

RUTGERS UNIVERSITY
SCHOOL OF ENVIRONMENTAL AND BIOLOGICAL SCIENCES

APTI 450 - Source Sampling for Particulate Pollutants

October 23-26, 2018

DRAFT AGENDA

Course Location:

Operator Training Center
16 Ag Extension Way
Cook Campus
New Brunswick, NJ 08901

Presented By:

Rutgers Air Pollution Training Programs
Department of Environmental Sciences
14 College Farm Road
New Brunswick, NJ 08901-8551

Course Director:

Stephen Szulecki
Dept. of Environmental Sciences
Rutgers University
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Sponsored by:

MARAMA
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<u>Day & Time</u>	<u>Subject</u>	<u>Lecturer</u>
<u>Tuesday, October 23</u>		
9:00 a.m.	Registration & Welcome	S. Szulecki
9:15 a.m.	Pretest	S. Szulecki
9:45 a.m.	BREAK	
10:00 a.m.	Introduction to Source Testing <ul style="list-style-type: none">• Purpose/Logistics of Stack Testing• Brief intro to Methods 1-5• Emission Standards	S. Szulecki
11:00 a.m.	Review of Fundamentals <ul style="list-style-type: none">• Pressure• Temperature• Gas Laws	S. Szulecki
12:00 p.m.	LUNCH	
1:00 p.m.	Stack Gas Velocity Determinations <ul style="list-style-type: none">• Review of Flow Properties• Velocity	S. Szulecki
2:45 p.m.	BREAK	

Day & Time	Subject	Lecturer
<u>Tuesday, October 23 (Continued)</u>		
3:00 p.m.	Laboratory Exercises <ul style="list-style-type: none"> • Pitot Tube Calibration • Stack Pressure Measurement 	S. Szulecki
5:00 p.m.	ADJOURN	
<u>Wednesday, October 24</u>		
9:00 a.m.	Review	
9:15 a.m.	Laboratory Exercises <ul style="list-style-type: none"> • Velocity Traverse • Pitot Tube Orientation 	S. Szulecki
10:30 a.m.	BREAK	
10:45 a.m.	Isokinetic Source Sampling Theory <ul style="list-style-type: none"> • Method 5 Sampling Train • Over- & under-isokinetic conditions • Methods 201/A and 202 	S. Szulecki
12:00 p.m.	LUNCH	
1:00 p.m.	Isokinetic Source Sampling Theory (Continued) <ul style="list-style-type: none"> • Method 5 Sampling Train • Over- & under-isokinetic conditions • Methods 201/A and 202 	S. Szulecki
2:15 p.m.	BREAK	
2:30 p.m.	Source Sampling Methodologies, Cyclonic Flow Evaluation and Sampling, EPA procedures on Source Sampling Calculations	L. Bernson
5:00 p.m.	ADJOURN	
<u>Thursday, October 25</u>		
9:00 a.m.	Review Session – Velocity Traverse Lab Exercise	S. Szulecki
9:30 a.m.	Stack Gas Composition <ul style="list-style-type: none"> • Moisture – Method 4 • CO₂, CO, N₂ – Method 3 • Calculations 	S. Szulecki

Day & Time	Subject	Lecturer
<u>Thursday, October 25 (Continued)</u>		
10:15 a.m.	BREAK	
10:30 a.m.	Stack Gas Composition (Continued) <ul style="list-style-type: none"> • Moisture – Method 4 • CO₂, CO, N₂ – Method 3 • Calculations 	S. Szulecki
12:00 p.m.	LUNCH	
1:00 p.m.	Discussion of Lab Exercise – Orifice Meter	S. Szulecki
1:30 p.m.	Laboratory Exercise: Calibration of Orifice Meter	S. Szulecki
5:00 p.m.	ADJOURN	
<u>Friday, October 26</u>		
9:00 a.m.	Practical Situations in Stack Testing, Sampling Protocol Development, QA/QC Procedures, Detection Limits and Sampling times and Role of the Agency Observer	F. Ballay
10:15 a.m.	BREAK	
10:30 a.m.	Role of the Agency Observer (continued)	F. Ballay
11:00 a.m.	Isokinetic Rate Equation: Calculation and Use of Nomograph	S. Szulecki
12:00 p.m.	LUNCH	
1:00 p.m.	Laboratory Exercise - Stack Test	S. Szulecki
3:00 p.m.	Review Stack Test <ul style="list-style-type: none"> • Calculations • Emission rate • % isokinetic • Sample recovery 	S. Szulecki
3:45 p.m.	Post-test	S. Szulecki
4:45 p.m.	Course Evaluation	S. Szulecki
5:00 p.m.	ADJOURN	

LECTURERS

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