.8113	0.5218	0.8990
TANKL	202	154.0	66.5958	122.0	76.0000	315.0
TANKW	202	76.9267	24.8472	76.2000	25.0000	123.0
TANKA	202	1.2958	1.0059	0.9300	0.1900	3.8800
HOODL	202	155.5	65.8036	125.0	84.0000	315.0
HOODW	202	4.4647	1.6233	4.4500	2.5400	7.6200
QHM3S	202	0.3305	0.2248	0.2800	0.0500	0.9600
QHCFM	202	699.6	475.9	595.0	108.0	2024.0
QDM3S	202	0.3293	0.2552	0.2400	0.0500	0.9900
QDCFM	202	696.9	541.0	500.0	103.0	2088.0
QHQD	202	118.0	71.8708	97.0000	36.0000	349.0
VFACE	202	5.0040	2.2980	4.8000	1.2000	9.5000
START	186	0.1882	0.4449	0.0517	0	2.8833
LIQ	186	0.0636	0.1423	0	0	0.9464
VAP	187	3.7423	12.7559	0.2500	0	90.3333
SHAKE	187	0.0250	0.0696	0	0	0.5833
SPRAY	187	0.0545	0.1121	0	0	0.6167
DRY	173	0.0391	0.0665	0	0	0.3333
CO	187	0.0810	0.2048	0	0	1.1333
END	186	0.1715	0.4315	0.0467	0	3.5333
PLAT	13	0.0215	0.0434	0	0	0.1250
SHELF	13	0.0396	0.0975	0	0	0.3448
WIPE	14	0.1000	0.0759	0.1103	0	0.2097
DRYCA	13	0.0472	0.0637	0	0	0.1628
COVER	192	0.1107	0.3031	0	0	1.2609
POUR	16	0.0603	0.0831	0.00893	0	0.2200
INOUT	186	0.3597	0.8654	0.1023	0	6.4167
VZ	74	0.3173	0.4452	0.2880	-0.8923	2.0927
VX	74	0.1002	0.6161	0.00376	-0.7698	1.8533
V	74	0.7847	0.3339	0.6289	0.4547	2.1097
THETA	74	-0.00384	0.1396	0.00918	-0.4836	0.2547
TI	74	26.3665	13.1577	26.1438	0.5724	56.6591

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob>|R| under Ho:Rho=0 / Number of Observations

	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA
SITE	1.00000 0.0 202	0.04700 0.5065 202	-0.16650 0.0185 200	-0.16219 0.0612 134	-0.16219 0.0612 134	-0.00970 0.9056 152
INT	0.04700 0.5065 202	1.00000 0.0 202	-0.12894 0.0688 200	0.02955 0.7347 134	0.02955 0.7347 134	0.09966 0.2219 152
TIME	-0.16650 0.0185 200	-0.12894 0.0688 200	1.00000 0.0 200	0.14102 0.1068 132	0.14102 0.1068 132	0.08869 0.2805 150
ERCMSK1	-0.16219 0.0612 134	0.02955 0.7347 134	0.14102 0.1068 132	1.00000 0.0 134	1.00000 0.0001 134	0.77539 0.0001 102
ERCMSK3	-0.16219 0.0612 134	0.02955 0.7347 134	0.14102 0.1068 132	1.00000 0.0001 134	1.00000 0.0 134	0.77539 0.0001 102
ER2PTA	-0.00970 0.9056 152	0.09966 0.2219 152	0.08869 0.2805 150	0.77539 0.0001 102	0.77539 0.0001 102	1.00000 0.0 152
ER2PTC	0.04705 0.5893 134	0.03309 0.7043 134	0.06140 0.4843 132	0.76658 0.0001 87	0.76658 0.0001 87	0.91165 0.0001 134
ERUSED	-0.29058 0.0001 182	0.08974 0.2283 182	0.13901 0.0627 180	1.00000 0.0001 134	1.00000 0.0001 134	0.75017 0.0001 150
ERUSEDM	-0.30966 0.0001 182	0.08124 0.2756 182	0.15965 0.0323 180	0.97780 0.0001 134	0.97780 0.0001 134	0.68411 0.0001 150
ERLEV	-0.06683 0.3558 193	0.01652 0.8196 193	0.02767 0.7040 191	0.13755 0.1230 127	0.13755 0.1230 127	0.14642 0.0799 144
ERLEVM	-0.10206 0.1589 192	0.02191 0.7629 192	0.06249 0.3917 190	0.17317 0.0515 127	0.17317 0.0515 127	0.03788 0.6533 143
CECMSK3	-0.04747 0.5961 127	-0.10451 0.2423 127	-0.05878 0.5150 125	-0.57114 0.0001 127	-0.57114 0.0001 127	-0.36059 0.0003 95
CE2PTA	-0.04724 0.5767 142	-0.02435 0.7736 142	-0.04202 0.6221 140	-0.58867 0.0001 95	-0.58867 0.0001 95	-0.74477 0.0001 142

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0 / Number of Observations

	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA
CE2PTC	-0.07918 0.3743 128	-0.00874 0.9220 128	-0.01906 0.8322 126	-0.60563 0.0001 82	-0.60563 0.0001 82	-0.73105 0.0001 128
CEUSED	0.10036 0.1876 174	-0.06551 0.3905 174	-0.07480 0.3295 172	-0.57114 0.0001 127	-0.57114 0.0001 127	-0.42918 0.0001 142
CEPRED	0.17941 0.1261 74	0.01536 0.8966 74	-0.14240 0.2294 73	-0.08726 0.4860 66	-0.08726 0.4860 66	0.00956 0.9497 46
TANKL	0.19361 0.0058 202	-0.00172 0.9806 202	-0.06078 0.3926 200	-0.31027 0.0003 134	-0.31027 0.0003 134	-0.17686 0.0293 152
TANKW	-0.00986 0.8892 202	-0.05482 0.4384 202	-0.08665 0.2225 200	-0.12089 0.1641 134	-0.12089 0.1641 134	0.20891 0.0098 152
TANKA	0.05557 0.4322 202	-0.02498 0.7241 202	-0.09881 0.1639 200	-0.15178 0.0800 134	-0.15178 0.0800 134	0.14465 0.0754 152
HOODL	0.12165 0.0846 202	-0.00076 0.9915 202	-0.06258 0.3787 200	-0.30064 0.0004 134	-0.30064 0.0004 134	-0.17935 0.0270 152
HOODW	0.20915 0.0028 202	0.05222 0.4604 202	-0.10562 0.1366 200	0.27355 0.0014 134	0.27355 0.0014 134	0.14266 0.0796 152
QHM3S	0.04923 0.4866 202	-0.02092 0.7676 202	-0.10538 0.1375 200	-0.42142 0.0001 134	-0.42142 0.0001 134	-0.16995 0.0363 152
QHCFM	0.04923 0.4866 202	-0.02092 0.7676 202	-0.10538 0.1375 200	-0.42142 0.0001 134	-0.42142 0.0001 134	-0.16995 0.0363 152
QDM3S	0.06602 0.3505 202	-0.01740 0.8058 202	-0.10204 0.1505 200	-0.15518 0.0734 134	-0.15518 0.0734 134	0.14232 0.0803 152
QDCFM	0.05557 0.4322 202	-0.02498 0.7241 202	-0.09881 0.1639 200	-0.15178 0.0800 134	-0.15178 0.0800 134	0.14465 0.0754 152
QHQD	-0.15017 0.0329 202	0.00321 0.9638 202	-0.01861 0.7936 200	-0.37981 0.0001 134	-0.37981 0.0001 134	-0.52780 0.0001 152

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA
VFACE	-0.33201	-0.07080	0.01453	-0.37765	-0.37765	-0.28793
	0.0001	0.3167	0.8382	0.0001	0.0001	0.0003
	202	202	200	134	134	152
START	0.05897	-0.03817	0.29087	0.50734	0.50734	0.41935
	0.4240	0.6050	0.0001	0.0001	0.0001	0.0001
	186	186	186	119	119	137
LIQ	0.36269	-0.04724	0.06453	0.19035	0.19035	0.12511
	0.0001	0.5220	0.3815	0.0381	0.0381	0.1452
	186	186	186	119	119	137
VAP	0.01523	-0.04090	0.20735	0.19953	0.19953	0.27715
	0.8361	0.5783	0.0044	0.0296	0.0296	0.0010
	187	187	187	119	119	137
SHAKE	0.16110	-0.14737	0.12424	0.25355	0.25355	0.30589
	0.0276	0.0441	0.0902	0.0054	0.0054	0.0003
	187	187	187	119	119	137
SPRAY	0.44328	-0.00175	0.13599	0.05457	0.05457	0.14886
	0.0001	0.9810	0.0635	0.5555	0.5555	0.0825
	187	187	187	119	119	137
DRY	0.32701	-0.06722	0.15457	0.19916	0.19916	0.28618
	0.0001	0.3795	0.0423	0.0407	0.0407	0.0010
	173	173	173	106	106	130
CO	0.27512	-0.03173	0.17097	0.37220	0.37220	0.42537
	0.0001	0.6664	0.0193	0.0001	0.0001	0.0001
	187	187	187	119	119	137
END	0.09645	-0.03952	0.29771	0.48200	0.48200	0.39733
	0.1903	0.5922	0.0001	0.0001	0.0001	0.0001
	186	186	186	119	119	137
PLAT	.	0.05945	0.15047	0.02601	0.02601	0.61079
		0.8470	0.6237	0.9328	0.9328	0.1451
	13	13	13	13	13	7
SHELF	.	-0.28610	0.07426	-0.23408	-0.23408	-0.25614
		0.3433	0.8095	0.4415	0.4415	0.5793
	13	13	13	13	13	7
WIPE	.	-0.23231	0.33370	0.48895	0.48895	0.42330
		0.4242	0.2436	0.0760	0.0760	0.1703
	14	14	14	14	14	12
DRYCA	.	0.59732	0.35381	.	.	0.71981
		0.0311	0.2356			0.0189
	13	13	13	0	0	10

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SITE	INT	TIME	ERCMSK1	ERCMSK3	ER2PTA
COVER	-0.12102 0.0945 192	0.03410 0.6386 192	0.06461 0.3733 192	-0.29091 0.0007 132	-0.29091 0.0007 132	-0.54249 0.0001 144
POUR	. 16	-0.63146 0.0087 16	-0.09745 0.7196 16	0.37228 0.1556 16	0.37228 0.1556 16	-0.10561 0.7193 14
INOUT	0.07557 0.3053 186	-0.03915 0.5958 186	0.29085 0.0001 186	0.49898 0.0001 119	0.49898 0.0001 119	0.41374 0.0001 137
VZ	0.09606 0.4156 74	-0.16581 0.1580 74	-0.07831 0.5102 73	-0.14818 0.2351 66	-0.14818 0.2351 66	0.08363 0.5806 46
VX	-0.56703 0.0001 74	0.09235 0.4339 74	-0.11581 0.3292 73	0.01142 0.9275 66	0.01142 0.9275 66	-0.11619 0.4419 46
V	-0.01177 0.9207 74	-0.28426 0.0141 74	0.06378 0.5919 73	-0.17565 0.1583 66	-0.17565 0.1583 66	-0.10188 0.5005 46
THETA	0.22106 0.0584 74	-0.14155 0.2290 74	0.09786 0.4101 73	-0.07092 0.5715 66	-0.07092 0.5715 66	0.16979 0.2593 46
TI	-0.44417 0.0001 74	-0.02443 0.8363 74	0.03369 0.7772 73	0.28749 0.0193 66	0.28749 0.0193 66	0.03287 0.8283 46

	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMSK3
SITE	0.04705 0.5893 134	-0.29058 0.0001 182	-0.30966 0.0001 182	-0.06683 0.3558 193	-0.10206 0.1589 192	-0.04747 0.5961 127
INT	0.03309 0.7043 134	0.08974 0.2283 182	0.08124 0.2756 182	0.01652 0.8196 193	0.02191 0.7629 192	-0.10451 0.2423 127
TIME	0.06140 0.4843 132	0.13901 0.0627 180	0.15965 0.0323 180	0.02767 0.7040 191	0.06249 0.3917 190	-0.05878 0.5150 125
ERCMSK1	0.76658 0.0001 87	1.00000 0.0001 134	0.97780 0.0001 134	0.13755 0.1230 127	0.17317 0.0515 127	-0.57114 0.0001 127

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMSK3
ERCMSK3	0.76658 0.0001 87	1.00000 0.0001 134	0.97780 0.0001 134	0.13755 0.1230 127	0.17317 0.0515 127	-0.57114 0.0001 127
ER2PTA	0.91165 0.0001 134	0.75017 0.0001 150	0.68411 0.0001 150	0.14642 0.0799 144	0.03788 0.6533 143	-0.36059 0.0003 95
ER2PTC	1.00000 0.0 134	0.66051 0.0001 134	0.61729 0.0001 134	0.08479 0.3413 128	0.02500 0.7803 127	-0.39630 0.0002 82
ERUSED	0.66051 0.0001 134	1.00000 0.0 182	0.96841 0.0001 182	0.08579 0.2603 174	0.01516 0.8431 173	-0.57114 0.0001 127
ERUSEDM	0.61729 0.0001 134	0.96841 0.0001 182	1.00000 0.0 182	-0.00769 0.9198 174	-0.01047 0.8913 173	-0.59647 0.0001 127
ERLEV	0.08479 0.3413 128	0.08579 0.2603 174	-0.00769 0.9198 174	1.00000 0.0 193	0.90232 0.0001 192	0.63020 0.0001 127
ERLEVM	0.02500 0.7803 127	0.01516 0.8431 173	-0.01047 0.8913 173	0.90232 0.0001 192	1.00000 0.0 192	0.59441 0.0001 127
CECMSK3	-0.39630 0.0002 82	-0.57114 0.0001 127	-0.59647 0.0001 127	0.63020 0.0001 127	0.59441 0.0001 127	1.00000 0.0 127
CE2PTA	-0.70491 0.0001 126	-0.58475 0.0001 140	-0.59736 0.0001 140	0.47732 0.0001 142	0.52516 0.0001 141	0.69630 0.0001 95
CE2PTC	-0.82640 0.0001 128	-0.55801 0.0001 128	-0.57695 0.0001 128	0.35790 0.0001 128	0.38487 0.0001 127	0.56334 0.0001 82
CEUSED	-0.41053 0.0001 128	-0.66857 0.0001 174	-0.70729 0.0001 174	0.59016 0.0001 174	0.62520 0.0001 173	1.00000 0.0001 127
CEPRED	-0.03213 0.8503 37	-0.08051 0.5076 70	-0.20474 0.0891 70	0.00261 0.9825 73	-0.12957 0.2746 73	-0.08147 0.5188 65

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMSK3
TANKL	-0.29108	-0.12350	-0.25972	0.36224	0.06480	0.22008
	0.0006	0.0967	0.0004	0.0001	0.3719	0.0129
	134	182	182	193	192	127
TANKW	0.26366	-0.08526	-0.22845	0.37419	0.09450	0.27907
	0.0021	0.2525	0.0019	0.0001	0.1923	0.0015
	134	182	182	193	192	127
TANKA	0.04492	-0.07918	-0.26308	0.45289	0.12666	0.38051
	0.6063	0.2880	0.0003	0.0001	0.0800	0.0001
	134	182	182	193	192	127
HOODL	-0.28941	-0.09849	-0.23860	0.37046	0.06913	0.17318
	0.0007	0.1859	0.0012	0.0001	0.3407	0.0515
	134	182	182	193	192	127
HOODW	0.18383	-0.02080	-0.05319	-0.24622	-0.30454	-0.22833
	0.0335	0.7805	0.4757	0.0006	0.0001	0.0098
	134	182	182	193	192	127
QHM3S	-0.13842	-0.26977	-0.37230	0.40364	0.17820	0.37025
	0.1107	0.0002	0.0001	0.0001	0.0134	0.0001
	134	182	182	193	192	127
QHCFM	-0.13842	-0.26977	-0.37230	0.40364	0.17820	0.37025
	0.1107	0.0002	0.0001	0.0001	0.0134	0.0001
	134	182	182	193	192	127
QDM3S	0.04246	-0.08383	-0.26746	0.44692	0.12037	0.38098
	0.6262	0.2605	0.0003	0.0001	0.0963	0.0001
	134	182	182	193	192	127
QDCFM	0.04492	-0.07918	-0.26308	0.45289	0.12666	0.38051
	0.6063	0.2880	0.0003	0.0001	0.0800	0.0001
	134	182	182	193	192	127
QHQD	-0.47985	-0.38035	-0.31611	-0.02988	0.13120	0.19911
	0.0001	0.0001	0.0001	0.6800	0.0697	0.0248
	134	182	182	193	192	127
VFACE	-0.21786	-0.19415	-0.20717	0.41468	0.39625	0.33004
	0.0114	0.0086	0.0050	0.0001	0.0001	0.0002
	134	182	182	193	192	127
START	0.44214	0.38291	0.41724	0.20294	0.20296	0.01512
	0.0001	0.0001	0.0001	0.0067	0.0069	0.8743
	120	167	167	177	176	112
LIQ	0.02922	0.08334	0.08785	-0.23578	-0.24349	0.01443
	0.7514	0.2843	0.2589	0.0016	0.0011	0.8799
	120	167	167	177	176	112

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMSK3
VAP	0.38365 0.0001 120	0.20644 0.0074 167	0.16255 0.0358 167	0.38613 0.0001 178	0.24355 0.0011 177	0.07625 0.4242 112
SHAKE	0.21974 0.0159 120	0.18954 0.0142 167	0.15471 0.0459 167	-0.08596 0.2539 178	-0.16472 0.0285 177	0.08252 0.3871 112
SPRAY	0.28592 0.0015 120	-0.09143 0.2399 167	-0.07503 0.3352 167	-0.12138 0.1065 178	-0.08075 0.2853 177	-0.16096 0.0900 112
DRY	0.22630 0.0146 116	0.12830 0.1128 154	0.04667 0.5654 154	0.20906 0.0067 167	0.05887 0.4512 166	0.15553 0.1185 102
CO	0.47124 0.0001 120	0.24690 0.0013 167	0.24732 0.0013 167	0.04782 0.5262 178	0.00924 0.9029 177	0.05467 0.5670 112
END	0.43262 0.0001 120	0.35861 0.0001 167	0.39274 0.0001 167	0.20403 0.0065 177	0.20482 0.0064 176	0.03105 0.7452 112
PLAT	-0.63246 0.3675 4	0.02601 0.9328 13	0.02601 0.9328 13	-0.10380 0.7754 10	-0.10380 0.7754 10	-0.33735 0.3405 10
SHELF	-0.77460 0.2254 4	-0.23408 0.4415 13	-0.23408 0.4415 13	0.21625 0.5485 10	0.21625 0.5485 10	0.21625 0.5485 10
WIPE	0.21622 0.6414 7	0.48895 0.0760 14	0.48895 0.0760 14	0.11505 0.6953 14	0.11505 0.6953 14	-0.47789 0.0839 14
DRYCA	0.73030 0.0255 9	0.71981 0.0189 10	0.71981 0.0189 10	-0.14336 0.6403 13	-0.14336 0.6403 13	. 0
COVER	-0.52466 0.0001 127	-0.14629 0.0541 174	-0.08592 0.2596 174	-0.37000 0.0001 183	-0.32569 0.0001 182	-0.27470 0.0019 125
POUR	0.64378 0.0130 14	0.37228 0.1556 16	0.37228 0.1556 16	0.57020 0.0211 16	0.57020 0.0211 16	0.29845 0.2615 16
INOUT	0.44340 0.0001 120	0.37730 0.0001 167	0.41206 0.0001 167	0.21334 0.0044 177	0.21170 0.0048 176	0.01653 0.8627 112

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	ER2PTC	ERUSED	ERUSEDM	ERLEV	ERLEVM	CECMSK3
VZ	0.06189	-0.19985	-0.33336	-0.23503	-0.39978	-0.06779
	0.7160	0.0972	0.0048	0.0453	0.0005	0.5916
	37	70	70	73	73	65
VX	-0.13788	0.00093	0.04288	-0.05095	-0.04124	-0.00446
	0.4158	0.9939	0.7245	0.6686	0.7291	0.9719
	37	70	70	73	73	65
V	-0.03225	-0.17585	-0.19118	0.12487	0.03977	0.23995
	0.8497	0.1454	0.1129	0.2925	0.7383	0.0542
	37	70	70	73	73	65
THETA	0.07991	-0.04570	-0.09875	0.37406	0.33127	0.30970
	0.6383	0.7071	0.4160	0.0011	0.0042	0.0121
	37	70	70	73	73	65
TI	0.04161	0.29037	0.30061	0.12545	0.15831	-0.22684
	0.8068	0.0148	0.0115	0.2903	0.1810	0.0692
	37	70	70	73	73	65

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
SITE	-0.04724	-0.07918	0.10036	0.17941	0.19361	-0.00986
	0.5767	0.3743	0.1876	0.1261	0.0058	0.8892
	142	128	174	74	202	202
INT	-0.02435	-0.00874	-0.06551	0.01536	-0.00172	-0.05482
	0.7736	0.9220	0.3905	0.8966	0.9806	0.4384
	142	128	174	74	202	202
TIME	-0.04202	-0.01906	-0.07480	-0.14240	-0.06078	-0.08665
	0.6221	0.8322	0.3295	0.2294	0.3926	0.2225
	140	126	172	73	200	200
ERCMSK1	-0.58867	-0.60563	-0.57114	-0.08726	-0.31027	-0.12089
	0.0001	0.0001	0.0001	0.4860	0.0003	0.1641
	95	82	127	66	134	134
ERCMSK3	-0.58867	-0.60563	-0.57114	-0.08726	-0.31027	-0.12089
	0.0001	0.0001	0.0001	0.4860	0.0003	0.1641
	95	82	127	66	134	134
ER2PTA	-0.74477	-0.73105	-0.42918	0.00956	-0.17686	0.20891
	0.0001	0.0001	0.0001	0.9497	0.0293	0.0098
	142	128	142	46	152	152
ER2PTC	-0.70491	-0.82640	-0.41053	-0.03213	-0.29108	0.26366
	0.0001	0.0001	0.0001	0.8503	0.0006	0.0021
	126	128	128	37	134	134

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
ERUSED	-0.58475	-0.55801	-0.66857	-0.08051	-0.12350	-0.08526
	0.0001	0.0001	0.0001	0.5076	0.0967	0.2525
	140	128	174	70	182	182
ERUSEDM	-0.59736	-0.57695	-0.70729	-0.20474	-0.25972	-0.22845
	0.0001	0.0001	0.0001	0.0891	0.0004	0.0019
	140	128	174	70	182	182
ERLEV	0.47732	0.35790	0.59016	0.00261	0.36224	0.37419
	0.0001	0.0001	0.0001	0.9825	0.0001	0.0001
	142	128	174	73	193	193
ERLEVM	0.52516	0.38487	0.62520	-0.12957	0.06480	0.09450
	0.0001	0.0001	0.0001	0.2746	0.3719	0.1923
	141	127	173	73	192	192
CECMSK3	0.69630	0.56334	1.00000	-0.08147	0.22008	0.27907
	0.0001	0.0001	0.0001	0.5188	0.0129	0.0015
	95	82	127	65	127	127
CE2PTA	1.00000	0.91577	0.76246	-0.04637	0.38959	-0.01582
	0.0	0.0001	0.0001	0.7650	0.0001	0.8517
	142	126	140	44	142	142
CE2PTC	0.91577	1.00000	0.65187	0.00695	0.46340	-0.10826
	0.0001	0.0	0.0001	0.9679	0.0001	0.2238
	126	128	128	36	128	128
CEUSED	0.76246	0.65187	1.00000	-0.00705	0.21211	0.22803
	0.0001	0.0001	0.0	0.9541	0.0050	0.0025
	140	128	174	69	174	174
CEPRED	-0.04637	0.00695	-0.00705	1.00000	0.48547	0.51115
	0.7650	0.9679	0.9541	0.0	0.0001	0.0001
	44	36	69	74	74	74
TANKL	0.38959	0.46340	0.21211	0.48547	1.00000	0.44579
	0.0001	0.0001	0.0050	0.0001	0.0	0.0001
	142	128	174	74	202	202
TANKW	-0.01582	-0.10826	0.22803	0.51115	0.44579	1.00000
	0.8517	0.2238	0.0025	0.0001	0.0001	0.0
	142	128	174	74	202	202
TANKA	0.13147	0.12813	0.29842	0.57665	0.74325	0.84183
	0.1188	0.1495	0.0001	0.0001	0.0001	0.0001
	142	128	174	74	202	202
HOODL	0.39894	0.47370	0.18660	0.65846	0.97326	0.49077
	0.0001	0.0001	0.0137	0.0001	0.0001	0.0001
	142	128	174	74	202	202

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
HOODW	-0.32942 0.0001 142	-0.33236 0.0001 128	-0.09910 0.1933 174	0.14820 0.2076 74	-0.08076 0.2532 202	0.17903 0.0108 202
QHM3S	0.30499 0.0002 142	0.22080 0.0123 128	0.32715 0.0001 174	0.79115 0.0001 74	0.60740 0.0001 202	0.63099 0.0001 202
QHCFM	0.30499 0.0002 142	0.22080 0.0123 128	0.32715 0.0001 174	0.79115 0.0001 74	0.60740 0.0001 202	0.63099 0.0001 202
QDM3S	0.12937 0.1249 142	0.12613 0.1560 128	0.29731 0.0001 174	0.56188 0.0001 74	0.74885 0.0001 202	0.83790 0.0001 202
QDCFM	0.13147 0.1188 142	0.12813 0.1495 128	0.29842 0.0001 174	0.57665 0.0001 74	0.74325 0.0001 202	0.84183 0.0001 202
QHQD	0.31251 0.0002 142	0.30679 0.0004 128	0.21036 0.0053 174	0.51142 0.0001 74	-0.07503 0.2885 202	-0.17732 0.0116 202
VFACE	0.47167 0.0001 142	0.35188 0.0001 128	0.32489 0.0001 174	0.64691 0.0001 74	0.18805 0.0074 202	0.31732 0.0001 202
START	-0.28959 0.0010 127	-0.37276 0.0001 114	-0.13282 0.0951 159	-0.14907 0.2114 72	-0.30609 0.0001 186	-0.07495 0.3093 186
LIQ	-0.25522 0.0038 127	-0.18543 0.0482 114	-0.14608 0.0662 159	-0.10309 0.3888 72	0.04561 0.5364 186	-0.18528 0.0113 186
VAP	-0.00823 0.9268 127	-0.16517 0.0791 114	0.06503 0.4154 159	-0.19375 0.1005 73	-0.00065 0.9930 187	0.30239 0.0001 187
SHAKE	-0.33997 0.0001 127	-0.27576 0.0030 114	-0.14114 0.0760 159	0.14479 0.2217 73	0.00218 0.9764 187	-0.06569 0.3717 187
SPRAY	-0.27555 0.0017 127	-0.37754 0.0001 114	-0.06586 0.4095 159	0.42823 0.0002 73	-0.12727 0.0826 187	0.16373 0.0251 187
DRY	-0.11014 0.2252 123	-0.15786 0.0965 112	0.02552 0.7574 149	0.24544 0.0470 66	0.22858 0.0025 173	0.16930 0.0260 173

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
CO	-0.33012	-0.41742	-0.12247	-0.27579	-0.18976	0.09476
	0.0002	0.0001	0.1241	0.0182	0.0093	0.1970
	127	114	159	73	187	187
END	-0.27731	-0.34896	-0.11350	-0.20239	-0.27110	-0.07977
	0.0016	0.0001	0.1543	0.0882	0.0002	0.2791
	127	114	159	72	186	186
PLAT	-0.94868	1.00000	-0.33735	0.77754	.	.
	0.0513		0.3405	0.0687		
	4	2	10	6	13	13
SHELF	0.31623	1.00000	0.21625	0.39279	.	.
	0.6838		0.5485	0.4411		
	4	2	10	6	13	13
WIPE	-0.46915	-0.14415	-0.47789	0.11641	.	.
	0.1239	0.7578	0.0839	0.7186		
	12	7	14	12	14	14
DRYCA	-0.67883	-0.74855	-0.67883	.	.	.
	0.0309	0.0203	0.0309			
	10	9	10	0	13	13
COVER	0.20277	0.32894	-0.25674	0.37325	0.13236	-0.21717
	0.0188	0.0002	0.0008	0.0011	0.0672	0.0025
	134	121	166	73	192	192
POUR	0.42480	0.17133	0.29845	.	.	.
	0.1300	0.5581	0.2615			
	14	14	16	0	16	16
INOUT	-0.28183	-0.36665	-0.13035	-0.16916	-0.29478	-0.07239
	0.0013	0.0001	0.1015	0.1555	0.0001	0.3261
	127	114	159	72	186	186
VZ	-0.13756	-0.03320	0.07954	0.60684	0.41383	0.57233
	0.3732	0.8475	0.5159	0.0001	0.0002	0.0001
	44	36	69	74	74	74
VX	0.10289	0.06075	-0.00680	0.21484	0.05485	0.01237
	0.5063	0.7249	0.9558	0.0660	0.6426	0.9167
	44	36	69	74	74	74
V	0.32840	0.16782	0.30789	0.06236	0.23677	0.29761
	0.0295	0.3279	0.0101	0.5976	0.0422	0.0100
	44	36	69	74	74	74
THETA	0.12911	0.17014	0.31074	0.07791	0.40211	-0.13531
	0.4036	0.3212	0.0094	0.5094	0.0004	0.2504
	44	36	69	74	74	74

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
TI	0.13897 0.3683 44	0.03758 0.8277 36	-0.18889 0.1201 69	-0.13294 0.2588 74	-0.04955 0.6750 74	-0.11217 0.3413 74

	TANKA	HOODL	HOODW	QHM3S	QHCFM	QDM3S
SITE	0.05557 0.4322 202	0.12165 0.0846 202	0.20915 0.0028 202	0.04923 0.4866 202	0.04923 0.4866 202	0.06602 0.3505 202
INT	-0.02498 0.7241 202	-0.00076 0.9915 202	0.05222 0.4604 202	-0.02092 0.7676 202	-0.02092 0.7676 202	-0.01740 0.8058 202
TIME	-0.09881 0.1639 200	-0.06258 0.3787 200	-0.10562 0.1366 200	-0.10538 0.1375 200	-0.10538 0.1375 200	-0.10204 0.1505 200
ERCMSK1	-0.15178 0.0800 134	-0.30064 0.0004 134	0.27355 0.0014 134	-0.42142 0.0001 134	-0.42142 0.0001 134	-0.15518 0.0734 134
ERCMSK3	-0.15178 0.0800 134	-0.30064 0.0004 134	0.27355 0.0014 134	-0.42142 0.0001 134	-0.42142 0.0001 134	-0.15518 0.0734 134
ER2PTA	0.14465 0.0754 152	-0.17935 0.0270 152	0.14266 0.0796 152	-0.16995 0.0363 152	-0.16995 0.0363 152	0.14232 0.0803 152
ER2PTC	0.04492 0.6063 134	-0.28941 0.0007 134	0.18383 0.0335 134	-0.13842 0.1107 134	-0.13842 0.1107 134	0.04246 0.6262 134
ERUSED	-0.07918 0.2880 182	-0.09849 0.1859 182	-0.02080 0.7805 182	-0.26977 0.0002 182	-0.26977 0.0002 182	-0.08383 0.2605 182
ERUSEDM	-0.26308 0.0003 182	-0.23860 0.0012 182	-0.05319 0.4757 182	-0.37230 0.0001 182	-0.37230 0.0001 182	-0.26746 0.0003 182
ERLEV	0.45289 0.0001 193	0.37046 0.0001 193	-0.24622 0.0006 193	0.40364 0.0001 193	0.40364 0.0001 193	0.44692 0.0001 193
ERLEVM	0.12666 0.0800 192	0.06913 0.3407 192	-0.30454 0.0001 192	0.17820 0.0134 192	0.17820 0.0134 192	0.12037 0.0963 192

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
CECMSK3	0.38051 0.0001 127	0.17318 0.0515 127	-0.22833 0.0098 127	0.37025 0.0001 127	0.37025 0.0001 127	0.38098 0.0001 127
CE2PTA	0.13147 0.1188 142	0.39894 0.0001 142	-0.32942 0.0001 142	0.30499 0.0002 142	0.30499 0.0002 142	0.12937 0.1249 142
CE2PTC	0.12813 0.1495 128	0.47370 0.0001 128	-0.33236 0.0001 128	0.22080 0.0123 128	0.22080 0.0123 128	0.12613 0.1560 128
CEUSED	0.29842 0.0001 174	0.18660 0.0137 174	-0.09910 0.1933 174	0.32715 0.0001 174	0.32715 0.0001 174	0.29731 0.0001 174
CEPRED	0.57665 0.0001 74	0.65846 0.0001 74	0.14820 0.2076 74	0.79115 0.0001 74	0.79115 0.0001 74	0.56188 0.0001 74
TANKL	0.74325 0.0001 202	0.97326 0.0001 202	-0.08076 0.2532 202	0.60740 0.0001 202	0.60740 0.0001 202	0.74885 0.0001 202
TANKW	0.84183 0.0001 202	0.49077 0.0001 202	0.17903 0.0108 202	0.63099 0.0001 202	0.63099 0.0001 202	0.83790 0.0001 202
TANKA	1.00000 0.0 202	0.76087 0.0001 202	0.12147 0.0851 202	0.65435 0.0001 202	0.65435 0.0001 202	0.99895 0.0001 202
HOODL	0.76087 0.0001 202	1.00000 0.0 202	-0.17368 0.0134 202	0.64645 0.0001 202	0.64645 0.0001 202	0.76512 0.0001 202
HOODW	0.12147 0.0851 202	-0.17368 0.0134 202	1.00000 0.0 202	0.12976 0.0657 202	0.12976 0.0657 202	0.12079 0.0868 202
QHM3S	0.65435 0.0001 202	0.64645 0.0001 202	0.12976 0.0657 202	1.00000 0.0 202	1.00000 0.0001 202	0.64649 0.0001 202
QHCFM	0.65435 0.0001 202	0.64645 0.0001 202	0.12976 0.0657 202	1.00000 0.0001 202	1.00000 0.0 202	0.64649 0.0001 202
QDM3S	0.99895 0.0001 202	0.76512 0.0001 202	0.12079 0.0868 202	0.64649 0.0001 202	0.64649 0.0001 202	1.00000 0.0 202

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
QDCFM	1.00000 0.0001 202	0.76087 0.0001 202	0.12147 0.0851 202	0.65435 0.0001 202	0.65435 0.0001 202	0.99895 0.0001 202
QHQD	-0.18088 0.0100 202	-0.03835 0.5879 202	0.05440 0.4420 202	0.46024 0.0001 202	0.46024 0.0001 202	-0.18882 0.0071 202
VFACE	0.21852 0.0018 202	0.31017 0.0001 202	-0.50332 0.0001 202	0.64394 0.0001 202	0.64394 0.0001 202	0.20665 0.0032 202
START	-0.16750 0.0223 186	-0.27675 0.0001 186	0.12172 0.0979 186	-0.09102 0.2166 186	-0.09102 0.2166 186	-0.16887 0.0212 186
LIQ	-0.02842 0.7002 186	-0.04021 0.5858 186	0.38065 0.0001 186	-0.20670 0.0046 186	-0.20670 0.0046 186	-0.02008 0.7856 186
VAP	0.10723 0.1441 187	0.06341 0.3886 187	-0.08516 0.2465 187	0.22896 0.0016 187	0.22896 0.0016 187	0.10795 0.1414 187
SHAKE	0.11062 0.1318 187	-0.05626 0.4444 187	0.35993 0.0001 187	-0.13020 0.0757 187	-0.13020 0.0757 187	0.10548 0.1508 187
SPRAY	0.05056 0.4920 187	-0.16563 0.0235 187	0.43985 0.0001 187	0.13274 0.0701 187	0.13274 0.0701 187	0.04979 0.4986 187
DRY	0.35639 0.0001 173	0.18015 0.0177 173	0.39327 0.0001 173	0.27582 0.0002 173	0.27582 0.0002 173	0.35189 0.0001 173
CO	-0.02404 0.7440 187	-0.21385 0.0033 187	0.18008 0.0137 187	-0.26597 0.0002 187	-0.26597 0.0002 187	-0.01421 0.8469 187
END	-0.15555 0.0340 186	-0.25818 0.0004 186	0.14772 0.0442 186	-0.09070 0.2183 186	-0.09070 0.2183 186	-0.15702 0.0323 186
PLAT	. 13	. 13	. 13	. 13	. 13	. 13
SHELF	. 13	. 13	. 13	. 13	. 13	. 13

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
WIPE	.	.	.	.	.	.
	14	14	14	14	14	14
DRYCA	.	.	.	.	.	.
	13	13	13	13	13	13
COVER	-0.23897	0.21794	-0.22359	0.10519	0.10519	-0.23926
	0.0008	0.0024	0.0018	0.1465	0.1465	0.0008
	192	192	192	192	192	192
POUR	.	.	.	.	.	.
	16	16	16	16	16	16
INOUT	-0.16409	-0.26922	0.12711	-0.08773	-0.08773	-0.16549
	0.0252	0.0002	0.0838	0.2337	0.2337	0.0240
	186	186	186	186	186	186
VZ	0.61456	0.52812	0.25215	0.53965	0.53965	0.59452
	0.0001	0.0001	0.0302	0.0001	0.0001	0.0001
	74	74	74	74	74	74
VX	-0.04745	-0.01267	0.58317	0.55264	0.55264	-0.06789
	0.6881	0.9147	0.0001	0.0001	0.0001	0.5655
	74	74	74	74	74	74
V	0.21621	0.19961	0.08522	0.48939	0.48939	0.20186
	0.0643	0.0882	0.4703	0.0001	0.0001	0.0846
	74	74	74	74	74	74
THETA	0.07706	0.21494	-0.03495	0.15991	0.15991	0.07738
	0.5140	0.0659	0.7675	0.1735	0.1735	0.5123
	74	74	74	74	74	74
TI	-0.18747	-0.14711	0.37153	0.23263	0.23263	-0.20248
	0.1097	0.2110	0.0011	0.0461	0.0461	0.0836
	74	74	74	74	74	74

	QDCFM	QHQD	VFACE	START	LIQ	VAP
SITE	0.05557	-0.15017	-0.33201	0.05897	0.36269	0.01523
	0.4322	0.0329	0.0001	0.4240	0.0001	0.8361
	202	202	202	186	186	187
INT	-0.02498	0.00321	-0.07080	-0.03817	-0.04724	-0.04090
	0.7241	0.9638	0.3167	0.6050	0.5220	0.5783
	202	202	202	186	186	187

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
TIME	-0.09881	-0.01861	0.01453	0.29087	0.06453	0.20735
	0.1639	0.7936	0.8382	0.0001	0.3815	0.0044
	200	200	200	186	186	187
ERCMSK1	-0.15178	-0.37981	-0.37765	0.50734	0.19035	0.19953
	0.0800	0.0001	0.0001	0.0001	0.0381	0.0296
	134	134	134	119	119	119
ERCMSK3	-0.15178	-0.37981	-0.37765	0.50734	0.19035	0.19953
	0.0800	0.0001	0.0001	0.0001	0.0381	0.0296
	134	134	134	119	119	119
ER2PTA	0.14465	-0.52780	-0.28793	0.41935	0.12511	0.27715
	0.0754	0.0001	0.0003	0.0001	0.1452	0.0010
	152	152	152	137	137	137
ER2PTC	0.04492	-0.47985	-0.21786	0.44214	0.02922	0.38365
	0.6063	0.0001	0.0114	0.0001	0.7514	0.0001
	134	134	134	120	120	120
ERUSED	-0.07918	-0.38035	-0.19415	0.38291	0.08334	0.20644
	0.2880	0.0001	0.0086	0.0001	0.2843	0.0074
	182	182	182	167	167	167
ERUSEDM	-0.26308	-0.31611	-0.20717	0.41724	0.08785	0.16255
	0.0003	0.0001	0.0050	0.0001	0.2589	0.0358
	182	182	182	167	167	167
ERLEV	0.45289	-0.02988	0.41468	0.20294	-0.23578	0.38613
	0.0001	0.6800	0.0001	0.0067	0.0016	0.0001
	193	193	193	177	177	178
ERLEVM	0.12666	0.13120	0.39625	0.20296	-0.24349	0.24355
	0.0800	0.0697	0.0001	0.0069	0.0011	0.0011
	192	192	192	176	176	177
CECMSK3	0.38051	0.19911	0.33004	0.01512	0.01443	0.07625
	0.0001	0.0248	0.0002	0.8743	0.8799	0.4242
	127	127	127	112	112	112
CE2PTA	0.13147	0.31251	0.47167	-0.28959	-0.25522	-0.00823
	0.1188	0.0002	0.0001	0.0010	0.0038	0.9268
	142	142	142	127	127	127
CE2PTC	0.12813	0.30679	0.35188	-0.37276	-0.18543	-0.16517
	0.1495	0.0004	0.0001	0.0001	0.0482	0.0791
	128	128	128	114	114	114
CEUSED	0.29842	0.21036	0.32489	-0.13282	-0.14608	0.06503
	0.0001	0.0053	0.0001	0.0951	0.0662	0.4154
	174	174	174	159	159	159

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	CE2PTA	CE2PTC	CEUSED	CEPRED	TANKL	TANKW
CEPRED	0.57665 0.0001 74	0.51142 0.0001 74	0.64691 0.0001 74	-0.14907 0.2114 72	-0.10309 0.3888 72	-0.19375 0.1005 73

	QDCFM	QHQD	VFACE	START	LIQ	VAP
TANKL	0.74325 0.0001 202	-0.07503 0.2885 202	0.18805 0.0074 202	-0.30609 0.0001 186	0.04561 0.5364 186	-0.00065 0.9930 187
TANKW	0.84183 0.0001 202	-0.17732 0.0116 202	0.31732 0.0001 202	-0.07495 0.3093 186	-0.18528 0.0113 186	0.30239 0.0001 187
TANKA	1.00000 0.0001 202	-0.18088 0.0100 202	0.21852 0.0018 202	-0.16750 0.0223 186	-0.02842 0.7002 186	0.10723 0.1441 187
HOODL	0.76087 0.0001 202	-0.03835 0.5879 202	0.31017 0.0001 202	-0.27675 0.0001 186	-0.04021 0.5858 186	0.06341 0.3886 187
HOODW	0.12147 0.0851 202	0.05440 0.4420 202	-0.50332 0.0001 202	0.12172 0.0979 186	0.38065 0.0001 186	-0.08516 0.2465 187
QHM3S	0.65435 0.0001 202	0.46024 0.0001 202	0.64394 0.0001 202	-0.09102 0.2166 186	-0.20670 0.0046 186	0.22896 0.0016 187
QHCFM	0.65435 0.0001 202	0.46024 0.0001 202	0.64394 0.0001 202	-0.09102 0.2166 186	-0.20670 0.0046 186	0.22896 0.0016 187
QDM3S	0.99895 0.0001 202	-0.18882 0.0071 202	0.20665 0.0032 202	-0.16887 0.0212 186	-0.02008 0.7856 186	0.10795 0.1414 187
QDCFM	1.00000 0.0 202	-0.18088 0.0100 202	0.21852 0.0018 202	-0.16750 0.0223 186	-0.02842 0.7002 186	0.10723 0.1441 187
QHQD	-0.18088 0.0100 202	1.00000 0.0 202	0.54732 0.0001 202	-0.07728 0.2944 186	-0.17264 0.0185 186	-0.16375 0.0251 187
VFACE	0.21852 0.0018 202	0.54732 0.0001 202	1.00000 0.0 202	-0.07427 0.3137 186	-0.54468 0.0001 186	0.21164 0.0036 187

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	QDCFM	QHQD	VFACE	START	LIQ	VAP
START	-0.16750	-0.07728	-0.07427	1.00000	0.39943	0.56810
	0.0223	0.2944	0.3137	0.0	0.0001	0.0001
	186	186	186	186	186	186
LIQ	-0.02842	-0.17264	-0.54468	0.39943	1.00000	-0.15099
	0.7002	0.0185	0.0001	0.0001	0.0	0.0397
	186	186	186	186	186	186
VAP	0.10723	-0.16375	0.21164	0.56810	-0.15099	1.00000
	0.1441	0.0251	0.0036	0.0001	0.0397	0.0
	187	187	187	186	186	187
SHAKE	0.11062	-0.17023	-0.41439	0.45010	0.57170	-0.02179
	0.1318	0.0198	0.0001	0.0001	0.0001	0.7672
	187	187	187	186	186	187
SPRAY	0.05056	0.13643	-0.15510	0.44450	0.31865	0.17942
	0.4920	0.0626	0.0340	0.0001	0.0001	0.0140
	187	187	187	186	186	187
DRY	0.35639	-0.08810	-0.16640	0.48459	0.47580	0.24231
	0.0001	0.2491	0.0287	0.0001	0.0001	0.0013
	173	173	173	173	173	173
CO	-0.02404	-0.40045	-0.38006	0.60555	0.45111	0.27282
	0.7440	0.0001	0.0001	0.0001	0.0001	0.0002
	187	187	187	186	186	187
END	-0.15555	-0.08988	-0.10862	0.93549	0.39890	0.53102
	0.0340	0.2224	0.1400	0.0001	0.0001	0.0001
	186	186	186	186	186	186
PLAT	.	.	.	0.30939	0.28634	0.30406
				0.3037	0.3429	0.3125
	13	13	13	13	13	13
SHELF	.	.	.	0.45653	0.36546	0.71703
				0.1168	0.2195	0.0058
	13	13	13	13	13	13
WIPE	.	.	.	0.86763	-0.24241	0.71778
				0.0001	0.4037	0.0038
	14	14	14	14	14	14
DRYCA	.	.	.	0.99838	0.68376	0.08387
				0.0001	0.0100	0.7853
	13	13	13	13	13	13
COVER	-0.23897	0.40910	0.27300	-0.20059	-0.07047	-0.12474
	0.0008	0.0001	0.0001	0.0073	0.3499	0.0962
	192	192	192	178	178	179

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	QDCFM	QHQD	VFACE	START	LIQ	VAP
POUR	.	.	.	0.86994	-0.11903	0.79993
				0.0001	0.6606	0.0002
	16	16	16	16	16	16
INOUT	-0.16409	-0.08541	-0.08111	0.98876	0.40158	0.57399
	0.0252	0.2464	0.2711	0.0001	0.0001	0.0001
	186	186	186	186	186	186
VZ	0.61456	0.26932	0.38943	-0.32573	0.13105	-0.33025
	0.0001	0.0203	0.0006	0.0052	0.2725	0.0043
	74	74	74	72	72	73
VX	-0.04745	0.56153	0.39930	-0.07818	0.25791	-0.26260
	0.6881	0.0001	0.0004	0.5139	0.0287	0.0248
	74	74	74	72	72	73
V	0.21621	0.11559	0.44856	-0.04295	0.24110	-0.06344
	0.0643	0.3267	0.0001	0.7201	0.0413	0.5939
	74	74	74	72	72	73
THETA	0.07706	-0.02875	0.05405	-0.12031	-0.16717	-0.06598
	0.5140	0.8079	0.6474	0.3141	0.1604	0.5792
	74	74	74	72	72	73
TI	-0.18747	0.16554	0.05517	0.21008	0.33295	0.05017
	0.1097	0.1587	0.6406	0.0765	0.0043	0.6734
	74	74	74	72	72	73

	SHAKE	SPRAY	DRY	CO	END	PLAT
SITE	0.16110	0.44328	0.32701	0.27512	0.09645	.
	0.0276	0.0001	0.0001	0.0001	0.1903	
	187	187	173	187	186	13
INT	-0.14737	-0.00175	-0.06722	-0.03173	-0.03952	0.05945
	0.0441	0.9810	0.3795	0.6664	0.5922	0.8470
	187	187	173	187	186	13
TIME	0.12424	0.13599	0.15457	0.17097	0.29771	0.15047
	0.0902	0.0635	0.0423	0.0193	0.0001	0.6237
	187	187	173	187	186	13
ERCMSK1	0.25355	0.05457	0.19916	0.37220	0.48200	0.02601
	0.0054	0.5555	0.0407	0.0001	0.0001	0.9328
	119	119	106	119	119	13
ERCMSK3	0.25355	0.05457	0.19916	0.37220	0.48200	0.02601
	0.0054	0.5555	0.0407	0.0001	0.0001	0.9328
	119	119	106	119	119	13

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SHAKE	SPRAY	DRY	CO	END	PLAT
ER2PTA	0.30589 0.0003 137	0.14886 0.0825 137	0.28618 0.0010 130	0.42537 0.0001 137	0.39733 0.0001 137	0.61079 0.1451 7
ER2PTC	0.21974 0.0159 120	0.28592 0.0015 120	0.22630 0.0146 116	0.47124 0.0001 120	0.43262 0.0001 120	-0.63246 0.3675 4
ERUSED	0.18954 0.0142 167	-0.09143 0.2399 167	0.12830 0.1128 154	0.24690 0.0013 167	0.35861 0.0001 167	0.02601 0.9328 13
ERUSEDM	0.15471 0.0459 167	-0.07503 0.3352 167	0.04667 0.5654 154	0.24732 0.0013 167	0.39274 0.0001 167	0.02601 0.9328 13
ERLEV	-0.08596 0.2539 178	-0.12138 0.1065 178	0.20906 0.0067 167	0.04782 0.5262 178	0.20403 0.0065 177	-0.10380 0.7754 10
ERLEVM	-0.16472 0.0285 177	-0.08075 0.2853 177	0.05887 0.4512 166	0.00924 0.9029 177	0.20482 0.0064 176	-0.10380 0.7754 10
CECMSK3	0.08252 0.3871 112	-0.16096 0.0900 112	0.15553 0.1185 102	0.05467 0.5670 112	0.03105 0.7452 112	-0.33735 0.3405 10
CE2PTA	-0.33997 0.0001 127	-0.27555 0.0017 127	-0.11014 0.2252 123	-0.33012 0.0002 127	-0.27731 0.0016 127	-0.94868 0.0513 4
CE2PTC	-0.27576 0.0030 114	-0.37754 0.0001 114	-0.15786 0.0965 112	-0.41742 0.0001 114	-0.34896 0.0001 114	1.00000 2
CEUSED	-0.14114 0.0760 159	-0.06586 0.4095 159	0.02552 0.7574 149	-0.12247 0.1241 159	-0.11350 0.1543 159	-0.33735 0.3405 10
CEPRED	0.14479 0.2217 73	0.42823 0.0002 73	0.24544 0.0470 66	-0.27579 0.0182 73	-0.20239 0.0882 72	0.77754 0.0687 6
TANKL	0.00218 0.9764 187	-0.12727 0.0826 187	0.22858 0.0025 173	-0.18976 0.0093 187	-0.27110 0.0002 186	. 13
TANKW	-0.06569 0.3717 187	0.16373 0.0251 187	0.16930 0.0260 173	0.09476 0.1970 187	-0.07977 0.2791 186	. 13

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SHAKE	SPRAY	DRY	CO	END	PLAT
TANKA	0.11062 0.1318 187	0.05056 0.4920 187	0.35639 0.0001 173	-0.02404 0.7440 187	-0.15555 0.0340 186	. 13
HOODL	-0.05626 0.4444 187	-0.16563 0.0235 187	0.18015 0.0177 173	-0.21385 0.0033 187	-0.25818 0.0004 186	. 13
HOODW	0.35993 0.0001 187	0.43985 0.0001 187	0.39327 0.0001 173	0.18008 0.0137 187	0.14772 0.0442 186	. 13
QHM3S	-0.13020 0.0757 187	0.13274 0.0701 187	0.27582 0.0002 173	-0.26597 0.0002 187	-0.09070 0.2183 186	. 13
QHCFM	-0.13020 0.0757 187	0.13274 0.0701 187	0.27582 0.0002 173	-0.26597 0.0002 187	-0.09070 0.2183 186	. 13
QDM3S	0.10548 0.1508 187	0.04979 0.4986 187	0.35189 0.0001 173	-0.01421 0.8469 187	-0.15702 0.0323 186	. 13
QDCFM	0.11062 0.1318 187	0.05056 0.4920 187	0.35639 0.0001 173	-0.02404 0.7440 187	-0.15555 0.0340 186	. 13
QHQD	-0.17023 0.0198 187	0.13643 0.0626 187	-0.08810 0.2491 173	-0.40045 0.0001 187	-0.08988 0.2224 186	. 13
VFACE	-0.41439 0.0001 187	-0.15510 0.0340 187	-0.16640 0.0287 173	-0.38006 0.0001 187	-0.10862 0.1400 186	. 13
START	0.45010 0.0001 186	0.44450 0.0001 186	0.48459 0.0001 173	0.60555 0.0001 186	0.93549 0.0001 186	0.30939 0.3037 13
LIQ	0.57170 0.0001 186	0.31865 0.0001 186	0.47580 0.0001 173	0.45111 0.0001 186	0.39890 0.0001 186	0.28634 0.3429 13
VAP	-0.02179 0.7672 187	0.17942 0.0140 187	0.24231 0.0013 173	0.27282 0.0002 187	0.53102 0.0001 186	0.30406 0.3125 13
SHAKE	1.00000 0.0 187	0.35814 0.0001 187	0.57964 0.0001 173	0.43187 0.0001 187	0.45008 0.0001 186	0.63721 0.0192 13

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SHAKE	SPRAY	DRY	CO	END	PLAT
SPRAY	0.35814	1.00000	0.50136	0.39082	0.43669	.
	0.0001	0.0	0.0001	0.0001	0.0001	
	187	187	173	187	186	13
DRY	0.57964	0.50136	1.00000	0.32410	0.53943	.
	0.0001	0.0001	0.0	0.0001	0.0001	
	173	173	173	173	173	0
CO	0.43187	0.39082	0.32410	1.00000	0.62889	0.45914
	0.0001	0.0001	0.0001	0.0	0.0001	0.1145
	187	187	173	187	186	13
END	0.45008	0.43669	0.53943	0.62889	1.00000	0.28178
	0.0001	0.0001	0.0001	0.0001	0.0	0.3510
	186	186	173	186	186	13
PLAT	0.63721	.	.	0.45914	0.28178	1.00000
	0.0192			0.1145	0.3510	0.0
	13	13	0	13	13	13
SHELF	0.19015	.	.	0.28839	0.30808	0.47990
	0.5338			0.3393	0.3058	0.0970
	13	13	0	13	13	13
WIPE	.	.	0.20318	-0.13852	0.94105	.
			0.4860	0.6367	0.0001	
	14	14	14	14	14	0
DRYCA	.	0.99838	.	0.25162	0.99838	.
		0.0001		0.4069	0.0001	
	13	13	13	13	13	0
COVER	-0.22096	-0.02334	-0.16628	-0.30499	-0.19688	.
	0.0030	0.7564	0.0328	0.0001	0.0084	
	179	179	165	179	178	13
POUR	0.81593	.	0.90218	0.58752	0.88645	.
	0.0001		0.0001	0.0167	0.0001	
	16	16	16	16	16	0
INOUT	0.44680	0.44648	0.51697	0.61630	0.97149	0.41155
	0.0001	0.0001	0.0001	0.0001	0.0001	0.1624
	186	186	173	186	186	13
VZ	0.32369	0.27611	0.16371	-0.36220	-0.35195	0.77754
	0.0052	0.0181	0.1890	0.0016	0.0024	0.0687
	73	73	66	73	72	6
VX	0.05193	0.01432	0.27960	-0.44500	-0.06706	-0.43948
	0.6626	0.9043	0.0230	0.0001	0.5757	0.3832
	73	73	66	73	72	6

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SHAKE	SPRAY	DRY	CO	END	PLAT
V	0.00516	0.02273	0.28173	-0.15843	0.00432	0.77754
	0.9654	0.8486	0.0219	0.1807	0.9712	0.0687
	73	73	66	73	72	6
THETA	0.02638	0.02677	0.08904	-0.07974	-0.06799	-0.37187
	0.8247	0.8221	0.4771	0.5025	0.5704	0.4679
	73	73	66	73	72	6
TI	0.02705	-0.01632	0.18948	-0.04188	0.25757	0.84515
	0.8203	0.8910	0.1276	0.7250	0.0289	0.0341
	73	73	66	73	72	6

	SHELF	WIPE	DRYCA	COVER	POUR	INOUT
SITE	.	.	.	-0.12102	.	0.07557
				0.0945		0.3053
	13	14	13	192	16	186
INT	-0.28610	-0.23231	0.59732	0.03410	-0.63146	-0.03915
	0.3433	0.4242	0.0311	0.6386	0.0087	0.5958
	13	14	13	192	16	186
TIME	0.07426	0.33370	0.35381	0.06461	-0.09745	0.29085
	0.8095	0.2436	0.2356	0.3733	0.7196	0.0001
	13	14	13	192	16	186
ERCMSK1	-0.23408	0.48895	.	-0.29091	0.37228	0.49898
	0.4415	0.0760		0.0007	0.1556	0.0001
	13	14	0	132	16	119
ERCMSK3	-0.23408	0.48895	.	-0.29091	0.37228	0.49898
	0.4415	0.0760		0.0007	0.1556	0.0001
	13	14	0	132	16	119
ER2PTA	-0.25614	0.42330	0.71981	-0.54249	-0.10561	0.41374
	0.5793	0.1703	0.0189	0.0001	0.7193	0.0001
	7	12	10	144	14	137
ER2PTC	-0.77460	0.21622	0.73030	-0.52466	0.64378	0.44340
	0.2254	0.6414	0.0255	0.0001	0.0130	0.0001
	4	7	9	127	14	120
ERUSED	-0.23408	0.48895	0.71981	-0.14629	0.37228	0.37730
	0.4415	0.0760	0.0189	0.0541	0.1556	0.0001
	13	14	10	174	16	167
ERUSEDM	-0.23408	0.48895	0.71981	-0.08592	0.37228	0.41206
	0.4415	0.0760	0.0189	0.2596	0.1556	0.0001
	13	14	10	174	16	167

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SHELF	WIPE	DRYCA	COVER	POUR	INOUT
ERLEV	0.21625 0.5485 10	0.11505 0.6953 14	-0.14336 0.6403 13	-0.37000 0.0001 183	0.57020 0.0211 16	0.21334 0.0044 177
ERLEVM	0.21625 0.5485 10	0.11505 0.6953 14	-0.14336 0.6403 13	-0.32569 0.0001 182	0.57020 0.0211 16	0.21170 0.0048 176
CECMSK3	0.21625 0.5485 10	-0.47789 0.0839 14	. 0	-0.27470 0.0019 125	0.29845 0.2615 16	0.01653 0.8627 112
CE2PTA	0.31623 0.6838 4	-0.46915 0.1239 12	-0.67883 0.0309 10	0.20277 0.0188 134	0.42480 0.1300 14	-0.28183 0.0013 127
CE2PTC	1.00000 2	-0.14415 0.7578 7	-0.74855 0.0203 9	0.32894 0.0002 121	0.17133 0.5581 14	-0.36665 0.0001 114
CEUSED	0.21625 0.5485 10	-0.47789 0.0839 14	-0.67883 0.0309 10	-0.25674 0.0008 166	0.29845 0.2615 16	-0.13035 0.1015 159
CEPRED	0.39279 0.4411 6	0.11641 0.7186 12	. 0	0.37325 0.0011 73	. 0	-0.16916 0.1555 72
TANKL	. 13	. 14	. 13	0.13236 0.0672 192	. 16	-0.29478 0.0001 186
TANKW	. 13	. 14	. 13	-0.21717 0.0025 192	. 16	-0.07239 0.3261 186
TANKA	. 13	. 14	. 13	-0.23897 0.0008 192	. 16	-0.16409 0.0252 186
HOODL	. 13	. 14	. 13	0.21794 0.0024 192	. 16	-0.26922 0.0002 186
HOODW	. 13	. 14	. 13	-0.22359 0.0018 192	. 16	0.12711 0.0838 186
QHM3S	. 13	. 14	. 13	0.10519 0.1465 192	. 16	-0.08773 0.2337 186

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SHELF	WIPE	DRYCA	COVER	POUR	INOUT
QHCFM	.	.	.	0.10519	.	-0.08773
				0.1465		0.2337
	13	14	13	192	16	186
QDM3S	.	.	.	-0.23926	.	-0.16549
				0.0008		0.0240
	13	14	13	192	16	186
QDCFM	.	.	.	-0.23897	.	-0.16409
				0.0008		0.0252
	13	14	13	192	16	186
QHQD	.	.	.	0.40910	.	-0.08541
				0.0001		0.2464
	13	14	13	192	16	186
VFACE	.	.	.	0.27300	.	-0.08111
				0.0001		0.2711
	13	14	13	192	16	186
START	0.45653	0.86763	0.99838	-0.20059	0.86994	0.98876
	0.1168	0.0001	0.0001	0.0073	0.0001	0.0001
	13	14	13	178	16	186
LIQ	0.36546	-0.24241	0.68376	-0.07047	-0.11903	0.40158
	0.2195	0.4037	0.0100	0.3499	0.6606	0.0001
	13	14	13	178	16	186
VAP	0.71703	0.71778	0.08387	-0.12474	0.79993	0.57399
	0.0058	0.0038	0.7853	0.0962	0.0002	0.0001
	13	14	13	179	16	186
SHAKE	0.19015	.	.	-0.22096	0.81593	0.44680
	0.5338			0.0030	0.0001	0.0001
	13	14	13	179	16	186
SPRAY	.	.	0.99838	-0.02334	.	0.44648
			0.0001	0.7564		0.0001
	13	14	13	179	16	186
DRY	.	0.20318	.	-0.16628	0.90218	0.51697
		0.4860		0.0328	0.0001	0.0001
	0	14	13	165	16	173
CO	0.28839	-0.13852	0.25162	-0.30499	0.58752	0.61630
	0.3393	0.6367	0.4069	0.0001	0.0167	0.0001
	13	14	13	179	16	186
END	0.30808	0.94105	0.99838	-0.19688	0.88645	0.97149
	0.3058	0.0001	0.0001	0.0084	0.0001	0.0001
	13	14	13	178	16	186

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	SHELF	WIPE	DRYCA	COVER	POUR	INOUT
PLAT	0.47990 0.0970 13	. 0	. 0	. 13	. 0	0.41155 0.1624 13
SHELF	1.00000 0.0 13	. 0	. 0	. 13	. 0	0.49386 0.0863 13
WIPE	. 0	1.00000 0.0 14	. 0	. 14	. 0	0.91334 0.0001 14
DRYCA	. 0	. 0	1.00000 0.0 13	0.72548 0.1654 5	. 0	0.99838 0.0001 13
COVER	. 13	. 14	0.72548 0.1654 5	1.00000 0.0 192	. 16	-0.19481 0.0092 178
POUR	. 0	. 0	. 0	. 16	1.00000 0.0 16	0.88396 0.0001 16
INOUT	0.49386 0.0863 13	0.91334 0.0001 14	0.99838 0.0001 13	-0.19481 0.0092 178	0.88396 0.0001 16	1.00000 0.0 186
VZ	0.39279 0.4411 6	-0.10230 0.7517 12	. 0	0.11150 0.3477 73	. 0	-0.34003 0.0035 72
VX	-0.39279 0.4411 6	-0.08819 0.7852 12	. 0	0.14144 0.2326 73	. 0	-0.07274 0.5437 72
V	0.39279 0.4411 6	-0.08819 0.7852 12	. 0	-0.20552 0.0811 73	. 0	-0.02640 0.8257 72
THETA	-0.13093 0.8047 6	-0.29631 0.3497 12	. 0	-0.34433 0.0029 73	. 0	-0.11624 0.3309 72
TI	0.65465 0.1583 6	0.05997 0.8531 12	. 0	-0.08881 0.4550 73	. 0	0.22528 0.0571 72

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	VZ	VX	V	THETA	TI
SITE	0.09606	-0.56703	-0.01177	0.22106	-0.44417
	0.4156	0.0001	0.9207	0.0584	0.0001
	74	74	74	74	74
INT	-0.16581	0.09235	-0.28426	-0.14155	-0.02443
	0.1580	0.4339	0.0141	0.2290	0.8363
	74	74	74	74	74
TIME	-0.07831	-0.11581	0.06378	0.09786	0.03369
	0.5102	0.3292	0.5919	0.4101	0.7772
	73	73	73	73	73
ERCMSK1	-0.14818	0.01142	-0.17565	-0.07092	0.28749
	0.2351	0.9275	0.1583	0.5715	0.0193
	66	66	66	66	66
ERCMSK3	-0.14818	0.01142	-0.17565	-0.07092	0.28749
	0.2351	0.9275	0.1583	0.5715	0.0193
	66	66	66	66	66
ER2PTA	0.08363	-0.11619	-0.10188	0.16979	0.03287
	0.5806	0.4419	0.5005	0.2593	0.8283
	46	46	46	46	46
ER2PTC	0.06189	-0.13788	-0.03225	0.07991	0.04161
	0.7160	0.4158	0.8497	0.6383	0.8068
	37	37	37	37	37
ERUSED	-0.19985	0.00093	-0.17585	-0.04570	0.29037
	0.0972	0.9939	0.1454	0.7071	0.0148
	70	70	70	70	70
ERUSEDM	-0.33336	0.04288	-0.19118	-0.09875	0.30061
	0.0048	0.7245	0.1129	0.4160	0.0115
	70	70	70	70	70
ERLEV	-0.23503	-0.05095	0.12487	0.37406	0.12545
	0.0453	0.6686	0.2925	0.0011	0.2903
	73	73	73	73	73
ERLEVM	-0.39978	-0.04124	0.03977	0.33127	0.15831
	0.0005	0.7291	0.7383	0.0042	0.1810
	73	73	73	73	73
CECMSK3	-0.06779	-0.00446	0.23995	0.30970	-0.22684
	0.5916	0.9719	0.0542	0.0121	0.0692
	65	65	65	65	65
CE2PTA	-0.13756	0.10289	0.32840	0.12911	0.13897
	0.3732	0.5063	0.0295	0.4036	0.3683
	44	44	44	44	44

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	VZ	VX	V	THETA	TI
CE2PTC	-0.03320	0.06075	0.16782	0.17014	0.03758
	0.8475	0.7249	0.3279	0.3212	0.8277
	36	36	36	36	36
CEUSED	0.07954	-0.00680	0.30789	0.31074	-0.18889
	0.5159	0.9558	0.0101	0.0094	0.1201
	69	69	69	69	69
CEPRED	0.60684	0.21484	0.06236	0.07791	-0.13294
	0.0001	0.0660	0.5976	0.5094	0.2588
	74	74	74	74	74
TANKL	0.41383	0.05485	0.23677	0.40211	-0.04955
	0.0002	0.6426	0.0422	0.0004	0.6750
	74	74	74	74	74
TANKW	0.57233	0.01237	0.29761	-0.13531	-0.11217
	0.0001	0.9167	0.0100	0.2504	0.3413
	74	74	74	74	74
TANKA	0.61456	-0.04745	0.21621	0.07706	-0.18747
	0.0001	0.6881	0.0643	0.5140	0.1097
	74	74	74	74	74
HOODL	0.52812	-0.01267	0.19961	0.21494	-0.14711
	0.0001	0.9147	0.0882	0.0659	0.2110
	74	74	74	74	74
HOODW	0.25215	0.58317	0.08522	-0.03495	0.37153
	0.0302	0.0001	0.4703	0.7675	0.0011
	74	74	74	74	74
QHM3S	0.53965	0.55264	0.48939	0.15991	0.23263
	0.0001	0.0001	0.0001	0.1735	0.0461
	74	74	74	74	74
QHCFM	0.53965	0.55264	0.48939	0.15991	0.23263
	0.0001	0.0001	0.0001	0.1735	0.0461
	74	74	74	74	74
QDM3S	0.59452	-0.06789	0.20186	0.07738	-0.20248
	0.0001	0.5655	0.0846	0.5123	0.0836
	74	74	74	74	74
QDCFM	0.61456	-0.04745	0.21621	0.07706	-0.18747
	0.0001	0.6881	0.0643	0.5140	0.1097
	74	74	74	74	74
QHQD	0.26932	0.56153	0.11559	-0.02875	0.16554
	0.0203	0.0001	0.3267	0.8079	0.1587
	74	74	74	74	74

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	VZ	VX	V	THETA	TI
VFACE	0.38943 0.0006 74	0.39930 0.0004 74	0.44856 0.0001 74	0.05405 0.6474 74	0.05517 0.6406 74
START	-0.32573 0.0052 72	-0.07818 0.5139 72	-0.04295 0.7201 72	-0.12031 0.3141 72	0.21008 0.0765 72
LIQ	0.13105 0.2725 72	0.25791 0.0287 72	0.24110 0.0413 72	-0.16717 0.1604 72	0.33295 0.0043 72
VAP	-0.33025 0.0043 73	-0.26260 0.0248 73	-0.06344 0.5939 73	-0.06598 0.5792 73	0.05017 0.6734 73
SHAKE	0.32369 0.0052 73	0.05193 0.6626 73	0.00516 0.9654 73	0.02638 0.8247 73	0.02705 0.8203 73
SPRAY	0.27611 0.0181 73	0.01432 0.9043 73	0.02273 0.8486 73	0.02677 0.8221 73	-0.01632 0.8910 73
DRY	0.16371 0.1890 66	0.27960 0.0230 66	0.28173 0.0219 66	0.08904 0.4771 66	0.18948 0.1276 66
CO	-0.36220 0.0016 73	-0.44500 0.0001 73	-0.15843 0.1807 73	-0.07974 0.5025 73	-0.04188 0.7250 73
END	-0.35195 0.0024 72	-0.06706 0.5757 72	0.00432 0.9712 72	-0.06799 0.5704 72	0.25757 0.0289 72
PLAT	0.77754 0.0687 6	-0.43948 0.3832 6	0.77754 0.0687 6	-0.37187 0.4679 6	0.84515 0.0341 6
SHELF	0.39279 0.4411 6	-0.39279 0.4411 6	0.39279 0.4411 6	-0.13093 0.8047 6	0.65465 0.1583 6
WIPE	-0.10230 0.7517 12	-0.08819 0.7852 12	-0.08819 0.7852 12	-0.29631 0.3497 12	0.05997 0.8531 12
DRYCA	. 0	. 0	. 0	. 0	. 0

TABLE XXXIII. SPEARMAN CORRELATION COEFFICIENTS (CONTINUED).

Spearman Correlation Coefficients / Prob > |R| under Ho: Rho=0/ Number of Observations

	VZ	VX	V	THETA	TI
COVER	0.11150 0.3477 73	0.14144 0.2326 73	-0.20552 0.0811 73	-0.34433 0.0029 73	-0.08881 0.4550 73
POUR	. 0	. 0	. 0	. 0	. 0
INOUT	-0.34003 0.0035 72	-0.07274 0.5437 72	-0.02640 0.8257 72	-0.11624 0.3309 72	0.22528 0.0571 72
VZ	1.00000 0.0 74	0.19408 0.0975 74	0.39101 0.0006 74	0.00863 0.9418 74	-0.07927 0.5020 74
VX	0.19408 0.0975 74	1.00000 0.0 74	0.54423 0.0001 74	-0.12358 0.2942 74	0.56854 0.0001 74
V	0.39101 0.0006 74	0.54423 0.0001 74	1.00000 0.0 74	0.14577 0.2153 74	0.50892 0.0001 74
THETA	0.00863 0.9418 74	-0.12358 0.2942 74	0.14577 0.2153 74	1.00000 0.0 74	0.04832 0.6826 74
TI	-0.07927 0.5020 74	0.56854 0.0001 74	0.50892 0.0001 74	0.04832 0.6826 74	1.00000 0.0 74

6 Publications

Conroy, L.M., Prodans, R.S., Lachman, M. Yu, X., Wadden, R.A., Franke, J.E., Scheff, P.A.: Hood efficiencies of vapor degreasers under operating conditions. J. Envir. Engrg. 121(10):736-741 (1995).

Conroy, L.M., Prodans, R.S., Lachman, M., Yu, X., and Perez, S.: Field study of local exhaust hood performance. Proceedings of the 4th International Symposium on Ventilation for Contaminant Control, Stockholm, Sweden, September 5-9, 1994.

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