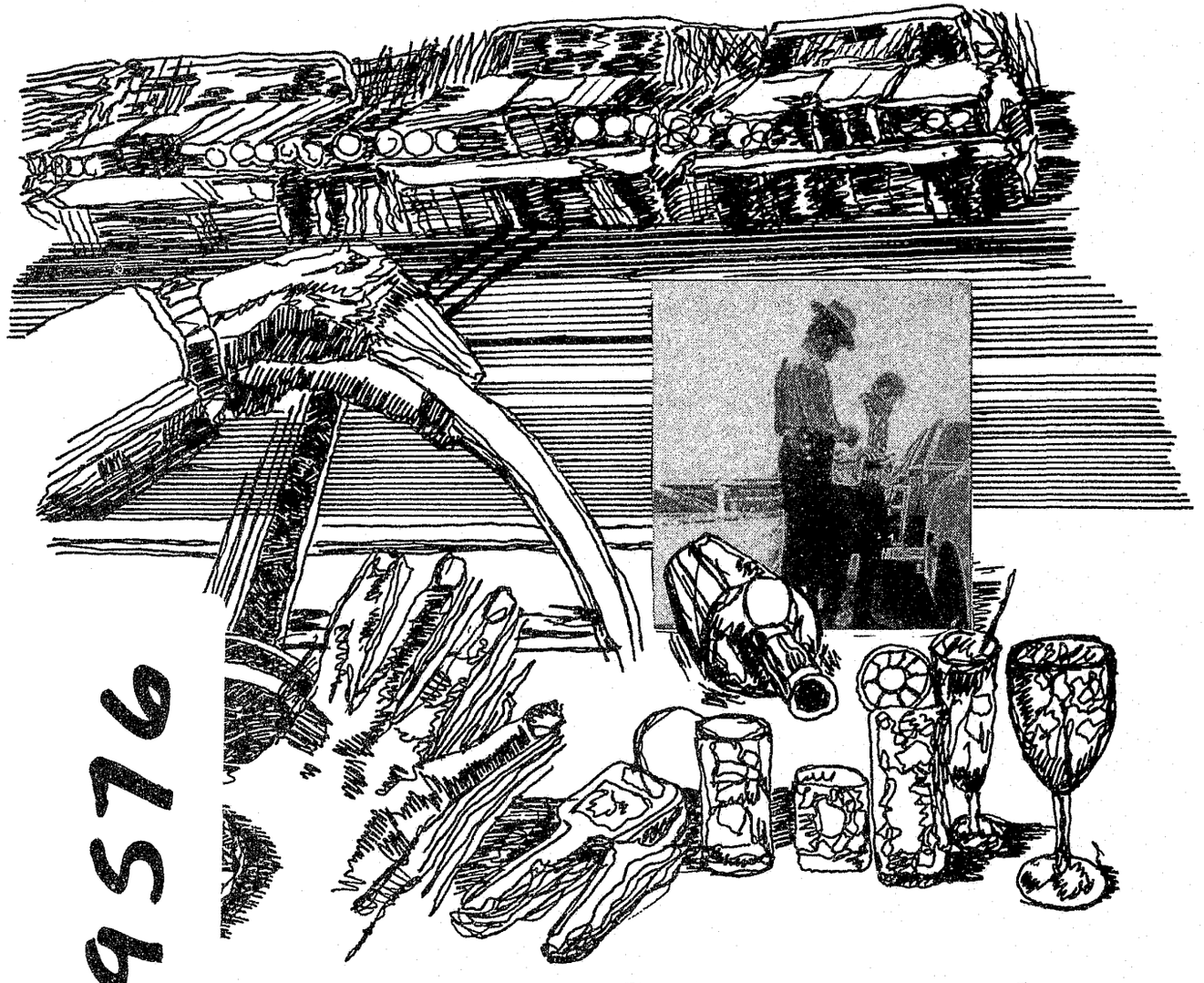
Maryland DWI



Manual

MARYLAND DWI MANUAL

Prepared By

CHEMICAL TEST FOR ALCOHOL UNIT, CRIME LABORATORY DIVISION
MARYLAND STATE POLICE
Pikesville, Maryland

Director – Ira S. Dubey

With Funds Provided By

MARYLAND DEPARTMENT OF TRANSPORTATION
TRANSPORTATION SAFETY DIVISION

August, 1985

INTRODUCTION

More than 50 percent of all highway fatalities in Maryland and the entire United States are alcohol related. The number killed on our nation's highways annually is equal to all Americans, approximately 50,000, killed over a ten year period in Vietnam.

The National Safety Council conservatively estimates that the economic loss to society for a single highway fatality is $200,000. The human and economic impact of these fatalities is catastrophic and affects all of society. The drinking driver brings personal grief and hardship to families and loved ones and affects everyone through increased costs for law enforcement, medical, corrections, rehabilitation, and social services.

It is important that all elements of the law enforcement community work together to reduce the number of drinking drivers on our streets and highways. As law enforcement officers, your initial contact and reaction to drinking drivers affects the entire system of prosecutors, judges, probation departments, treatment centers, and other governmental agencies who deal with this problem.

This manual was developed as a joint effort between the Maryland State Police, the Department of Public Safety and Correctional Services, the Maryland Police Training Commission, the Office of the Chief Medical Examiner, and the State's Attorneys' Coordinator for the State of Maryland. Funds were provided by the Maryland Department of Transportation through a Driving While Intoxicated Countermeasure grant.

The primary purpose of this manual is to aid you, the law enforcement officer, in detecting, apprehending, and processing the drunk driver in addition to testifying about the drinking driver. The intent is to establish common guidelines throughout the State leading to more prosecutable, alcohol-related driving arrests and subsequent court convictions. You should find it a meaningful tool in clarifying and simplifying portions of the DWI enforcement task. This manual is neither the final nor only word in procedure, and it is intended to assist, not dictate, the development of policies. Some agencies may implement the procedures suggested in their entirety, while others may choose to use only selected portions. In any event, it is the sincere hope of the contributors of this manual that everyone will find it useful in making our streets and highways safer for all citizens.

W. T. Travers, Jr.

Col. W. T. Travers, Jr.
Superintendent
Maryland State Police

CONTRIBUTORS

1st Lieutenant David T. Yohman
Sergeant Frederick J. Kirckhoff
Trooper First Class James A. Williams
CTAU - Crime Laboratory Division

Yale H. Caplan, Ph.D., D-ABFT,
Toxicologist
Office of the Chief Medical Examiner

David H. Hugel
State's Attorney Coordinator

Larry G. Karsten
Deputy Director
Division of Highway Safety
State of Colorado

Edward H. Smith, Director
Division of Administrative Adjudication
Motor Vehicle Administration

Bruce Savadow
Maryland Police and Correctional Training Commission

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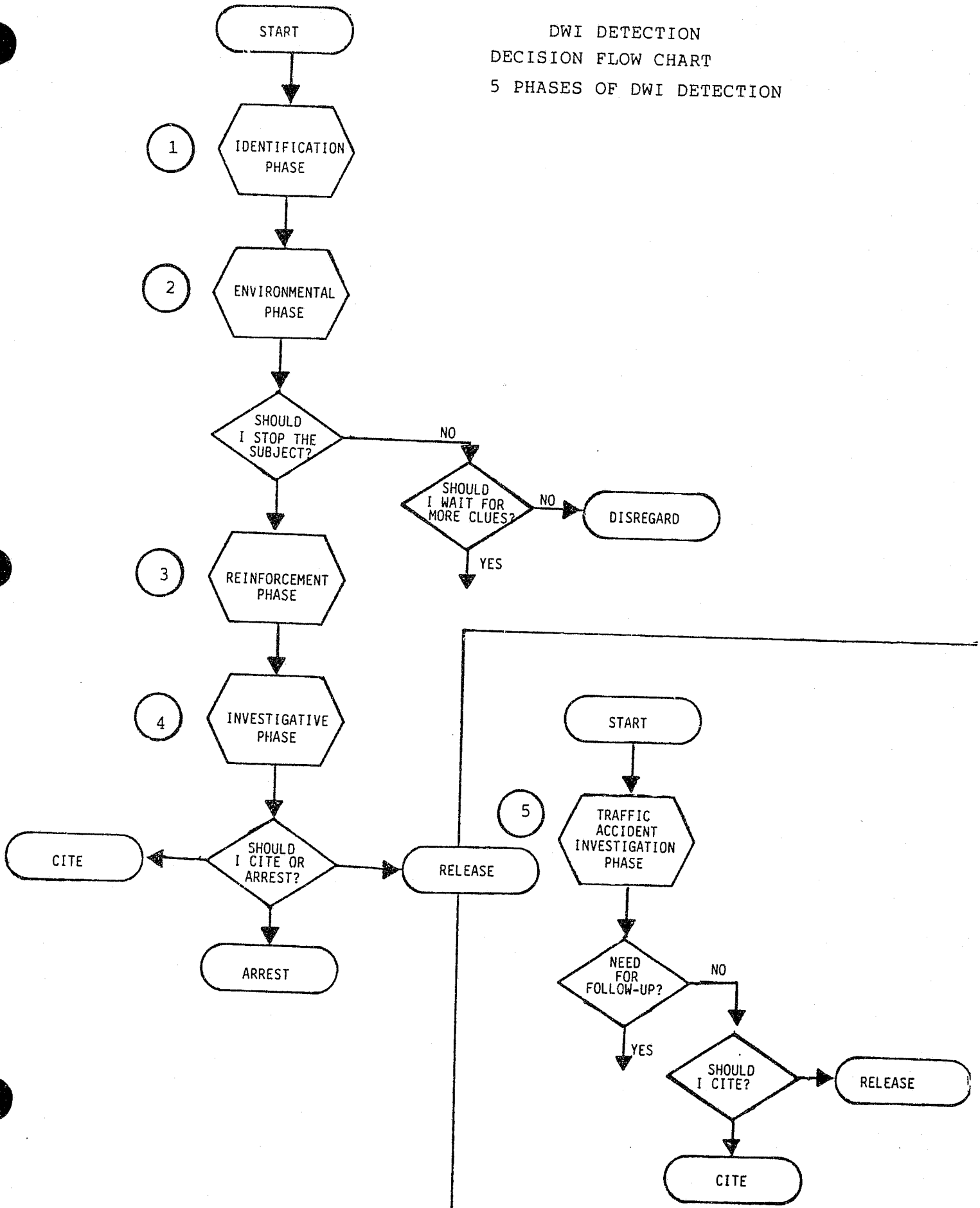

DWI DETECTION
DECISION FLOW CHART
5 PHASES OF DWI DETECTION
START
1
IDENTIFICATION PHASE
2
ENVIRONMENTAL PHASE
SHOULD I STOP THE SUBJECT?
NO
SHOULD I WAIT FOR MORE CLUES?
NO
DISREGARD
YES
3
REINFORCEMENT PHASE
4
INVESTIGATIVE PHASE
SHOULD I CITE OR ARREST?
CITE
ARREST
RELEASE
5
START
TRAFFIC ACCIDENT INVESTIGATION PHASE
NEED FOR FOLLOW-UP?
NO
YES
SHOULD I CITE?
RELEASE
CITE

SECTION I

DETECTION OF THE INTOXICATED DRIVER

One of the most difficult traffic cases to prosecute in the court today is driving while intoxicated or under the influence of alcohol. Unlike criminal cases, the DWI case usually does not have the physical evidence to support the allegations of the arresting officer. The successful prosecution of the case depends greatly upon the ability of the arresting officer to paint the so-called "word picture" in order to explain in graphic detail the events which culminated in the arrest of the accused for driving while intoxicated.

This is not accomplished by a haphazard occurrence, but rather by following closely proven methods of identification, apprehension and prosecution of the intoxicated driver. In other words, a successful driving while intoxicated prosecution involves the gathering of evidence in a chronological order, evaluating the results and arriving at a sound conclusion.

To accomplish the DWI process, five basic tasks must be performed. These tasks provide for the systematic gathering of evidence, which will ultimately allow the officer to present a DWI case for trial.

Defining the Various Phases of Detection

Traditionally, detection of drinking drivers has been defined simply as the process of observing various types of driving behavior exhibited by suspect drivers. Once a suspect's vehicle has been halted, the process of detection is considered complete. The driver is arrested, processed, jailed, and prosecuted; "detection" was the initial step of the overall process. This manual will define "detection" in a different manner, since the process of detecting alcohol impairment is actually a much more involved process than many officers believe it to be. "Detection" as described here consists of five phases:

A. IDENTIFICATION PHASE (Phase I)

In this phase, the officer observes either or both of the following types of clues that may be indicative of a drinking driver:

(1) Vehicle maneuvers

(2) Human indicators

This phase starts at the point where the vehicle or driver (or both) attracts the officer's attention; it stops when the officer first signals the driver to stop.

The officer must recognize that the detection task is fundamental to all other alcohol enforcement tasks. It is the initial step upon

which the remaining tasks hinge. It is necessary to locate the drinking driver in order to institute enforcement action, to establish the framework for investigative activities, to lay the foundation for accumulating evidence, and to build a case for subsequent trial and conviction.

The entire alcohol countermeasures program depends on the detection of the drinking driver. Experience shows that few problem drinking drivers are identified by other than police agencies. The police are the primary source for the identification of potential problem drivers.

B. ENVIRONMENTAL PHASE (Phase II)

One must understand the role the environment plays in the identification phase. The environment setting is very important during the identification of the intoxicated driver. This phase includes: type and condition of the roadway, weather, traffic conditions, type of area, other vehicles, pedestrians, etc. It should also include the age and number of passengers, model year of car and age of driver.

All variables of this phase are important and all environmental factors should be noted (written) for testimony during the prosecution phase.

C. REINFORCEMENT PHASE (Phase III)

This is a phase that normally is very short in duration. It starts when the officer signals the driver to stop. It ends when the driver finally has stopped and the officer has exited his patrol vehicle. During this phase, detection clues are observed by the officer that may or may not reinforce his initial belief that the driver may be impaired by the consumption of alcohol. Detection clues are of two types:

(1) Vehicle maneuvers

(2) Human indicators

D. INVESTIGATION PHASE (Phase IV)

The investigation phase starts when the officer approaches the driver's vehicle on foot. It does not terminate until the cell door is locked or the individual is released. It includes face-to-face contact, questioning, roadside and station house sobriety tests, chemical tests, photographing, fingerprinting, etc. This is the phase in which the officer's initial belief that the driver might be DWI from observation of Phase I and II clues is either confirmed or refuted.

E. TRAFFIC ACCIDENT INVESTIGATION (Phase V)

This phase differs from the other phases because here the officer does not personally observe the driving behavior contributing to an

accident. It is not an "on view" situation. In the course of investigating the traffic accident, the officer discovers clues indicating either or both of the following:

(1) Physical evidence depicting driving behavior possibly caused by alcohol impairment, e.g. driving on wrong side of road.

(2) Human indicators of alcohol impairment, e.g. statements of witnesses, the driver's physical appearance.

The Process of Various Phases of Detection

Identification Phase

During the identification phase (Phase I), the officer makes the initial observation of possible drinking drivers, precipitating the entire chain of events that follow. These observations are made while he is patrolling a selected area, observing traffic movements, looking for erratic vehicle maneuvers, observing drivers and occupants, and looking for driver behavior clues.

The National Highway Transportation Safety Administration (NHTSA) has conducted research into the DWI process and, as a result of this research, has published a "Visual Detection of Driving While Intoxicated Guide". This Guide should be used by the arresting officer to aid in the identification of the intoxicated driver. The more articulate cues the driver displays, the more evidence the officer will have for court. Usually, intoxicated drivers will display more than one cue, but some may not. It is important that the arresting officer pay particular attention to the initial observations. Specifically, he must mentally note exactly how many times the driver drifted across into the other traffic lane, etc. It is important that observations be accurate; they will be used later in the entire process.

The Guide explains the visual cues (vehicle maneuvers or human indicators) and probability values. The twenty cues in the Guide are the best ones for discriminating nighttime drunk drivers from nighttime sober drivers, and they account for more than ninety percent of all DWI detections. The cues were based on the results of field studies in which cues observed in more than 4,600 patrol stops were correlated with driver blood alcohol concentrations (BAC). Thus, the Guide is the most systematically developed method now available for visually predicting whether a vehicle being operated at night is being driven by a drunk or sober driver.

Neither the National Highway Traffic Safety Administration nor the Maryland State Police endorse the use of the numerical value given a visual cue when testifying in court. These numerical values, although accurate, are provided primarily to emphasize the importance of a particular cue. These cues may be used as probable cause for the stop.

Probability Values

The number given after each visual cue is the probability that a driver exhibiting that cue has a BAC equal to or greater than 0.10%. For example, the index, 65 for the first cue, Turning With Wide Radius, means that chances are 65 out of 100 that a driver who turns with wide radius at night will have a BAC equal to or greater than 0.10%. The index, 50 for Drifting, means that chances are 50 out of 100 (50:50) that a driver who is drifting at night will have a BAC equal to or greater than 0.10%.

Each value shown is based on seeing only one cue. However, multiple cues are seen more often than single cues. When two or more cues are seen, a value of 10 should be added to the largest value among the cues observed.

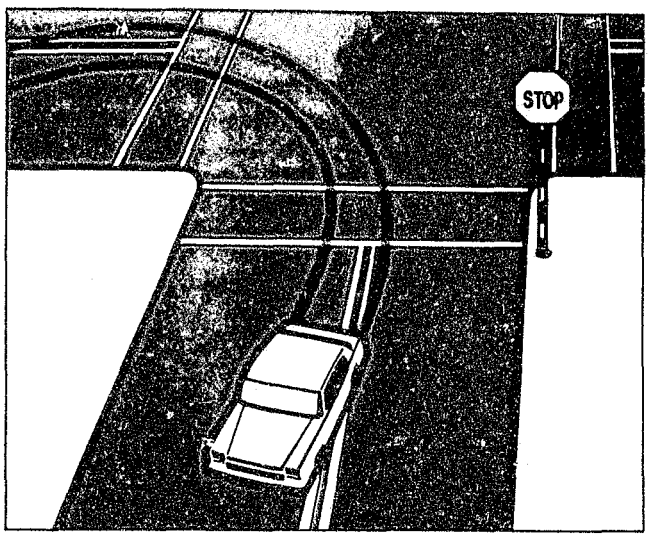
When predicting from an observed cue the probability that a driver has a BAC equal to or greater than 0.05%, add 15 to the value shown for that cue. For multiple cues, add 15 after adding 10 to the largest cue value.

Using the probability values to decide whether or not to stop a particular driver will be a matter of the officer's judgement and experience. The guide is only an aid that provides information concerning which visual cues are most likely to indicate a drunk driver at night.

VISUAL CUE DESCRIPTIONS

65% Turning With Wide Radius

During a turn, the radius defined by the distance between the turning vehicle and the center of the turn is greater than normal. This cue is illustrated below:



65% Straddling Center or Lane Marker

The vehicle is moving straight ahead with the center or lane marker between the left-hand and right-hand wheels.

60% Appearing To Be Drunk

This cue, or human indicator, is actually one or more of a set of indicators related to the personal behavior or appearance of the driver. Examples of specific indicators might include:

- o Slouching in the seat
- o Gesturing erratically or obscenely
- o Eye fixation
- o Tightly gripping the steering wheel
- o Face close to the windshield
- o Drinking in the vehicle

The drawing below illustrates the third, fourth and fifth indicators listed above.

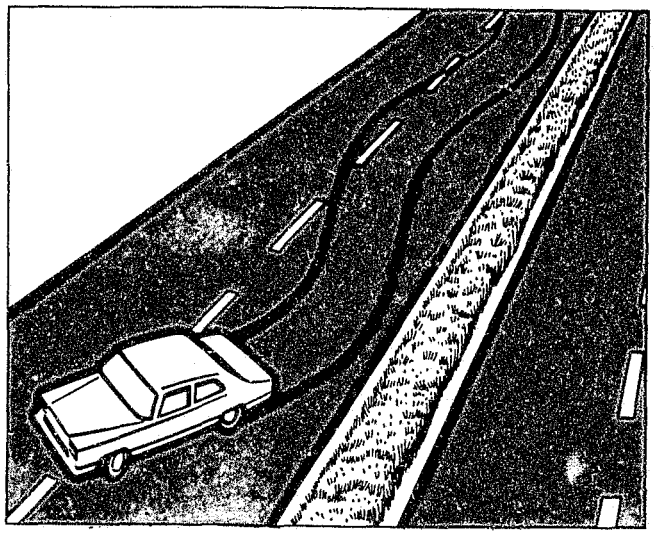
60% Almost Striking Object or Vehicle

The observed vehicle almost strikes a stationary object or another moving vehicle. Examples include: passing abnormally close to a sign, wall, building, or other object;

passing abnormally close to another moving vehicle; and causing another vehicle to maneuver to avoid collision.

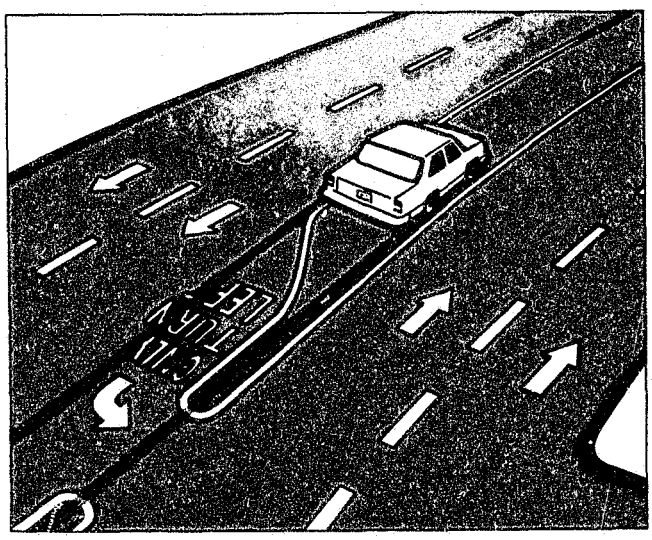
60% Weaving

Weaving occurs when the vehicle alternately moves toward one side of the roadway and then the other, creating a zig-zag course. The pattern of lateral movement is relatively regular as one steering correction is closely followed by another. Weaving is illustrated by the drawing below:



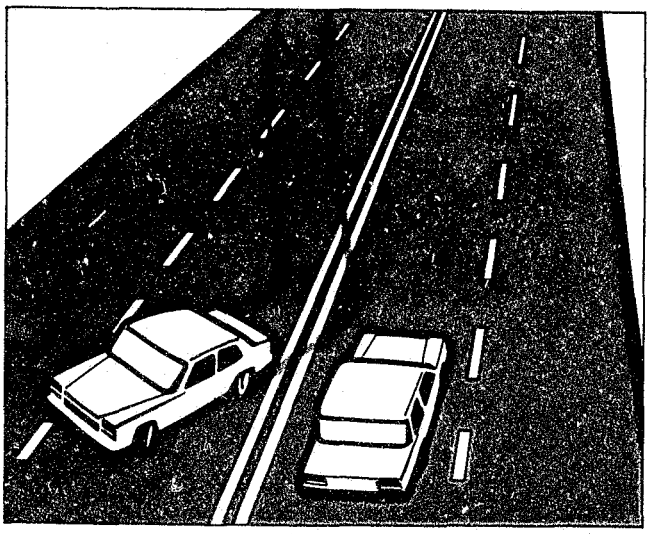
55% Driving on Other Than Designated Roadway

The vehicle is observed being driven on other than the roadway designated for traffic movement. Examples include: driving at the edge of the roadway, on the shoulder, off the roadway entirely, and straight through turn-only lanes or areas. The last example is illustrated below:



55% Swerving

A swerve is an abrupt turn away from a generally straight course. Swerving might occur directly after a period of drifting when the driver discovers the approach of traffic in an oncoming lane or discovers that the vehicle is going off the road; swerving might also occur as an abrupt turn is executed to return the vehicle to the traffic lane. In the illustration below, a swerve was executed to return to a lane after a period of drifting toward opposing traffic.



50% Slow Speed (More Than 10 MPH Below Limit)

The observed vehicle is being driven at a speed that is more than 10 MPH below the speed limit.

50% Stopping (Without Cause) in Traffic Lane

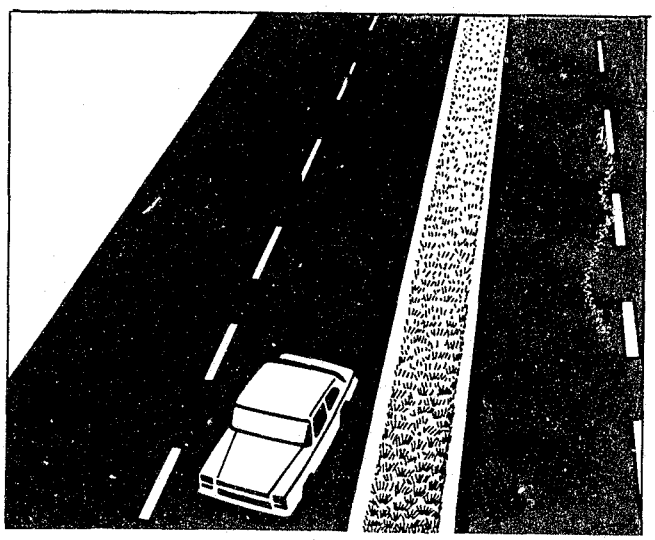
The critical element in this cue is that there is no observable justification for the vehicle to stop in the traffic lane; the stop is not caused by traffic conditions, traffic signals, an emergency situation, or related circumstances. Intoxicated drivers might stop in lane when their capability to interpret information and make decisions becomes severely impaired. As a consequence, stopping (without cause) in the traffic lane is likely to occur at intersections or other decision points.

50% Following Too Closely

The vehicle is observed following another vehicle while not maintaining the legal minimum separation.

50% Drifting

Drifting is a straight-line movement of the vehicle at a slight angle to the roadway. As the driver approaches a marker or boundary (lane marker, center line, edge of the roadway), the direction of drift might change. As shown in the illustration, the vehicle drifts across the lane marker into another lane, then the driver makes a correction and the vehicle drifts back across the lane marker. Drifting might be observed within a single lane, across lanes, across the center line, onto the shoulder, and from lane to lane. An example of this cue is illustrated below:



45% Tires on Center or Lane Marker

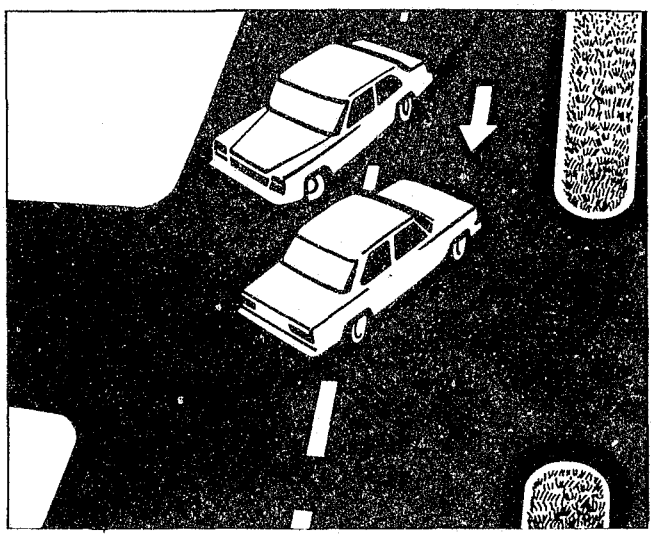
The left-hand set of tires of the observed vehicle is consistently on the center line, or either set of tires is consistently on the lane marker.

45% Braking Erratically

The driver of the observed vehicle is braking unnecessarily frequently, maintaining pressure on the brake pedal ("riding the brakes") or braking in an uneven or jerky manner.

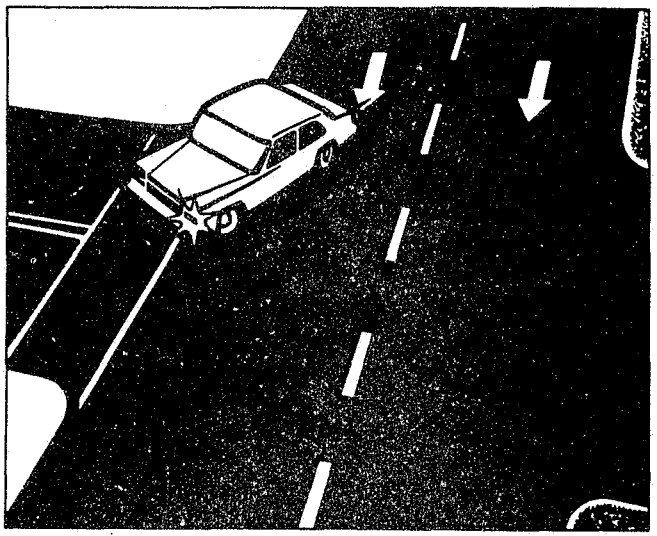
45% Driving Into Opposing or Crossing Traffic

The vehicle is observed heading into opposing or crossing traffic under one or more of the following circumstances: driving in the opposing lane, backing into traffic, failing to yield the right-of-way, driving the wrong way on a one-way street. This last circumstance is illustrated below:



40% Signaling Inconsistent With Driving Actions

A number of possibilities exist for the driver's signaling to be inconsistent with the associated driving actions. This cue occurs when inconsistencies such as the following are observed: failing to signal a turn or lane change, signaling opposite to the turn or lane change executed, signaling constantly with no accompanying driving action, and driving with four-way hazard flashers on. An example of this cue is illustrated below:

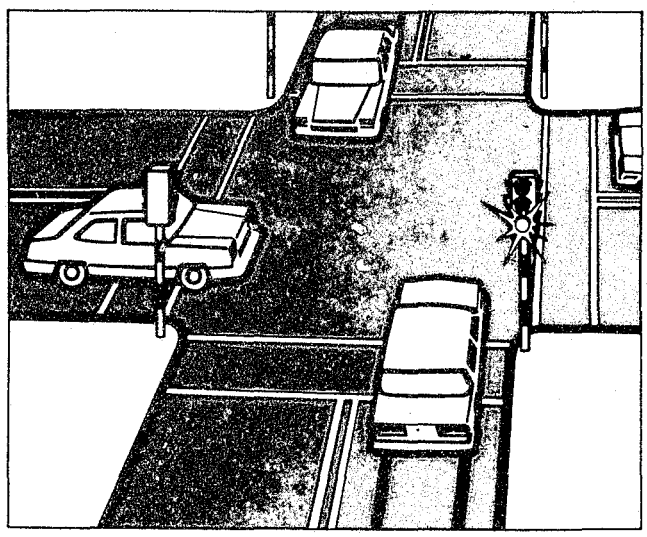


40% Slow Response to Traffic Signals

The observed vehicle exhibits a longer than normal response to a change in traffic signal. For example, the driver remains stopped at the intersection for an abnormally long period of time after the traffic signal has turned green.

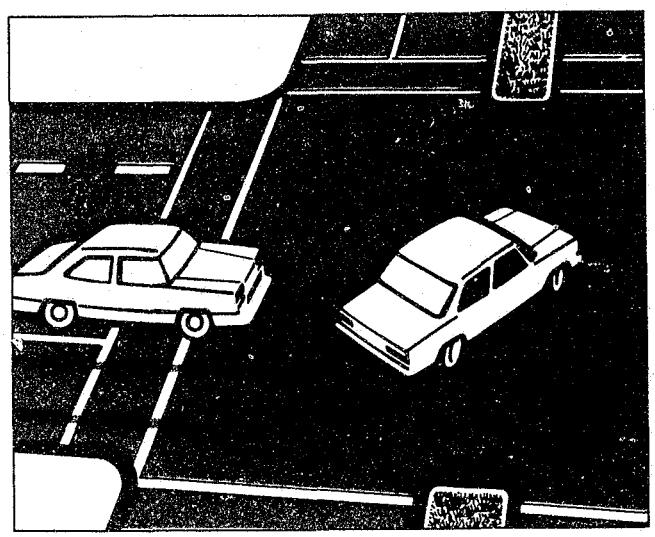
35% Stopping Inappropriately (Other Than in Traffic Lane)

The observed vehicle stops at an inappropriate location or under inappropriate conditions, other than in the traffic lane. Examples include stopping: in a prohibited zone, at a crosswalk, far short of an intersection, on a walkway, across lanes, for a green traffic signal, or for a flashing yellow traffic signal. The drawing below shows one example of this cue.



35% Turning Abruptly or Illegally

The driver executes any turn that is abnormally abrupt or illegal. Specific examples include turning: with excessive speed, sharply from the wrong lane, a U illegally, and outside the designated turn lane. This cue is illustrated on the next page.



30% Accelerating or Decelerating Rapidly

This cue encompasses any acceleration or deceleration that is significantly more rapid than that required by the traffic conditions. Rapid acceleration might be accompanied by breaking traction; rapid deceleration might be accompanied by an abrupt stop. Also, a vehicle might alternately accelerate and decelerate rapidly.

30% Headlights Off

The observed vehicle is being driven with both headlights off during a period of the day when the use of headlights is required.

Environmental Phase

When on patrol, you will find these clues under a wide variety of circumstances. The clue will be only a part of what the trooper sees. It is his responsibility to observe and document as many facts as possible surrounding an event. Consequently, it is necessary to look at Phase I clues taking place in the context of their environmental setting.

Examples of environmental situations:

1. Speeding (45 MPH) -- posted 25 MPH zone -- residential -- good paved road surface -- no traffic -- 1:00 a.m. -- street lights.

2. Wrong side of street -- multi-lane divided -- business zone -- no traffic -- 2:00 a.m. -- street lights.

3. Right turn from left lane -- business zone -- moderate traffic -- Wednesday night -- 10:00 p.m. -- street lights.

4. Left wheels on line -- moderate -- rural -- dry/wet -- blacktop -- fair -- Saturday -- 11:00 p.m. -- darkness -- clear/cloudy -- older car.

5. Unsafe backing -- moderate -- fast -- freeway -- dry -- paved -- good -- night -- clear -- Saturday -- midnight -- night (no lights) -- vehicle backing up to exit ramp while other traffic passing.

6. Following too closely -- moderate -- rural -- dry -- gravel -- poor -- Fall -- Friday -- 10:00 p.m. -- dark -- clear.

7. Speed too slow -- 35 in a 50 MPH -- moderate -- rapid -- rural -- dry -- paved (2 lane) -- good -- Fall -- Saturday -- 2:00 a.m. -- dark (no lights).

8. Failure to yield -- private drive (bar business) -- moderate -- urban -- business -- dry -- paved -- good -- Friday -- 9:00 p.m. -- dusk -- clear -- 2 passengers -- older model car.

9. Weaving (touches line) -- moderate -- slow -- rural -- residential -- dry -- blacktop -- fair -- Saturday -- 9:00 p.m. -- night -- clear -- older model pick-up -- male.

10. Stopping beyond crosswalk at traffic signal -- heavy (pedestrians) -- slow -- urban -- business -- dry -- paved -- good -- Fall -- Friday -- 9:00 p.m. -- night -- clear -- female -- newer model car.

11. Driving close to parked vehicles -- light -- moderate -- residential -- dry -- paved -- fair -- Fall -- Friday -- 7:00 p.m. -- dusk -- male (2 occupants) -- older model car.

12. Failure to yield from stop sign (vehicle stopped but pulls out in front of cross traffic) -- light -- moderate -- residential -- dry -- paved -- Fall -- Friday -- 2:00 a.m. -- night --

Reinforcement Phase

Having decided to stop a suspect vehicle, the reinforcement phase (Phase III) begins. The officer assumes the proper position to stop the suspect vehicle, signaling the driver to stop. The driver then reacts by coming to a halt, attempting to elude the officer, etc. During this stopping procedure, the officer is seeking vehicle maneuver and driving behavior clues to reinforce or refute his original suspicion that the driver may be alcohol-impaired.

It is important to carefully observe how the driver reacts to the signal to stop. How the driver brings the vehicle to a stop can provide valuable evidence of the driver's ability to control the vehicle. Does the driver bring the vehicle to a smooth stop? Does the driver strike the curb when stopping? Does the driver suddenly stop in the driving lane? Although very short in duration, the reinforcement phase can provide valuable evidence to support the officer's opinion of intoxication.

Investigation Phase

Phase IV, the investigation phase, involves many detection opportunities because this phase can be a long one. The officer is able to observe various types of clues as he walks up to the vehicle, talks to the occupants, conducts his pre-arrest investigation, arrests the driver, advises him of his rights, administers field sobriety tests, transports the arrested driver, conducts chemical tests to determine BAC and incarcerates the person. During all of these functions, the officer must be observing clues relating to the driver's behavior and condition.

During this phase, the continuous observations of the driver enable the officer to confirm or refute his belief that the driver is intoxicated. As the officer approaches the vehicle, he must keep the operator under observation. What are his actions? Does he bend over to place or remove something from under the seat? Do not overlook the trunk or back seat when approaching. Keeping safety in mind, get close enough and attempt to detect the odor of an alcoholic beverage emanating from the driver. Often, the vehicle will contain a heavy odor of an alcoholic beverage. You may see containers of intoxicating beverages lying on the floor or on the seat. These may be seized as evidence.[1] The officer may also search the glove compartment or other containers within the passenger compartment if he has reason to believe they may contain alcoholic beverages or drugs. Any broader searches, including the trunk area, should be made only after obtaining a search warrant.[2]

Stopping the Vehicle — Identify yourself, the Agency, and why you stopped him. Do not say you suspect him of DWI. This may place him on the defensive. State only the actual reason for the stop; such as weaving, speeding, etc.

Request the Driver's License and Registration — Watch closely how he attempts to search for his driver's license and registration. He may pass by them several times not even seeing them. If you ask for his license and he gives you a credit card, record it in your reports. At this point, you should begin to notice, and mentally record, his verbal responses. Note if his speech is slurred. Observe the physical condition of the driver. Note his eyes, speech, clothing, etc. If, at this point, you have detected incriminating signs such as an odor of an alcoholic beverage, bloodshot eyes, slurred speech, etc., then you are ready for the roadside sobriety tests.

The roadside sobriety tests provide additional probable cause for the arrest. Experts disagree on the value of the roadside sobriety test; some feel that the anxiety caused by performing the test for a uniformed police officer may affect the performance of the individual rather than alcohol intoxication. Recent research by the National Highway Traffic Safety Administration (NHTSA) supports the validity of the roadside sobriety tests in identifying intoxicated drivers. The validity of these tests will be substantiated by the officer if he follows the performance instructions exactly. It is emphasized that you must not deviate from the instructions whatsoever. Even though an officer has not been given classroom instructions on the proper conduct of the tests, valid results will be obtained by following the instructions.

When requesting the driver to perform the roadside test, advise him that you suspect his driving performance may be affected by his consumption of alcoholic beverages, and the results of his performance of the roadside test will be used with other observations in your decision to release or arrest him.

Consider the following factors before requesting roadside sobriety tests from a driver: the hostile attitude of the driver, passengers, neighborhood, the availability of cover, if the location presents a traffic hazard, or if there are any adverse terrain or weather conditions present. If you feel that conducting the roadside test would be hazardous and you feel the driver is intoxicated or under the influence based on his driving behavior and physical observations, arrest him and remove him from the scene. Drivers may be obviously intoxicated and any further contact may expose you to danger. In this instance, arrest the driver immediately. Experience and a thorough knowledge of the DWI process will guide your actions as to roadside sobriety testing.

If you believe it is safe and justified to conduct the roadside tests, ask the driver to step out of his vehicle and observe how he does it. Frequently, the drinking driver will stumble in an attempt to get out. Watch for him to hold onto a part of his vehicle for support. He may know he is intoxicated and begin compensating for it. Have passengers remain in the vehicle. Conduct the roadside tests towards the right rear of the subject's vehicle so that you can keep an eye on the passengers.

Before you request him to perform roadside tests, ask him if there is anything wrong with him medically. This eliminates medical issues the driver might possibly bring up in court at a later date. Determine if he is under medication for any ailment that would affect his driving behavior. Ask these questions in such a manner as not to give him the idea of creating an excuse at the time. Just say, "Do you have any serious illness," "Are you taking medication," etc. You want to eliminate all possible medical and physical reasons that could affect his driving behavior except for alcohol.

It is important to establish a routine when conducting the roadside sobriety tests. A well organized routine will allow the process to flow smoothly and allow you to testify at a later date more effectively because you will remember exactly the sequence you followed in administering the tests. It is necessary to administer only enough tests to assist you in making a final determination of release or arrest. Immediately preceding the tests, you may want to state the following: "Mr./Ms. Doe, I am going to ask you to perform a series of physical maneuvers; I want you to do the best you can; and, if at any point, you do not understand my instructions, please feel free to ask me to repeat them." The following two tests are recommended in this order:

Divided Attention Tests

Walk and Turn and One Leg Stand are divided attention tests. That means that they require the suspect to concentrate on more than one thing at a time.

Walk and Turn requires the suspect to divide attention between mental tasks and physical tasks. The mental tasks include: comprehension of verbal instructions; processing of information; and, recall of memory. The physical tasks include balance and coordination. The suspect must be able to maintain balance and coordination while standing still; while walking on a straight line; and, while turning around.

The Walk and Turn Test has two stages:

- o the instruction stage
- o the walking stage

During the instructions stage, the suspect must be able to maintain balance while standing heel-to-toe, and simultaneously must listen to and comprehend the test instructions.

During the walking stage, the suspect must take nine heel-to-toe steps down a straight line, turn around on the line exactly as instructed, and take another nine heel-to-toe steps up the line.

Under the influence of alcohol, people are likely to make certain predictable mistakes when attempting to perform the Walk and Turn test. Officers look for these predictable mistakes as evidence of the suspect's alcoholic impairment.

One Leg Stand also requires the suspect to concentrate on more than one thing at a time. In this test, the suspect first must concentrate on balancing and listening, and then, must concentrate on balancing and counting out loud.

The One Leg Stand test also has two stages:

- the instruction stage
- the balancing and counting stage

During the instructions stage, the suspect must maintain balance while standing with the heels together, and listening to the instructions.

During the balancing and counting stage, the suspect must stand on one foot, with the other leg held stiffly out in front, and with the raised foot approximately six inches off the ground; simultaneously, the suspect must count 30 seconds out loud ("one-one thousand, two-one thousand," etc.)

Under the influence of alcohol, people are likely to make certain predictable mistakes when attempting to perform the One Leg Stand. These mistakes provide evidence of the suspect's alcoholic impairment.

Procedures for Walk and Turn Testing

A. Instructions Stage: Initial Positioning and Verbal Instructions

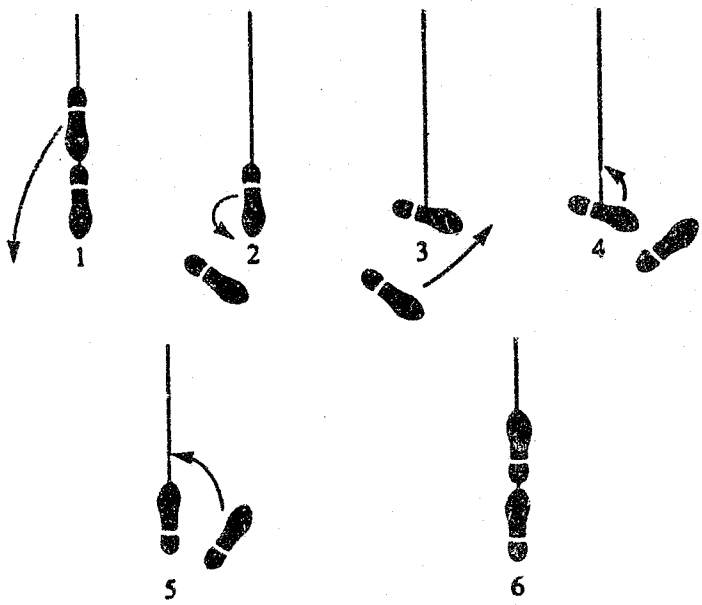
Have the suspect assume the heel-to-toe stance by giving the following verbal instructions, accompanied by demonstrations:

- Place your left foot on the line (place your own left foot on the line to demonstrate.)
- Place your right foot on the line ahead of the left foot, with heel of right foot against toe of left foot (demonstrate.)
- Keep this position until I tell you to start walking. Do not start to walk until I tell you to do so.
- Do you understand the instructions so far? (Make sure suspect indicates he or she understands.)

B. Demonstrations and Instructions for the Walking Stage

Explain the test requirements, using the following verbal instructions, accompanied by demonstrations:

- When I tell you to start, you will take nine heel-to-toe steps down the line, turn around, and take nine heel-to-toe steps back up the line. (Demonstrate two or three heel-to-toe steps.)
- When you turn, keep the front foot on the line, and turn by taking a series of small steps with the other foot, like this: (Demonstrate)



- o While you are walking, keep your arms at your sides, watch your feet at all times, and count your steps out loud.
- o Once you start walking, don't stop until you have completed the test.
- o Do you understand the instructions? (Make sure suspect indicates he or she understands.)
- o Begin, and count your first step from the heel-to-toe position as "One".

C. Scoring

You may observe a number of different behaviors when a suspect performs this test. Research, however, has demonstrated that the behaviors listed below are the most likely to be observed in someone with a BAC of 0.10 percent or more. In scoring this test, give only one point for each item observed (even if it is observed more than once) with a maximum score of 9 points.

(1) Cannot keep balance while listening to the instructions.

Two tasks are required at the beginning of this test. The suspect must balance heel-to-toe on the line, and, at the same time, listen carefully to the instructions. Typically, the person who is intoxicated can do only one of these things. He or she may listen to the instructions, but not keep balance. Score this item if the suspect does not maintain the heel-to-toe position throughout the instructions. Do not score this item if the suspect sways or uses the arms to balance, but maintains the heel-to-toe position.

(2) Starts before the instructions are finished.

The intoxicated person may also keep balance, but not listen to the instructions. Since you specifically instructed the suspect not to start walking "until I tell you to begin," score this item if the

suspect does not wait. Other aspects of not listening to the instructions are included in the other items.

(3) Stops while walking to steady self.

The suspect pauses for several seconds after one step. Do not score this item if the suspect is merely walking slowly.

(4) Does not touch heel-to-toe.

The suspect leaves a space of one-half inch or more between the heel and toe on any step. Also score this item if the suspect does not walk straight along the line.

(5) Steps off the line.

The suspect steps so that one foot is entirely off the line. Only count this item once, even if the suspect steps off several times.

(6) Uses arms to balance.

The suspect raises one or both arms more than six inches from the sides in order to maintain balance.

(7) Loses balance while turning.

The suspect removes the pivot foot from the line while turning. That is, score this item if both feet are removed from the line. Also score this item if the suspect clearly has not followed directions in turning; for example, he or she pivots in one movement instead of the several-small-steps movement that he or she was instructed to perform.

(8) Incorrect number of steps.

Score this item if the suspect takes more or fewer than nine steps in either direction.

(9) Cannot perform the test.

Score this item if the suspect steps off the line three or more times, is in danger of falling, or otherwise demonstrates that he or she cannot do the test. If this item is scored, the suspect gets 9 points for this test, the maximum score.

Should the suspect have difficulty with this test (for example, steps off the line), have him or her repeat the test from the point of difficulty; not from the beginning. This test tends to lose its sensitivity if it is repeated several times.

Observe the suspect from three or four feet away and remain motionless while he or she performs the test. Being too close or excessive motion on

your part will make it more difficult for the suspect to perform, even if sober.

If the suspect scores two or more points on this test, classify the BAC as above 0.10 percent. Using this criterion, you will be able to classify correctly about 68 percent of your suspects with respect to whether they are drunk or sober. So, your decision point on the Walk and Turn test is TWO.

D. Test Conditions

Walk and Turn requires a hard, dry, level, non-slipping surface with sufficient room for the suspect to complete nine heel-to-toe steps. Conditions must be such that the suspect would be in no danger if he or she were to fall.

Some people have difficulty with balance even when sober. People more than sixty years of age, fifty pounds overweight, or with physical impairments that affect their ability to balance, should not be given this test. Individuals wearing heels more than two inches high should be given the opportunity to remove their shoes. Individuals who cannot see out of one eye may also have trouble with this test because of poor depth perception.

Procedures for One Leg Stand Testing

A. Instructions Stage: Initial Positioning and Verbal Instructions

Initiate the test by giving the following verbal instructions, accompanied by demonstrations:

- Please stand with your heels together and your arms down at the sides, like this (demonstrate.)
- Do not start to perform the test until I tell you to do so.
- Do you understand the instructions so far? (Make sure suspect indicates he or she understands.)

B. Demonstrations and Instructions for the Balancing and Counting Stage

Explain the test requirements, using the following verbal instructions, accompanied by demonstrations:

- When I tell you to start, you will stand on one leg, holding the other foot out in front, like this (demonstrate one leg stance.)
- You may stand on either leg that you wish.
- Keep the raised foot about six inches off the ground, like this: (Demonstrate)

- o While you are standing, you will count out loud for 30 seconds, like this (demonstrate a count, as follows: "one-one thousand, two-one thousand, and so on, all the way to thirty-one thousand.)

- o Throughout the entire test, keep your arms at the sides at all times, and keep watching the raised foot.

- o Do you understand? (Make sure suspect indicates he or she understands.)

- o Go ahead and perform the test.

C. Scoring

You may observe a number of different behaviors when a suspect performs this test. Researchers, however, have found that those behaviors listed below are the most likely to be observed in someone with a BAC of 0.10 percent or higher. In scoring this test, give only one point for each item observed, even if it is observed more than once. The maximum possible score on this test is five points.

(1) The suspect sways while balancing. This refers to a side-to-side or back-and-forth motion while the suspect maintains the one-leg-stand position.

(2) Uses arms for balance.

He or she moves the arms six or more inches from the side of the body in order to keep balance.

(3) Hopping.

He or she is able to keep one foot off the ground, but resorts to hopping on the anchor foot in order to maintain balance.

(4) Puts foot down.

The suspect is not able to maintain the one-leg-stand position, putting the foot down one or more times during the 30-second count.

(5) Cannot do test.

Score this item if the suspect puts the foot down three or more times during the 30-second count or otherwise demonstrates that he or

she cannot do the test. If you score this item, give the suspect five points - the maximum for this test.

Remember that time is critical in this test. Research has shown that a person with a BAC of 0.10 percent can maintain his balance for up to 25 seconds, but seldom as long as 30.

If an individual scores two or more points on the One Leg Stand, there is a good chance the BAC is 0.10 percent or higher. So, your decision point on this test is TWO. Using that criterion, you will correctly classify about 65 percent of the people you test as to whether their BACs are above or below 0.10 percent.

Observe the suspect from at least three feet away, and remain as motionless as possible while he or she is performing the test, so as not to interfere with the test. If the suspect puts the foot down, instruct him or her to pick the foot up again and continue counting from the point at which the foot touched the ground. If the suspect counts very slowly, terminate the test after 30 seconds actually have elapsed.

D. Test Conditions

One Leg Stand requires a hard, dry, level, non-slippery surface. There should be adequate lighting for the suspect to have some visual frame of reference; in total darkness, One Leg Stand is difficult even for sober people. Conditions must be such that the suspect would be in no danger if he or she were to fall.

Some people have difficulty with One Leg Stand even when sober. People more than sixty years of age, more than fifty pounds overweight, or with physical impairments that interfere with balance should not be given this test. Individuals wearing heels more than two inches high should be given the opportunity to remove the shoes.

After the roadside sobriety test the officer may want to administer a preliminary breath test (PBT) to the driver. Only those officers who have successfully completed the PBT course and are approved to administer the test may do so. The officer will follow the procedures outlined in the Patrol Manual, Chapter 25, Section XI, Subsection 2-3 to 2-5 inclusive, and the regulations of The Toxicologist, Office of the Chief Medical Examiner. If the officer is not presently assigned a PBT, he must determine the value of waiting for another officer to respond with a PBT. If the officer has closely observed and noted the actions of the driver, the timely availability of a PBT should not be a serious consideration.

At this point, you should be able to make a sound decision either to arrest or release the driver. You have observed his driving behavior and his physical and mental condition in the vehicle. These factors, together,

constitute probable cause for the arrest or should influence your decision to release the individual.

If you decide that you have probable cause to arrest him for driving while intoxicated or under the influence, consider the following recommended procedure: If possible, have another officer available at the time you advise the driver he is under arrest. People are very unpredictable when they think they are going to jail. Always search and handcuff the arrested drinking driver. By handcuffing him, you are preventing him from possibly hurting himself as well as you. DWI's have been known to jump out of moving patrol vehicles when they were not handcuffed and fastened securely into the front seat by the use of a safety belt. Again, people under the influence are unpredictable.

If you have not established probable cause to arrest the driver after conducting the roadside sobriety tests, then the appropriate decision is to release him. (Possibly cite him for original violation if indicated.) But remember, much rests on your effectiveness in properly detecting the drinking driver. As was stated before, the impaired or problem-drinking driver can be very dangerous, and you will have to be exceptionally alert in detecting him. If you fail in this detection process and let him go, it could cost someone their life.

Once the driver has been arrested, you must make arrangements for the disposition of his vehicle and protection of his personal property. Follow procedures as outlined in the Patrol Manual, Chapter 30. If there are passengers in the vehicle, you must make arrangements for their removal to an appropriate area so they may continue their journey.

Traffic Accident Investigation Phase

In this phase, detection takes place during accident investigation and is as complex as any of the other phases. There are many opportunities for detection to take place, beginning with the initial dispatch to and arrival at the scene, through all of the steps that are taken in seeking physical and non-physical evidence of accident causation. Of course, when alcohol appears to be a contributing factor, observation of the suspect driver(s) is especially important. Noting the driver's behavior and condition can be as important as determining the facts of the accident itself.

The officer should conduct this phase of the investigation as outlined earlier. All of the foregoing provisions are applicable to accident investigation.

FOOTNOTES

1. Colorado v. Bannister, 101 S.Ct. 42 (1980).

2. United States v. Ross, 102 S.Ct. 2157 (1982).

SECTION II

PROCESSING

We define processing as that period of time commencing with the arrest of the drinking driver and terminating when he has been jailed, released on bond, or released on the summons by the discretion of supervisory personnel. (refer to Patrol Manual, Chapter 25, Section XI, Subsection 6-0 for Regulations on Discretionary Release of DWI Violators.) It is during this stage that the arresting officer completes the necessary forms required to prosecute the case successfully in court. NOTE: Record the date and times accurately on all forms.

After the violator has been placed under arrest, the individual will be advised of his rights to a chemical test to determine the alcohol content of his blood. The Advice of Rights To A Chemical Test will be read to the individual from the form provided by the Motor Vehicle Administration. (See Appendix G.)

If the accused expresses a desire to consult with an attorney prior to submitting to a chemical test, the accused will be given an opportunity to contact an attorney prior to deciding on whether or not to submit to a chemical test. The accused may contact his attorney by telephone, and may, in addition, consult with his attorney face-to-face in the barrack. He shall be given a reasonable time period in which to contact his attorney, and, if the attorney comes to the barrack, to consult with his attorney face-to-face. Thereafter, the accused shall be advised that he must make a decision to elect to submit or refuse the chemical test. If the accused fails to make this decision, he will be advised that he has refused to submit to the chemical test and the MVA Form DR-15A, "Officer's Certification of Driver's Refusal to Submit to Chemical Test", will be submitted to MVA in accordance with established procedure.

If the accused's attorney is present at the barrack at the time the accused is being offered a chemical test, or the attorney responds to the barrack as a result of a telephone call from the accused, the officers will proceed as follows:

1. Provide the attorney with a copy of MSP Form 36 "Procedures to be Followed When Conducting Interview with DWI Suspect by Counsel."

2. Advise counsel that he may not give the accused anything to eat, smoke, drink, or take orally or intravenously. Counsel will not be permitted to administer a breath test prior to the election by the accused to take or refuse the State administered chemical test.

3. Advise counsel that he will be permitted to consult with his client, but that the arresting officer, in compliance with regulations established by the Toxicologist, Office of the Chief Medical Examiner, must be within a reasonable distance to observe the accused. The officer will not eavesdrop on the conversation between the accused and his counsel.

4. If counsel violates any of these provisions, or attempts to administer a breath test, the accused will be immediately removed and counsel will be instructed that the consultation is suspended until he agrees to comply with these provisions. The accused will be permitted a reasonable time to consult with his attorney, so long as this does not interfere with the officer's administration of the test within the required statutory time limit.

5. After consultation with his attorney, the accused will be advised that he must decide to submit to or refuse to take a chemical test.

The accused may have his attorney administer a chemical test after the accused has submitted to the evidentiary test administered at the direction of the arresting officer.

If the individual refuses to take a chemical test, the arresting officer will complete the MVA Form DR-15A, "Officer's Certification of Driver's Refusal to Submit to a Chemical Test" and forward to the MVA within seventy-two hours of the apprehension. The individual will also be provided a copy of the form.

The individual should be charged with "driving while intoxicated," Section 21-902(a). Depending upon the advice and policy of the State's Attorney for the respective area, the individual may also be charged with "driving under the influence of alcohol," Section 21-902(b).

If the individual agrees to take a chemical test, the arresting officer shall notify the appropriate installation of this fact so that qualified chemical test personnel may be notified and be ready to give the test. All tests, regardless of type, must be given within a period of two hours of the time of apprehension.

If an individual fails to take any of the required chemical tests within two hours of the time of apprehension and it is apparent that such failure to comply is the result of intentional subterfuge or delaying tactics, he shall be presumed to have "refused" and proper action shall be taken. (See Willis v. State, Appendix N on definition of apprehension and two-hour time period.)

All entries of results of breath tests will be completed by the Breathalyzer operator on both forms, MSP Form 36A and MSP Form 36B, at the time of the test. All other entries (blood or refusal) will be completed by the arresting officer on MSP Form 36B. All entries will be hand printed at the time of refusal in black or blue ink.

When an individual has been tested at a location other than that of the arresting authority, the Breathalyzer operator will provide the arresting officer with a copy of the test results and other necessary information for entry into the Log of Tests for Alcohol Influence Arrests of the arresting authority. Proper notation will be made in the "Comments" column of the Log of Tests, indicating where the test was conducted, e.g. "test conducted at Montgomery County Police Department, Rockville, Maryland."

In those cases where the arresting authority is an agency which is not approved to conduct Breathalyzer tests, the testing agency will record the arrest information on their Log of Tests for Alcohol Influence Arrests. A copy of the Breathalyzer forms will be given to the arresting officer and the original will be filed with the testing agency.

Breath Test

Only a properly licensed Breathalyzer operator will make the examination. The operator will be held strictly accountable for the determination of what alcoholic content is present, and shall be prepared to testify in detail how this was determined. The arresting officer may not administer the breath test. (See Courts and Judicial Proceedings Article, Section 10-304.) The equipment used must have been approved by the Toxicologist. (See Appendix O.)

If the results are 0.13 percent or over, the defendant will be charged with "driving while intoxicated," Section 21-902(a). Consistent with the advice or policy of the State's Attorney for the respective area, another citation may also be issued to the defendant for "driving while under the influence of alcohol," Section 21-902(b).

If the results are 0.08 percent or more, but less than 0.13 percent, the defendant should be charged with "driving while under the influence of alcohol," Section 21-902(b). Results in this range may not give rise to any presumption that the defendant was or was not intoxicated or driving while under the influence of alcohol, but may be considered with other competent evidence in determining the guilt or innocence of the defendant.

If the results are 0.05 percent or below, and the individual appears to be extremely intoxicated, the individual should be examined by a physician to determine the reason for his physical and/or mental impairment. It is an established fact that some drivers use alcohol and drugs in combination, which significantly affect the individual's physical and mental faculties. Additionally, there are many medical infirmities which resemble alcohol intoxication but are not. An examination by a physician will resolve the matter. If the individual arrested has tested less than 0.05 percent, the individual should be charged with either driving while intoxicated or under the influence, based upon the advice of the State's Attorney. In no instance will a person arrested for driving while intoxicated be released without being charged formally after consultation with and consent from the local State's Attorney. (Refer to Patrol Manual, Chapter 25, Section XI, Subsection 3-5.)

All Breathalyzer tests will be conducted in accordance with procedures established by the Toxicologist, Office of the Chief Medical Examiner, and adopted by this Agency. These procedures may be found in the "Regulations of the Toxicologist, Office of the Chief Medical Examiner, Post Mortem Examiners Commission, State of Maryland, Regarding Chemical Tests of Breath and Blood for Alcohol."

Blood Test

The chemical test of blood will be administered in accordance with the Article of Courts and Judicial Proceedings, Section 10-305.

Only the blood alcohol collection kits approved by the Toxicologist, Office of the Chief Medical Examiner (OCME) will be used for the withdrawal of blood.

Only those persons approved under the provisions of Courts and Judicial Proceedings, 10-304(c) and/or the Toxicologist, Office of the Chief Medical Examiner, will be utilized to withdraw blood.

The arresting officer should witness the withdrawal of blood to prevent the medical personnel from having to appear in court.

The arresting officer will be responsible for properly filling out all forms used in conjunction with the blood alcohol collection kit.

To assure prompt payment of medical personnel and provide for specimen analysis, MSP Form 34 (Alcohol Analysis - Medical Personnel Payment Authorization) will be completed by the arresting officer at the time of the blood withdrawal (including the social security number of the medical personnel and the hospital federal tax identification number) and approved by the installation commander or his representative. The form will then be forwarded with the blood specimens to the Chemical Test for Alcohol Unit (CTAU) for approval and analysis. When forwarding blood specimens, procedures established by the CTAU will be followed. (See Appendix K.) If the medical personnel are needed for court appearance, an additional copy of the MSP Form 34 will be completed, referring to the original, and forwarded to the CTAU.

The arresting officer will be responsible for sealing the blood kit and forwarding it to the CTAU via U.S. Mail unless the circumstances dictate personal delivery.

In an emergency, when a blood kit is requested by any other department, the person handling such request will be certain a summons has been written or a warrant has been issued for the person suspected of being intoxicated. This person will also instruct the requesting party as to persons authorized to draw the blood. It should be noted that other law enforcement agencies are responsible for maintaining their own supply of blood alcohol collection kits.

Before mailing:

1. seal each tube of blood with seals provided and complete required information

2. place the tubes of blood in the protective inner case and secure with two evidence seals

3. make sure the MSP Form 34 is correctly completed

4. place the secured protective case containing the blood samples and MSP Form 34 in the mailing package.

5. the mailing package should already have affixed to it the name and address of the CTAU. If it does not, make sure you correctly address it before mailing. Place your installation's return address on the package and check it for proper postage. Take the package to your local post office and place it in an inside mail depository. If the package is placed in an outside mail depository during cold weather, the sample tubes could freeze and break, thus destroying the blood samples.

COMMON ERRORS MADE IN COMPLETING MSP FORM 34

Area	Errors
Arrest Date	Not completed
Arrest Time	Not completed
1st Sample Time & Date	Not completed, or times entered are the same or before arrest time
Location Sample Taken	Body part indicated instead of physical place, i.e. Easton Hospital
Court Appearance Time & Date	New form not submitted to CTAU with this information if medical personnel are required for court appearance.

For detailed explanations on completing MSP Form 34, see Appendix K.

Additional Information

The arresting officer will, at all times, be responsible for filling out the Alcohol Influence Report (MSP Form 32) except that in the case of breath tests, the qualified operator will be sure that the part of the report pertaining to the chemical test is accurately filled out. This form will be used in all cases regardless of whether or not a chemical test is given when an individual is charged with a violation of Section 21-902.

FILLING OUT THE ALCOHOL INFLUENCE REPORT FORM

This form is designed to provide specific and accurate information about the accused that will assist you later in testifying in court or at an Implied Consent hearing. It is also designed to allow the processing procedure to flow smoothly and logically. The form should be completed as soon as possible after you have taken the accused into custody.

Observations and Performance Evaluations - All observations need to be recorded SPECIFICALLY, because you will rely heavily on them when testifying against the accused at a later date. Remember though, it is most important that you obtain a chemical test as soon after arrest as possible; so, do not delay the process. In completing the Form 32, write down in your words what you have observed. The following examples may help:

A. Arrest Information: When completing this section, be sure that all observations of the accused are recorded. This includes all phases of DWI detection, how the accused was dressed, his physical appearance, and any additional information which will aid in refreshing your memory of specific details at trial.

B. Observations: Record accurately how the accused performs the field sobriety testing. If the individual is not offered or does not perform the field sobriety tests, his physical performance may still be evaluated.

C. Field Interview: After the chemical test, breath or blood, has been completed, advise the individual of his Miranda warnings before any in-custody interrogations are started. (See Appendix for detailed explanation.) Complete this section if the accused waives his Miranda rights or if he refuses to answer questions, so state.

Ability to Understand Instructions - Be alert when asking the accused questions; observe what he does when you ask him to perform the physical task. If you ask him for his driver's license, and he gives you a credit card, record it in this section. If you tell him to touch his nose with the tip of his first finger, and he uses the middle finger, record it. If you have to explain something to him several times before he understands it, record it, e.g. you have to explain three times how you want him to touch the tip of his nose with the tip of the right finger.

Miranda Advisement - This advisement is not required until the accused is in custody and before interrogation begins. Advise the accused of his constitutional rights. (See Appendix E). The advisement of rights MUST precede the interview section of the Alcohol Influence Report Form which is located on the back. However, spontaneous statements by the subject, made at any time during your contact, need not be prefaced by Miranda warnings. Simply note the circumstances under whch they were made and quote them. For example, when you ask, "Where were you going?" and he replies, "Mars," don't just note it, QUOTE it.

STATE OF MARYLAND

ALCOHOL INFLUENCE REPORT FORM

CASE NO.	COMPLAINT CONTROL NO.	ACCIDENT REPORT NO.	CITATION NO.	DATE AND TIME OF ARREST AM PM

NAME	DRIVER'S LICENSE NO. AND STATE

ADDRESS	SEX	DATE OF BIRTH

SIGN OF ILLNESS OR INJURY

ARE YOU TAKING MEDICATION?	WHAT KIND OF MEDICATION?	DATE AND TIME OF LAST DOSAGE

REASON FOR STOPPING DEFENDANT'S VEHICLE OR INITIAL CONTACT – INCLUDE LOCATION AND DIRECTION OF TRAVEL, WHERE ACCUSED WAS STOPPED – DESCRIPTION OF INDIVIDUAL

ARREST INFORMATION

OBSERVATIONS

FIELD PERFORMANCE TESTS							
	☐ NOT PERFORMED						
BALANCE:	☐ FALLING	☐ NEEDED SUPPORT	☐ WOBBLING	☐ SWAYING	☐ UNSURE	☐ SURE	OTHER
WALKING:	☐ FALLING	☐ NEEDED SUPPORT	☐ WOBBLING	☐ SWAYING	☐ UNSURE	☐ SURE	OTHER
TURNING:	☐ FALLING	☐ NEEDED SUPPORT	☐ WOBBLING	☐ SWAYING	☐ UNSURE	☐ SURE	OTHER
FINGER TO NOSE:	RIGHT HAND		☐ COMPLETELY MISSED		☐ HESITANT	☐ SURE	OTHER
	LEFT HAND:		☐ COMPLETELY MISSED		☐ HESITANT	☐ SURE	OTHER
PICKING UP COINS:		☐ UNABLE	☐ FUMBLING	☐ SLOW	☐ SURE		OTHER

BALANCING WHILE PICKING UP COINS

HOW MANY PASSENGERS WITH ACCUSED (SOBRIETY IF KNOWN)

EVIDENCE IN VEHICLE – DISPOSITION (PROPERTY HELD NO.)

NOTE: MIRANDA WARNING MUST BE GIVEN TO ACCUSED BEFORE CONDUCTING INTERVIEW.

ANSWERING QUESTIONS IS VOLUNTARY, IF ACCUSED REFUSES TO ANSWER, SO STATE.

FIELD INTERVIEW

MIRANDA WARNING GIVEN ☐ YES ☐ NO	TIME AM PM	DR-15 FORM READ: ☐ YES ☐ NO	TIME AM PM
WERE YOU DRIVING A VEHICLE?		WHERE WERE YOU GOING?	
WHAT STREET OR HIGHWAY WERE YOU ON?		WHAT DIRECTION WERE YOU TRAVELING?	
WHERE DID YOU START FROM?		WHAT TIME DID YOU START?	

DO YOU HAVE ANY PHYSICIAL DEFECTS? IF SO, WHAT

ARE YOU A DIABETIC?		DO YOU HAVE EPILEPSY?		
HAVE YOU BEEN DRINKING?	WHAT	HOW MUCH?	WHAT TIME DID YOU START?	STOP

PBT

WAS PRELIMINARY BREATH TEST OFFERED? ☐ YES ☐ NO	PRELIMINARY BREATH TEST TAKEN ☐ YES ☐ NO	PBT SERIAL NO.

CHEMICAL TEST DATA

CHEMICAL TEST PERSONNEL

DATE AND TIME TEST GIVEN	TYPE TEST ☐ BLOOD ☐ BREATH	ALCOHOL (BY WEIGHT OF ALCOHOL) O. %

DISPOSITION

TRIAL DATE	COURT	PLEA	VERDICT
JUDGE		STATES ATTORNEY	

FINES AND COSTS

DISPOSITION

ARRESTING TROOPER – ID #

REVIEWING SUPERVISOR – ID #

COMMENTS

The arresting officer will be responsible for coordinating original trial dates, postponements, etc. with the courts, the Toxicologist, Office of the Chief Medical Examiner, medical personnel, Breathalyzer operators and other witnesses.

As in all cases where it is necessary to incarcerate an accused, the transportation of the accused and the disposition of his vehicle is to be accomplished according to Agency procedure. (Chapter 30, Section II, Subsection 5.) Proper entry shall be made in the installation incarceration ledger.

Chemical tests, whether they are breath or alcohol, should never be used by themselves in prosecuting a case. They supplement, but do not supplant, normal investigative procedure.

The results of chemical tests of blood will not be immediately available, therefore, the accused should be charged initially with Section 21-902(a), unless the State's Attorney for the respective area wishes an additional summons issued for Section 21-902(b). Upon receipt of the results of tests of less than 0.13 percent, the State's Attorney will be contacted before the trial date reference amending the initial citation.

APPENDICES

APPENDIX A

ETHANOL

PHARMACOLOGY AND TOXICOLOGY

ALCOHOL

Alcohol is a descriptive term which denotes a particular type of chemical compound. All alcohols are hydrocarbon derivatives. All alcohols contain a hydroxyl group composed of two atoms, one oxygen and one hydrogen. All alcohols are miscible (infinitely soluble) in water. Within the general category of alcohols there are many individual chemical compounds. All of these compounds are alcohols, but each possesses different chemical properties. The different chemical structures of these various alcohols results in each chemical being metabolized by the body to different metabolic products. This is why each alcohol has a different level of toxicity. All alcohols are toxic and if a sufficient quantity is consumed or introduced into a human, then death will result.

Ethanol is the specific alcohol which is present in alcoholic beverages. Ethanol in its purest state is a colorless liquid which possesses an ethereal odor and produces a burning taste sensation. Unless otherwise specified, the term alcohol will be considered to denote ethanol in this text.

ALCOHOL PRODUCTION

Alcohol can be produced naturally through the process of fermentation or synthetically produced through industrial means. The usual method of synthetic production is from the breakdown products produced when petroleum is refined. Alcohol synthetically produced is not sold for human consumption and is therefore not taxed by the federal government. Commonly, this product is denatured (poisoned) to discourage the consumption of this non-taxed alcohol. Methanol, isopropanol and benzene are three denaturants frequently used to poison industrially produced ethanol. Consumption of denatured alcohol can be very unpleasant and possibly lethal.

All alcohol intended for human consumption must be naturally produced. Natural production of alcohol always begins with the process of fermentation. Fermentation is the only process by which beer and wine are produced, and it is the first step in the production of distilled spirits. To produce beer, the fermentation process is usually carried out in a large vat in which at least one grain, some malted barley and yeast are combined. This mixture is referred to as the "mash." The malted barley contains an enzyme, beta-amylase, which converts the starch of the grain into sugar. The yeast then consumes the sugar and excretes ethanol as a waste product. This process will continue until either all the sugar has been consumed or the ethanol concentration reaches a maximum of approximately 15% by volume, thereby inactivating the yeast. In the production of wine, fruit juice is substituted in place of the grain, and the malt is unnecessary because the fruit juice is already high in sugar content. When beer or wine are the

desired end products, the fermentation process is usually carefully controlled so that a product with a specific alcohol concentration is collected.

Beer usually contains from 4 to 6% ethanol by volume. Wine usually contains between 12 to 15% ethanol by volume. Wines of greater alcohol content are produced by either adding additional alcohol or blending the wine with another alcoholic product, such as brandy. All values for alcoholic beverages listed in this text are approximate values and vary not only from state to state, but also from one nation to another.

Production of distilled spirits (Whiskey, Rum, Vodka, etc.) is accomplished by heating the fermented mash to evaporate the alcohol. The type of grain or cereal used in the mash along with the manner of processing determines the type of beverage produced. The vapors from the heated mash are collected and cooled to form a liquid. This distillate (liquid portion) formed from the cooled vapors contains the ethanol plus some water and flavorings from the fermented mash. Throughout the process, it is essential that precautions be taken to insure that ethanol is the only alcohol collected. After the distillate is collected, it is commonly placed in charred wooden barrels for aging. During the aging process certain chemicals are extracted from the wood and dissolved in the distillate. It is these chemicals, called congeners, which give aged distilled spirits (Whiskey, Scotch or Rum) their distinctive color, aroma and taste. Colorless distilled spirits (Vodka and Gin) are not aged and consequently have only a faint odor in comparison to aged spirits. Distilled spirits usually contain from 40 to 50% ethanol by volume. Fermented fruit juice may also be distilled. This is the process used to produce brandy. After distillation, the brandy is usually aged in oak barrels for at least three years.

PROOF SYSTEM

In the United States, the ethanol concentration of distilled beverages is shown by the proof system. The proof of an alcoholic beverage is equal to twice the ethanol concentration. As an example: 100 proof whiskey contains 50% ethanol by volume. Pure ethanol would be 200 proof because it is 100% ethanol.

ABSORPTION OF ALCOHOL

Ethanol can enter the human body in several different manners: injection, inhalation, and ingestion. Ethanol has not been demonstrated to accumulate in the body as a result of absorption through the skin. Injection of ethanol directly into the body is an extremely dangerous procedure because it produces a localized concentration of ethanol that can severely affect the heart and other vital organs. This phenomenon is referred to as the "bolus effect." Another possible route for ethanol to enter the body is through inhalation of alcoholic vapors. When the alcoholic vapors come into contact with the lungs and mucous membranes lining the nasal passages and throat, then the ethanol can diffuse through the membranes into the blood.

However, to reach significant levels of alcohol concentration requires exposure to a severely irritating environment for an extended period of time. It is therefore most unlikely that any individual would become intoxicated in this manner. The usual method for alcohol to enter the body is by ingestion of an alcoholic beverage. Ethanol is absorbed into the blood stream by contact with and diffusion through mucous membranes. Ethanol is not digested, but absorbed unchanged! The mouth, throat and the entire gastrointestinal tract are all common sites of alcohol absorption. The anal canal, vaginal tract, and ureter are also lined with mucous membranes and could serve as possible sites for alcohol absorption.

Once the alcoholic beverage enters the oral cavity, absorption begins immediately. Absorption continues as the beverage passes into the stomach and later into the small intestine. Since the alcohol absorbed through the mucous membranes lining the mouth is rapidly distributed to the surrounding tissue, the presence of alcohol can still be detected even after the alcoholic beverage has been swallowed. Residual alcohol is the alcohol which remains in the mouth and will affect a breath alcohol test. Alcohol can be reintroduced back into the oral cavity under certain conditions. If alcohol is present in the stomach, and if some of the alcohol is regurgitated back into the mouth, then a portion of that alcohol would be absorbed by the mucous membranes lining the oral cavity. Regardless of how the alcohol is introduced into the mouth, the presence of residual alcohol diminishes below significant levels within fifteen minutes.

When the alcoholic beverage reaches the stomach, some of the ethanol is absorbed through the stomach lining directly into the blood stream. This absorption from the stomach is unique because most other substances ingested cannot diffuse through the protective stomach lining.

The rate of absorption of ethanol through the stomach lining and the passage to the remainder of the gastrointestinal tract can vary due to several factors. The type of alcoholic beverage consumed can affect the absorption rate. Carbonated beverages tend to promote absorption, while fatty or oily beverages tend to slow down absorption. The concentration of ethanol in the alcoholic beverage consumed can also affect absorption. If the alcohol concentration in the stomach becomes too high, this can irritate the stomach lining and reduce the amount of alcohol absorbed from the stomach. Studies have also demonstrated that there is a concentration of ethanol in a beverage which promotes that most rapid absorption. Concentrations higher or lower than this level are absorbed less rapidly. Altitude has an effect on the rate of alcohol absorption. Higher altitudes tend to promote faster absorption of ethanol. The functioning of the pyloric sphincter, which controls the passage of the stomach contents from the stomach to the small intestine, can also have an effect on the rate of ethanol absorption. The longer the ethanol is held in the stomach, the slower the overall rate of absorption. The most significant effect on alcohol absorption is the quantity of food substances ingested with or immediately prior to consumption of an alcoholic beverage. A large amount of food present in the stomach will serve to delay the absorption of ethanol. If no food is present in the stomach, the rate of ethanol absorption is faster. The small intestine is the site of the most rapid absorption of ethanol. All of these various factors

combine with others to determine the specific absorption rate of a particular dose of alcohol consumed by a particular individual. Because of these various factors, absorption of ethanol can best be explained through the use of general rules which describe the overall concepts, but may not be specific for a particular situation. As a general rule only, complete absorption of a single alcoholic beverage is usually accomplished in from forty-five minutes to an hour, with an empty stomach.

DISTRIBUTION OF ALCOHOL

Once the alcohol has been absorbed, it is transported throughout the entire body. When the ethanol is absorbed into the blood stream from the small intestine it is transported to and passes through the liver. From the liver, the alcohol next passes with the blood to the right side of the heart. The alcohol and blood then travel to the lungs and return to the left side of the heart. When the alcohol and blood leave the heart, they are distributed throughout the entire body. The blood leaving the heart reaches the brain tissue directly through the carotid arteries. Studies have shown that equilibrium between the arterial blood and the brain is reached extremely rapidly.

The concentration of ethanol in the various tissues depends upon the tissue water content. The greater the water content of a tissue, the greater its alcohol concentration will be in relation to other tissues. Water content varies according to the different kinds of tissue. For example, the water content of muscle is greater than the water content of bone. The tissue water content can also vary from one individual to another. An obese person has less water per pound of body weight than an emaciated person because adipose (fat) tissue has a very low water content. Body water content also varies according to sex. Females have less water per pound of body weight than males because of the presence of adipose tissue in the breasts, buttocks and thighs. Since the concentration of alcohol is directly proportional to the body water content (within the limits already discussed) the concentration will vary according to the body weight. As a general rule, the heavier a person is, the greater the amount of alcoholic beverage that must be consumed to reach a specific alcohol concentration in the body.

The rate of alcoholic beverage consumption can affect the distribution of alcohol throughout the body. A slow, steady rate of consumption allows absorption and distribution to closely follow, thereby producing a slow, steady rise in the alcohol concentration of the body. However, rapid consumption of a large quantity of alcoholic beverage results in the absorption exceeding the rate of distribution. This produces a rapid rise in the alcohol concentration of the body. When this happens, the alcohol concentration in the arterial blood will exceed the alcohol concentration in the venous blood. It is important to remember that it is the alcohol concentration in the arterial blood which is reaching the brain tissue and exerting the effects on mental and physical faculties.

Ethanol is removed or eliminated from the body in several ways: metabolism, excretion, and evaporation. Metabolic processes account for the elimination of most of the alcohol consumed. As the alcohol is transported through the body with the blood, it passes again and again through the liver. During each pass through the liver a portion of the alcohol is metabolized by the enzyme Alcohol Dehydrogenase (ADH). The ethanol is oxidized to simpler compounds such as acetaldehyde and acetic acid. The acetic acid can then be broken down by another process into carbon dioxide and water. The carbon dioxide and water are eventually formed into urea and excreted through the kidneys. The rate at which ethanol is oxidized is constant for a particular individual, but varies somewhat from one person to another. Reported rates for alcohol oxidation usually range from 0.010% to 0.025% per hour. (The % symbol as used here and in other areas is a shorthand notation meaning grams of ethanol per hundred milliliters of blood, or two hundred and ten liters of breath. This value represents a weight to volume relationship.) Higher rates of oxidation have been reported and are usually associated with chronic consumption of large quantities of ethanol. Although the average ratio for ethanol oxidation is approximately 0.018% per hour, the value of 0.02% per hour may be used for ease of computation.

A small percentage of ethanol consumed is excreted unchanged into the urine. The amount of ethanol in the urine is proportional, within certain limits, to the ethanol concentration in the blood. Prior to elimination from the body, the urine is stored in the bladder. The bladder is very poorly supplied with blood and very little of the urine alcohol is reabsorbed back in the blood stream.

A portion of the ethanol consumed is eliminated from the body through the process of evaporation. Alcohol dissolved in the perspiration is transported through the skin and then evaporates into the surrounding air. A portion of the ingested alcohol is also evaporated into the breath and then exhaled from the body. The exchange of alcohol from the blood to the breath occurs in the alveoli of the lungs. The alveoli are minute tissue sacs in the lungs which are richly supplied with blood from the heart. The separation between the alveoli and the blood capillaries is permeable to certain vapors. This is where the exchange between oxygen and carbon dioxide takes place. By diffusion, a portion of the alcohol in the blood can evaporate into the breath. This exchange of alcohol from the blood to the breath can be explained by Henry's Law. According to Henry's Law, the concentration of a volatile substance in the air above a fluid is proportional to the concentration of the volatile substance in the fluid, within certain limits of concentration. The temperature of breath emanating from the mouth is normally 34 degrees C. At this temperature, the blood:breath ratio of 1:2100 has been accepted for use in computing alcohol concentrations. This means that a breath test instrument is calibrated so that 2100 milliliters of alveolar breath, at 34 degrees Centigrade, will have the same alcohol concentration as one milliliter of blood.

The blood:breath ratio is based upon a normal breath temperature of 34 degrees C. If a breath sample were collected and analyzed from an individual

with a high fever, this would affect the results of a breath test. If the breath temperature is significantly greater than normal, then more alcohol will be evaporated into the breath. This causes an increase in the final result of a breath alcohol test. If the breath temperature is significantly lower than normal, then less alcohol will be evaporated into the breath. This causes a decrease in the final result of a breath alcohol test. However, to have a significant effect, the breath temperature must vary by at least 2 degrees F. For example, a subject with an alcohol concentration of 0.10% and who had a fever of 2 degrees F above normal would produce a breath alcohol result of 0.106%.

In breath alcohol testing it is important to collect an alveolar sample. If an alveolar sample is not collected, then the sample will be diluted with breath of lower alcohol concentration from the upper respiratory tract. This will result in a lower than optimum test result. It is the responsibility of the breath test operator to collect the best sample possible.

Regardless of the method, elimination is a physiological process and as such is not significantly affected by exercise or stimulants such as caffeine. Therefore, neither stimulants nor exercise will affect the results of a breath alcohol test. Fructose, a sugar, has been suggested to increase the rate of elimination, but no consistent evidence has been demonstrated. Of course, increasing the rate of elimination would only speed up the process of sobering up, and would not change the effect of the alcohol on a person's performance. Currently, the only proven method for sobering up is to allow sufficient time for the body to eliminate the alcohol.

DOSAGE FORMS OF ALCOHOL

Alcohol is usually ingested through the consumption of an alcoholic beverage. To ease certain computations, a hypothetical normal dosage is used. Beer is about 4% ethanol by volume, therefore, a 12 fluid ounce container of beer contains approximately one-half fluid ounce of pure ethanol. (12 fl. oz. of beer x [0.04 fl.oz. ethanol ÷ 1 fl. oz. beer] = 0.48 fl.oz. ethanol.) One fluid ounce of 100 proof distilled spirits contains one-half fluid ounce of pure ethanol. (1 fl.oz. 100 proof spirits x [0.5 fl.oz. ethanol ÷ 1 fl.oz. 100 proof spirits] = 0.50 fl.oz. ethanol.) For the purpose of discussion, one "drink" will be considered one 12 fluid ounce serving of beer or one fluid ounce serving of 100 proof distilled spirits.

ALCOHOL CONCENTRATION CURVE

As noted before, body weight affects the alcohol concentration reached when a given amount of alcoholic beverage is consumed. Assuming the normal healthy male to have a body weight of 150 pounds, the consumption of one drink could produce an alcohol concentration of 0.02% in the blood. Recall that the body is capable of eliminating alcohol at the rate of 0.02% per hour, or the equivalent of one drink per hour. Therefore, in order to accumulate alcohol in the body, the rate of absorption must exceed the rate of elimination. When consumption ceases and absorption has been completed, the

alcohol concentration will gradually fall as the alcohol is eliminated from the body. There is an alcohol concentration curve which can be divided into three phases: the absorption phase, the peak phase, and the elimination phase. The slope of each phase will vary according to the various factors affecting absorption, distribution and elimination of alcohol. It is important to understand that absorption, distribution and elimination occur in all of these phases. However, in the elimination phase the rate of elimination is greater than the rate of absorption. This results in a net decrease in the alcohol concentration of the body.

The best method of determining the alcohol concentration in the body at any particular time is to conduct a chemical test. When a breath alcohol test is administered, the results demonstrate the alcohol concentration at the time the sample was collected and analyzed.

Based upon the results of a breath alcohol test, there are three possibilities as to what the alcohol concentration was at a time prior to the test. The alcohol concentration at a prior time could have been the same; higher or lower, depending on the circumstances. In regard to an individual arrested for driving while intoxicated, the alcohol concentration is usually higher at the time of arrest compared to the time of the breath alcohol test.

INTOXICATION

When the alcohol concentration reaches a certain level, the individual concerned is intoxicated. Intoxication refers to the reduction or loss of normal physical and mental faculties. Intoxication is based upon measurable changes in an individual's performance of a specific task, such as operating a motor vehicle. The term "intoxication" should be separated from the more common term "drunk." The term "drunk" is used as a descriptive word, denoting a particular type of observed behavior.

A tremendous amount of research has been performed to identify the progressive levels of intoxication induced by ethanol with regard to impairment in the operation of a motor vehicle. This information does not apply either to public intoxication or the operation of boats, planes or trains.

The single fundamental fact regarding alcohol consumption is that increasing alcohol concentration results in increasing impairment of normal physical and mental faculties. Research has demonstrated that between 0.00% and 0.04% alcohol concentration, the majority of individuals do not demonstrate significant measurable impairment. Changes in personality and mental states are sometimes observed and some persons do show impairment even at this low level of alcohol concentration. When the alcohol concentration increases to between 0.05% and 0.08%, the majority of individuals demonstrate some degree of measurable impairment. Judgment is the first area noticeably affected. Behavioral changes are sometimes observed and there is a loss of social inhibitions. Fine muscular coordination is affected and complex reaction time is lengthened. Complex reaction is the time required for a person to perform two tasks almost simultaneously. Above 0.08% alcohol concentration,

current research has shown that all persons are impaired with regard to the operation of a motor vehicle. Increasing the alcohol concentration above 0.08% results in further impairment of normal physical and mental faculties.

As the alcohol concentration continues to rise, it presents a threat to life. Persons with an alcohol concentration of 0.30% or greater should be carefully observed and consideration given to seeking medical assistance. This level of alcohol may cause respiratory depression. An individual with an alcohol concentration of 0.40% or greater may lapse into a coma. This level of alcohol could result in death, although persons receiving medical attention have survived higher levels.

TOLERANCE AND ETHANOL

The least understood phenomenon of alcohol consumption is tolerance. Tolerance is usually defined as the effect which results from the chronic use of a drug when a larger dose becomes necessary to achieve the desired effect. However, in discussing alcohol tolerance, it is more convenient to reverse this definition and consider tolerance as the effect where the expected changes in behavior or impairment in performance of a specific task are not observed. There are two general types of tolerance: natural tolerance and learned tolerance.

Natural tolerance consists of three areas: inborn tolerance, physical tolerance and stress tolerance. Certain individuals demonstrate a natural inborn tolerance to low levels of alcohol concentration. These persons are able to perform a specific task as well and sometimes slightly better with a low level of alcohol, compared to their performance when alcohol free. This effect may result from the alcohol lowering these individuals' anxiety in the testing situation. This type of tolerance has only been demonstrated at levels below 0.08%, and is most prominent between 0.04% and 0.06% alcohol concentration. Another form of natural tolerance is physical tolerance. The effect of a given alcohol concentration will always be greater in persons who are ill as compared to the same persons when healthy. These individuals' normal physical and mental faculties are already affected due to their sickness, and this adds to the effects of the alcohol. Another form of natural tolerance is stress tolerance. In high stress or anxiety situations, adrenalin is released in the human body to stimulate the body's response to the source of stress. In intoxicated individuals, this results in those persons appearing less intoxicated than they really are. Stress tolerance is only a temporary effect, lasting for a few minutes. Due to the transient nature of this response, it has been difficult to determine whether this effect results in a lessening of the influence of the alcohol on these persons, or if the adrenalin assists in making these individuals aware of their situation, resulting in these persons attempting to consciously disguise their intoxication. Regardless of how a person appears, it is important to remember that it is the impairment of the individual's normal physical and mental faculties which are important. An individual may consciously or unconsciously attempt to disguise his intoxication, but cannot alter the fact that his judgment, reactions and coordination are impaired.

Learned tolerance consists of three areas: behavioral tolerance, acquired tolerance, and acute tolerance. Behavioral tolerance is a result of the influence of the social setting and the social customs associated with alcohol consumption in a particular situation. An individual will behave differently in different social settings even though the alcohol concentration in that person was the same on both occasions. An individual's mood or sense of well-being will also influence their behavior at a particular alcohol concentration. A person who is depressed and unhappy is usually more depressed and unhappy following the consumption of alcohol. This effect is usually best observed at low levels of alcohol concentration, because higher levels may alter the person's perception of reality. Another type of learned tolerance is acquired tolerance. Acquired tolerance results from the chronic use of alcohol. A chronic user of alcohol is accustomed to the effects of alcohol and may attempt to compensate for these effects. These persons attempt to alter their behavior in order that they do not appear intoxicated. Tests demonstrate that these persons are indeed impaired in judgment, reaction and coordination, but have learned through experience to disguise their outward appearance of intoxication. A novice drinker (one who has not experienced the effects of alcohol) will demonstrate greater outward effects than those expected at a given alcohol concentration. This is due to the absence of an acquired tolerance.

The last type of learned tolerance is acute tolerance. This is sometimes referred to as the Mellanby Effect. Acute tolerance is the result of an individual comparing his own assessment of his present condition with his past condition. During the absorption phase of the alcohol concentration curve, the individual compares his perceived state with his condition when alcohol free. Thus, a person at the position marked "x" compares his present state with his condition when alcohol free. His perception has been altered so that the effects of the alcohol are overestimated. Later, during the elimination phase, the same individual compares his present perceived state with the peak phase of the alcohol concentration curve. Thus, a person at the position marked "y" compares his present condition with the time when the alcohol in his body was at its highest concentration. His perception has been altered such that the effects of the alcohol are underestimated. In both instances, the alcohol concentration was equal and the person equally impaired. However, because the individual perceives himself as less intoxicated in the elimination phase, although equally impaired at a given alcohol concentration, this increases the hazard of operating a motor vehicle.

Because of the various aspects of alcohol tolerance, judging an individual's intoxication can be very diffcult when based solely on visual observation. Most people have not closely associated with intoxicated individuals under circumstances which would allow objective evaluation. One person's judgment of another's intoxication is often influenced by their interpersonal relationships and social prestige. The best method for determining intoxication is to administer a chemical test to determine the alcohol concentration in that individual.

EFFECTS OF ALCOHOL

Ethanol acts as a depressant, not as a stimulant. It is this action of alcohol which accounts for its effects on the human body. The effects of alcohol can be demonstrated in all sensory-motor functions, plus, there are definite effects on the biochemical pathways of the body. Ethanol has such a broad spectrum effect due to both the large quantity consumed and the site of action. It is not the alcohol in the peripheral areas of the body which impairs a person's coordination, but the alcohol concentration in the brain tissue. It is in the brain that alcohol exerts its effects. In the brain, the alcohol acts to depress nerve transmission and to reduce coordination between various nerve centers. Depressing the nerve transmission results in the reduction of normal physical and mental faculties.

The first effect of alcohol on mental faculties is the impairment of judgment. Judgment is a general name given to various decision making aspects of human behavior. Such topics as social inhibitions, self evaluation, risk assessment, and perception of reality are all included under judgment. Alcohol depresses learned social and cultural inhibitions. This can result in an individual demonstrating inappropriate behavior or the expression of suppressed hostility. The depression of these inhibitions allows for the release of suppressed behavior that otherwise would have been concealed. Consumption of alcohol also results in an impairment of self-evaluation. Self-evaluation is the ability of an individual to judge their own behavior or performance in a particular situation. When individuals are required to perform a specific task, both in an alcohol free state and later when intoxicated, these individuals will consistently rate their performance when intoxicated as better than when alcohol free.

However, independent observation of these individuals clearly demonstrates that when intoxicated they performed the task slower and with more errors. These individuals have lost the ability to judge their own performance. Alcohol also has the ability to create a feeling of euphoria. Euphoria is a sense of well-being. Because of this artificial sense of well-being, combined with an increase in the pain threshold, an intoxicated individual may ignore minor injuries. Serious injuries may be considered trivial with no attempt made to seek the necessary medical attention. Because of the induced state of euphoria, an intoxicated individual's perception of reality is altered. Another aspect of judgment affected by alcohol is risk assessment. Each person has the ability to determine what risks are acceptable to them and to understand the consequences of their actions. An intoxicated individual may accept risks which would be unacceptable when alcohol free.

Other aspects of an individual's mental faculties are also affected by alcohol. Intoxicated individuals may exhibit a loss of memory such as the inability to recite the alphabet. Intoxicated persons sometimes have difficulty in remembering the date and the time of day. Intoxicated individuals may demonstrate a shortened attention span and the inability to concentrate on a particular task.

Alcohol also has significant effects on the physical faculties. The sense

of vision and visual perception, hearing, smell and taste are all affected by alcohol. Alcohol can cause a blurring of vision because it depresses the coordination between the eyes such that they do not focus on the same spot, as in normal vision. As the alcohol concentration is increased, this results in diplopia (double vision). Alcohol lengthens the glare recovery time. Glare recovery is the adjustment back to normal vision after a bright light has been shined in the eyes. Alcohol increases the time required for the eyes to make this necessary adjustment for night driving. When intoxicated, dim lights are more difficult to perceive, and colors are harder to distinguish than when alcohol free. An intoxicated individual may demonstrate the effect called light fixation. The intoxicated person's attention becomes fixed on a flashing light. It is not uncommon for police vehicles to be struck by another vehicle driven by an intoxicated person because of this effect. An intoxicated individual will also demonstrate the effect known as Positional Alcohol Nystagmus. When an intoxicated individual places his head in a lateral position, it can cause rapid involuntary eye movements. This is why intoxicated persons sometimes complain of the room spinning around. Because of the rapid eye movements, the individual perceives that the room is moving. Another aspect of the effects of alcohol on visual perception results in the distortion of distance estimation. An intoxicated person will consistently overestimate distances and as one consequence will underestimate speed when operating a motor vehicle.

Alcohol also impairs the hearing perception. Although no direct effect has been shown on the physical mechanism of hearing, alcohol raises the minimal level of noise to which the person will respond. Noises which are usually heard are ignored due to lack of attention. One consequence of this is that an intoxicated individual will raise his voice to compensate for this perceived hearing loss.

The nasal nerves are sensitive to even small quantities of alcohol. Alcohol very quickly dulls the sense of smell. Because of this, the drinker quickly becomes unaware of his own odor.

Alcohol also dulls the taste sensation resulting in most food tasting bland when an excess of alcohol has been consumed.

Alcohol also exerts its effects on other physical faculties. Muscular coordination is affected by alcohol. Alcohol depresses the nerve transmission to the muscle which affects the performance of the muscle. At low levels of alcohol concentration, fine muscular coordination is affected. As the alcohol concentration increases, larger groups of muscles are impaired, affecting gross muscular coordination. If the alcohol concentration continues to rise, the involuntary muscles are affected and respiration ceases, resulting in death. Because of the effects of alcohol on the nerves and muscles, reaction time is lengthened. At alcohol concentrations above 0.08%, the reaction time for performing a complex task is dramatically increased.

Alcohol can act as a vasodilator. This causes a relaxation of the blood vessel walls and results in more blood in the peripheral areas of the body

(hands, feet, etc.) This effect is responsible for the flushed face observed in certain individuals who consume alcohol. This results in additional heat being lost from the human body because of the increase of blood near the body surface. Alcohol should not be given to a person suffering from exposure to cold, because this may only further lower that person's body temperature.

Alcohol is a diuretic. Alcohol depresses the release of antidiuretic hormone which results in less water being retained in the body. This effect is best demonstrated when the alcohol concentration is rising.

INTOXICATION WITHOUT ALCOHOL

Alcohol is not the only agent which could produce the effects already described. The situation will occasionally arise where an individual appears intoxicated, but the breath alcohol test results are either negative or much lower than expected from the observed behavior. This situation could occur if the subject was a novice drinker, who lacked the experience of coping with alcohol induced intoxication. However, the breath test operator should be aware that symptoms similar to alcohol intoxication can be produced by a combination of alcohol and drugs, drugs alone, or certain diseases or illness.

When alcohol is consumed in combination with other chemical agents, illicit or prescribed, the symptoms of alcohol intoxication may be altered. This may explain the situation where an individual appears very intoxicated, but the breath alcohol test results demonstrate a low level of alcohol. Combining drugs or other chemical agents with alcohol can produce two types of effects: additive or synergistic. When a given dose of a drug is combined with a given dose of alcohol and the effects are equal to either two doses of the drug or alcohol, this is referred to as the additive effect. The combination of alcohol and phenobarbital is an example of the additive effect. The synergistic effect exists when a given dose of a drug is combined with a given dose of alcohol and the effects produced are greater than two doses of either the drug or alcohol alone. The combination of alcohol and valium is an example of synergistic effects.

Drugs or other chemical agents, in the absence of alcohol, are capable of producing symptoms similar to alcohol intoxication. The breath alcohol test will not determine the presence of drugs other than alcohol. Other types of chemical tests must be performed to determine the presence of drugs or other chemical agents. Therefore, if an individual appears very intoxicated, but the breath alcohol test results are negative, consideration should be given to the possibility that the individual is under the influence of drugs.

Certain illness or disease states are also able to produce symptoms similar to alcohol intoxication. Diabetes, epilepsy and trauma are examples of conditions which may fall within this category. When individuals have a low or negative breath alcohol test result, the breath test operator should consider the possibility of a medical condition being present. If a medical condition is suspected, consideration should be given to seeking medical assistance.

APPENDIX B

PRELIMINARY BREATH TEST

A recent innovation to assist officers in screening suspected drinking drivers is the preliminary breath test. Authorized by the Transportation Article, Section 16-205.2, effective July 1, 1981, police officers may request an individual to submit to a preliminary breath test prior to an arrest or the issuance of a citation. Because it is a hand-held device, the officer is able to use it at the site where the motorist has been stopped and obtain an immediate indication of the driver's blood alcohol concentration (BAC). The results of the test shall be used as a guide for the officer in deciding whether an arrest should be made.

Whether or not the driver takes the preliminary breath test, the individual must be advised that he or she may be required to submit to a subsequent chemical test, if so requested. Refusal to submit to a preliminary breath test may not be used as evidence in any litigation, nor constitute a refusal to submit to a chemical test in violation of the Transportation Article, Section 16-205.1. The State may not use the results as evidence in any court action; however, the results may be used by the defendant in any criminal action. No evidence pertaining to the test may be introduced into a civil case.

Before using the preliminary breath-testing device, the officer must have successfully completed a special training course approved by the Toxicologist and have been issued a preliminary breath test certificate card. The preliminary breath test device must not be used in lieu of the traditional methods of determining the state of intoxication of the motorist. As noted earlier, the officer's observations of a person's driving behavior, speech, balance, eyes, and reactions are evaluated to determine probable cause. The preliminary breath test device is simply another screening device for determining whether or not an arrest should be made for intoxicated driving and should be considered with the other observations of the officer.

The regulations governing the use of the PBT device may be found in Appendix I.

APPENDIX C

SEARCH AND SEIZURE

The Fourth Amendment to the U.S. Constitution provides for the right of the people to be protected against unreasonable searches and seizures and that no search and seizure should occur prior to the issuance of a warrant based upon probable cause. Generally, a warrant application is submitted to a judicial officer detailing the facts giving rise to probable cause. Only those facts listed in the application will be considered by the judicial officer in determining if there is probable cause to issue the search warrant.[1]

While warrantless searches are per se, unreasonable, a few well-defined exceptions have evolved through case law decisions authorizing warrantless searches.[2] This section will focus on those exceptions which a trooper would most likely rely upon during the investigation of a drunk driving incident or vehicle homicide case.

Search incidental to lawful arrest - Once an individual has been formally detained by the police, a warrantless search may be conducted of the person of the arrestee and the area within the immediate control of that person.[3] When the defendant is arrested inside an automobile, the interior of that vehicle may also be searched.[4] Placing the individual under full custody arrest will permit the search and seizure to be conducted without a showing of probable cause.[5] For this exception to apply, however, the search must be contemporaneous with the arrest and not conducted at a later time.[6] Such a search includes clothing, cigarette packages, pocketbooks, and any other containers found on the person arrested.[7] Where a police officer has a reasonable belief that a suspect is dangerous and may gain control of weapons, the officer may conduct a protective search of the passenger compartment of the suspect's vehicle, where a weapon could be placed or hidden.[8]

Automobile searches - A warrantless search of an automobile stopped by an officer who had probable cause to believe the vehicle contained an illegal substance was held to be reasonable within the meaning of the Fourth Amendment.[9] The scope of an automobile search has now been expanded to permit a warrantless search where the officers -- who have legitimately stopped an automobile and who have probable cause to believe that the vehicle contains something illegal -- may conduct a probing search of the entire vehicle including compartments and containers whose contents are unknown.[10]

The probable cause determinations must be based on objective facts that could justify the issuance of a search warrant by the court and not merely based on the subjective good faith of the officer.[11] The scope of a warrantless search of an automobile is defined by the object of the search and the places in which there is probable cause to believe that it may be found.[12] For example, probable cause to believe that illegal aliens are being transported in a vehicle will not justify a search of a vehicle's glove compartment.

The automobile exceptions will not apply where the police have probable

cause to search an immovable container prior to the transfer of the container to an automobile. Once the transfer has been made, a warrant for the search will be required.[13] The police may seize a vehicle for a limited external examination whenever there is probable cause to believe that the vehicle was used as an instrumentality of a crime.[14]

Inventories - The contents of an automobile or other property lawfully in the possession of the officer, may be inventoried without a warrant.[15] Any property found on the person of an arrestee may also be inventoried,[16] including property lawfully in police custody;[17] however, the inventory and seizure may only be for protective and not investigative purposes.[18] An inventory may not be used as a subterfuge for an otherwise illegal search.[19]

Searches for evidence with disappearing or vanishing properties - Evidence that may disappear before a warrant is obtained can be seized by the officer without a warrant, provided probable cause exists for the officer to believe that seizable evidence is present and will be unrecoverable if they fail to take immediate action to recover it.[20]

Under this authority, the warrantless taking of blood to determine alcohol content is a permissible search and blood may be withdrawn from an individual in custody under appropriate conditions.[21] It should be noted, however, that the taking of blood in DWI cases is governed by Maryland's implied consent statute discussed in Appendix G of this Manual. A breath test is the appropriate test, unless the defendant is unconscious or otherwise incapable of consenting to a chemical test, is in the hospital, or the equipment to conduct a breath test is unavailable. §10-305, Cts. & Jud. Proc. Art.

Plain and open view searches - A plain view search is authorized where there has been a prior valid intrusion by the officer and the officer inadvertently observes the seizable evidence.[22] The prior intrusion may be justified by a warrant or an exception to the warrant requirement and the officer must have probable cause to seize the evidence at the moment it was viewed.[23]

Stop and Frisk - Individuals may be stopped on less than probable cause and frisked for weapons whenever circumstances warrant. An officer making a traffic stop may frisk a motorist and any occupants of the automobile when he has reasonable apprehension for his safety. The justification for such a frisk must be more than a hunch; the officer must present articulable facts warranting the intrusion.

Consent - A warrant is not required when a person not in custody voluntarily consents to an inspection of his property. The consent is valid only if voluntary and not the result of duress or coercion. Determination of this issue of voluntary consent by a court is based on the totality of the circumstances.

Hot pursuit search - The police may search any premises without the need for a warrant whenever they are in hot pursuit of a dangerous felon and have probable cause to believe that the felon is on the premises. The U.S. Supreme Court has held that where the situation does not fall under "the hot

pursuit" exception to the warrant requirement, police may not enter a DWI suspect's home or make a warrantless arrest merely because his blood alcohol content would dissipate during the time required to obtain a warrant.[24]

Abandoned Property - A warrantless search may be conducted by the officer of any abandoned property. This includes abandoned vehicles and expelled body waste.

FOOTNOTES

1. Fourth Amendment, U.S. Constitution provides:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

2. Coolidge v. New Hampshire, 403 U.S. 443, 91 S.Ct. 2022, 29 L.Ed.2d 564 (1971).

3. Chimel v. California, 395 U.S. 752, 89 S.Ct. 2034, 23 L.Ed.2d 685 (1969).

4. New York v. Belton, 453 U.S. 454, 101 S.Ct. 2860 (1981).

5. Individuals that may be searched include arrested traffic offenders. United States v. Robinson, 444 U.S. 218, 94 S.Ct. 467, 38 L.Ed.2d 427 (1973); Gustafson v. Florida, 444 U.S. 260, 94 S.Ct. 488, 38 L.Ed.2d 456 (1973).

6. Dixon v. State, 23 Md. App. 19 (1974).

7. Dawson v. State, 40 Md. App. 640, 395 A.2d 160 (1978).

8. Michigan v. Long, 103 S.Ct. 3469 (1983).

9. Carroll v. United States, 267 U.S. 132, 45 S.Ct. 1975, 69 L.Ed. 543 (1925).

10. United States v. Ross, 102 S.Ct. 2157 (1982).

11. Ibid.

12. Ibid.

13. United States v. Chadwick, 433 U.S. 1, 97 S.Ct. 2476, 53 L.Ed.2d 538 (1977), Arkansas v. Sanders, 442 U.S. 753, 99 S.Ct. 2586, 61 L.Ed.2d 235 (1979).

14. Cardwell v. Lewis, 417 U.S. 583, 94 S.Ct. 2464, 41 L.Ed.2d 325 (1974).

15. See also Ciriago v. State, 57 Md.App. 563, 471 A.2d 320 (1984).

16. See also Illinois v. LaFayette, _____ U.S. _____, 103 S.Ct. 2605 (1983).

17. Waine v. State, 37 Md. App. 222, 327 A.2d 509 (1977).

18. Herring v. State, 43 Md. App. 24, 404 A.2d 1087 (1979).

19. Manalansan v. State, 415 A.2d 308 (1980).

20. Cupp. v. Murphy, 412 U.S. 291, 93 S.Ct. 2000, 36 L.Ed.2d 900 (1973); Franklin v. State, 18 Md. App. 651, 308 A.2d 752 (1973).

21. Schmerber v. California, 384 U.S. 759, 86 S.Ct. 1826, 16 L.Ed.2d 908 (1966).

22. See also Norwood and Howard v. State, 55 Md. App. 503, 462 A.2d 93 (1983).

23. State v. Wilson, 279 Md. 189, 367 A.2d 1223 (1977).

24. Welsh v. Wisconsin, 104 S.Ct. 1805 (1984)

APPENDIX D

RIGHT TO COUNSEL

An individual has the right to counsel under the United States Constitution in order to protect the Fifth Amendment privilege against self-incrimination and the Sixth Amendment right to assistance of counsel.

When a person has not been formally charged but is subject to custodial interrogation, that person is entitled to the assistance of counsel to protect his Fifth Amendment privilege against self-incrimination.[1]

Once an individual has been given the Miranda warnings, (see Appendix E) that individual then has the right to private consultation with counsel and the police must provide every reasonable opportunity for this to occur. Refusal to do so violates the accused's Sixth Amendment right to counsel.[2] Officers should be certain that the individual has been informed of his administrative rights under 16-205.1 before reading him Miranda warnings and questioning him.

With respect to a formally charged defendant, any statement that the individual makes is admissible only if the State satisfied the burden of proving that the defendant waived the Sixth Amendment right to counsel.[3]

The Maryland Court of Appeals has ruled that an individual has a due process right to communicate with an attorney prior to deciding whether or not to take a chemical test for intoxication. In reaching this conclusion, the Court explained that the decision to refuse chemical testing is a serious one because important rights are affected, making it unfair to unreasonably deny access to counsel. The Court stated that a suspect must "... be permitted a reasonable opportunity to communicate with counsel before submitting to a chemical sobriety test, as long as such attempted communication will not substantially interfere with the timely and efficacious administration of the testing process ..." which must, according to statute, be conducted no later than two hours after the driver's apprehension. The Court notes that this right to counsel may not delay the test results for an unreasonable time because that would impair the accuracy of the test. The Court further explained that the sanction for violating this right to counsel is the suppression of test results.[4]

FOOTNOTES

1. Kirby v. Illinois, 406 U.S. 682 (1972).
2. Fowler v. State, 6 Md. App. 651, 253 A.2d 409 (1970).
3. Watson v. State, 282 Md. 73, 382 A.2d 574 (1978).
4. Sites v. State, 481 A.2d 192 (1984).

APPENDIX E

APPLICABILITY OF MIRANDA TO DWI SUSPECTS

The U.S. Supreme Court has now addressed the issue of the applicability of Miranda warnings to DWI stops holding that, in light of the noncoercive nature of ordinary traffic stops, Miranda warnings are not required for general, on-the-scene questioning of DWI suspects. The Court did conclude however, that Miranda warnings are necessary for minor offenses, as well as felonies, once the suspect is subjected to custodial interrogation. The Court further explained that custody does not occur merely because a policeman has an unarticulated plan to arrest the suspect when he makes the stop.[1]

Additional questions for which Miranda warnings have been held not applicable include: asking a motorist if he owns the vehicle that struck a pedestrian and asking a motorist for his name and address to give a person who was injured as a result of the accident.[2]

Miranda warnings are required, however, once the motorist is subjected to a custodial police interrogation. Such questioning should follow the completion of any chemical or physical sobriety testing or the motorist's refusal to be tested.

The key factor determining whether an interrogation is custodial or non-custodial is the presence or lack of presence of any physical constraints on the individual; that is, if that person's freedom to depart is or is not restricted. The existence of physical restraint would almost invariably result in a showing of custody, while the absence of any restraints would be a manifestation of non-custody.[3]

The place of interrogation is another important factor but, alone, would not determine custody.[4] For example, the Maryland Court of Special Appeals has held that a motorist undergoing treatment in a hospital at the time of questioning, but whose freedom was not otherwise restrained, was not in custody and need not, therefore, have been given the Miranda warnings.[5] Questioning a person in his own home would be a non-custodial interrogation unless evidence is introduced to show the presence of physical restraint on that person.[6] Even the questioning of a person in a police station can be a non-custodial interrogation if the person is permitted to leave without hindrance.[7] Interrogation at the scene of an accident conducted in a police cruiser where the defendant was free to leave was also held to be non-custodial.[8]

Factors considered by the courts in holding that interrogations are non-custodial include the presence of the suspect's friends and relatives, the brevity of the questioning, the friendly demeanor of the police officer, and the short and central nature of the inquiries.

FOOTNOTES

1. Berkemer v. McCarthy, 104 S.Ct. 3138 (1984).

2. Commonwealth v. Merritt, 441 N.E. 2d 532 (Mass. 1982); State v. Bartenak, 323 N.W. 2d 121 (S.D. 1982).

3. Cummings v. State, 27 Md. App. 361, 341 A.2d 294 (1975).

4. Burton v. State, 278 Md. 302, 363 A.2d 243 (1976).

5. See Cummings, supra.

6. Bernos v. State, 10 Md. App. 184, 268 A.2d 568 (1970).

7. Oregon v. Mathiason, 429 U.S. 492, 97 S.Ct. 711, 50 L.Ed.2d (1977).

8, Commonwealth v. Comolli, 441 N.E. 2d 536 (Mass. App. 1982).

APPENDIX F

REFUSAL TO SUBMIT TO A CHEMICAL TEST

Every person who drives or attempts to drive in Maryland has consented, by implication, to take a chemical test to determine the alcohol content of his blood or breath.[1] After the police officer detains the individual, he shall request that the individual take the chemical test and advise the individual of the administrative sanctions for refusal.

With one exception, which will be discussed further on, the individual may refuse to take the test and may not be compelled to be tested. If the individual does in fact refuse to take the test, the officer has seventy-two hours to submit a report, under oath, stating that there were reasonable grounds to stop the person for driving or attempting to drive a motor vehicle while intoxicated or under the influence of alcohol and that the individual refused to take the test after being advised of the administrative sanctions for a refusal.

The one exception under which an individual may be compelled to take a chemical test is where an officer has reasonable grounds to believe the individual was driving or attempting to drive a motor vehicle while intoxicated or under the influence of alcohol and the individual was involved in a motor vehicle accident resulting in the death of another person.[2] In this instance, the test shall be administered by qualified medical personnel at the direction of the arresting officer. The medical personnel will not be liable for any civil damages unless his action or failure to act constitutes gross negligence.

If the individual is unconscious or otherwise incapable of consenting to take the chemical test, the officer is directed to obtain prompt medical attention and, if necessary, to arrange for his transportation to the nearest medical facility. The officer is also authorized to request that the person undergo a chemical test by qualified medical personnel if the test can be administered without jeopardizing the health or well-being of the individual.[3] If the individual regains consciousness or is otherwise capable of taking the test, the officer shall proceed as he would for any person who has been stopped on suspicion of driving while intoxicated or under the influence of alcohol. A Maryland statute specifically prohibits the State from mentioning that the defendant has refused to be tested.[4] Neither may a judge inquire as to whether the defendant refused to submit to the chemical analysis.[5]

When a person voluntarily consents to take a chemical test, but later alleges that this consent was not free and voluntary because he was incapable of giving such consent, he must object at the time the evidence is offered; otherwise, he is deemed to have waived the objection.[6] Even if a suspect is unconscious, the absence of refusal does not bar the test results' admission into evidence.[7] Therefore, unless there is an affirmative refusal, consent is valid.

For refusing to take the chemical test, an individual is subject to a driver's license suspension for a minimum period of sixty days, but not more than six months. The motorist, of course, has the opportunity for a hearing to explain the reasons for the refusal and to be represented by an attorney. Failure to appear at a hearing constitutes prima facie evidence that the information in the officer's statement as to the individual's refusal is correct and an immediate suspension of the driver's license will result. The length of suspension may be modified or a restrictive license issued if the individual can show his need to use a motor vehicle for work, his need for a motor vehicle to attend an alcoholic prevention or treatment program, or that no alternative means of transportation are available and this would severely affect the motorist's ability to earn a living. The motorist has a right to appeal any suspension imposed.

FOOTNOTES

1. Section 16-205.1, Transportation Article.

2. Subsection 16.205.1(c), Transportation Article.

3. Since the effective date of this amendment to section 16.205.1 is July 1, 1982, no case law exists to interpret the phrase, " . . . jeopardizing the health and well-being of the individual."

4. Section 10-309, Courts and Judicial Proceedings Article.

5. Davis v. State, 8 Md. App. 327 (1969).

6. Mauldin v. State, 239 Md. 592 (1964).

7. Ibid., See also Breithaupt v. Abram, 352 U.S. 432, 1 L.Ed.2d 448 (1957).

APPENDIX G

IMPLIED CONSENT

MARYLAND DEPARTMENT OF TRANSPORTATION
Motor Vehicle Administration

Memorandum to All Law Enforcement Agencies

Reference Implied Consent Forms and Procedures

DR-15 and DR-15A

Maryland Department of Transportation
Motor Vehicle Administration

William K. Hellmann
Secretary

W. Marshall Rickert
Acting Administrator

July, 1985

MEMORANDUM TO: All Law Enforcement Agencies

FROM: Motor Vehicle Administration

REF: Implied Consent Forms and Procedures
DR-15 and DR-15A

This memorandum supersedes one dated June, 1983 regarding Implied Consent Forms and Procedures.

Attached is a copy of Form DR-15 and DR-15A that have been developed by the Motor Vehicle Administration in cooperation with the Maryland State Police and other law enforcement agencies. The forms are designed to expedite both the enforcement and administration of the Implied Consent Law as amended at the 1983 Session of the Maryland General Assembly and become effective July 1, 1983.

You will notice that the advice of rights and administrative penalties for refusal to submit to the test have been separated into two distinct and separate forms.

The DR-15 "Advice of Rights to a Chemical Test" must be read to all persons arrested for violation of 21-902 (A) or (B). Once the form has been read or the person has read the advice of rights, the information at the bottom of the form will be completed by the arresting officer. One copy is given to the accused, the original is retained by the arresting officer for court.

If the driver refuses the chemical test, then the revised DR-15A will be completed and forwarded to MVA.

The DR-15A, three-part 8½ X 11 form has been designed with all necessary information on one side for easier handling, and is to be used in the following manner:

1. Note that all reference to having taken the test has been eliminated from the Form DR-15A. That information and the Advice of Rights has been incorporated on Form DR-15. If the test is taken, you only need to complete the DR-15 Form and give the driver his copy.

My telephone number is (301) – _____
6601 Ritchie Highway, N.E., Glen Burnie, Md. 21062, Telephone TTY For The Deaf 1-800-492-4575

2. Should the detained individual refuse to submit to a Chemical Test for Blood Alcohol, then the detaining officer must complete the information, such as: time, County, Baltimore City (specify), etc. on all three copies of the DR-15A Form. The MVA copy will then be completed for mailing.

3. In preparing his copy of the DR-15A, as well as the driver's copy, the detaining officer also will be preparing a hard carbon copy (MVA copy) for the Motor Vehicle Administration. Since the law requires that a sworn report be sent to the Administration within seventy-two (72) hours after detention, the MVA copy of the Certification of Refusal has been prepared for prompt mailing to the MVA immediately following its completion. To mail, simply detach the MVA hard copy and fold as indicated on the reverse side of the form. Remove the opaque transfer and seal. Postage is prepaid and the form is pre-addressed for prompt delivery to the appropriate Division of the Motor Vehicle Administration. The postmark is important to be able to establish compliance with the 72 hour rule.

4. In order to preclude officers having to appear at MVA Hearings, it is essential that the Reasonable Grounds section of the DR-15A Form be completed in a brief detailed manner, but complete enough to identify reason for detainment and reason for the chemical test to be requested. If there was an odor of an alcoholic beverage, it should be noted, as well as statements and other indications of alcohol consumption.

5. When the test is refused, it is intended that the driver be issued a completed copy of the DR-15A Form and the DR-15, Advice of Rights form, and those copies are so identified.

Attachments:
DR-15 Form
DR-15A Form

Maryland Department of Transportation
Motor Vehicle Administration

William K. Hellmann
Secretary

W. Marshall Rickert
Acting Administrator

July 1985

Detailed Instructions on Completing:

OFFICER'S CERTIFICATION OF DRIVER REFUSAL TO SUBMIT TO CHEMICAL TEST
(Motor Vehicle Administration, Form DR-15A)

It should again be emphasized that when a driver of a motor vehicle refused to submit to a chemical test, the Officer's Certification of Refusal to Submit to a Chemical Test - DR-15A is the basis for administrative action by the Motor Vehicle Administration under the Implied Consent Law (Refised 7/1/83), Maryland Vehicle Law - Section 16-205.1) Before a driver's license and/or privilege may be administratively suspended pursuant to the Implied Consent Law, the report must demonstrate that the following conditions have occurred in the sequence set forth, as follows:

The Police Officer must:

(1) Establish reasonable grounds to believe that the motorist was driving or attempting to drive a motor vehicle in violation of Section 21-902 (a) or (b).

(2) Detain/arrest the driver on suspicion of above.

(3) Advise the driver of the "Advice of Rights for Chemical Test", make a proper request of the Motorist to submit a sample of his breath or blood as provided in 10-305 (a) (Revised 7/1/83).

(4) Request the driver to state whether he agrees to submit to the chemical test.

(a) If motorist takes and completes test, the DR-15 is the only form completed. (MVA not to be advised.)

(b) If motorist refuses, Form DR-15A (Officer's Certification of Refusal to Submit to a Chemical Test) is completed and sent to the Motor Vehicle Administration. Send within 72 hours after detention. (Very important.)

A properly prepared report is a necessary condition for the Exercise of Administrative Jurisdiction by the Motor Vehicle Administration under the Implied Consent Law. The entries in the report must be filled out according to the following rules to be effective:

State of Maryland

MOTOR VEHICLE ADMINISTRATION

July 1985

Ref: Implied Consent Forms and Procedures
DR-15 and DR-15A

(1) Officer's full name, date of Violation-Location and Time of Arrest. (Printed)

(2) Defendant's full name - NO initials unless person uses "initial only". If no middle name, insert NMN in space provided; also, Date of Birth.

(3) Maryland driver's license number must be complete. If person does not have a Maryland license, or does not have one in his possession, indicate by the word "NONE"; however, full name and date of birth must be provided (See #2 above). If Out-of-State license, full information must be indicated.

(4) Include concise information as to:

(a) Evidence of driving of vehicle or attempting to drive. Designate highway, street or private property used by public.

(b) Condition of driver. Information, as provided, to include the manner of driving of vehicle, unusual actions or violations, and reason for detention. Manner of driving to include any evidence of alcohol used by driver.

(5) Uniform Traffic Summons Number used for violation(s). In case of juvenile, indicate "Juvenile Petition filed." This is important. It is evidence that detained party was charged.

(6) The warning contained in 16-205.1 of the Maryland Vehicle Law applies to all individuals, licensed, unlicensed or Out-of-State residents. However, if the individual is a non-resident driver, he must be further warned that the MVA may notify the resident state, and any other state where individual is licensed, of any action of suspension of driving privilege in Maryland invoked as a result of his refusal to submit to a chemical test.

(7) It is important to give the driver the copy of the DR-15 or DR-15A that is intended for him to receive. He needs this to have sufficient evidence for his defense. Failure to issue a copy will delay the hearing if the driver requests to review it or receive a copy.

Remember you are sending the MVA a document where you are affirming under penalty that the contents of the document are true and correct. Do not convert the language of the law into your own words.

ADVICE OF RIGHTS TO A CHEMICAL TEST

(As provided in 16.205.1 of the Maryland Vehicle Law)

OFFICER'S COPY

Any person who drives a motor vehicle on a highway or on any private property that is used by the public in general in this State is deemed to have consented, with certain limitations, to take a Chemical Test to determine the alcohol content of his blood.

Pursuant to law, I am hereby advising you that you have been stopped or detained on reasonable grounds on suspicion that you have been driving or attempting to drive a motor vehicle while intoxicated or while under the influence of alcohol. I am further advising you that Maryland Law requires the type of test to be administered shall be the chemical test of breath except that the chemical test of blood shall be the type of test administered if:

(1) The defendant is unconscious or otherwise incapable of refusing to take a chemical test for alcohol;

(2) Injuries to the defendant require removal of the defendant to a medical facility; or

(3) The equipment for administering the chemical test of breath is not available.

The results of such test may be admissible and may be considered with other competent evidence in determining your guilt or innocence in any prosecution relating to your driving or attempting to drive a motor vehicle while either intoxicated or under the influence of alcohol.

That you have the right to refuse to submit to the test and on your refusal, no test shall be administered.

That your refusal to submit to a chemical test shall result in a suspension of your driver's license and/or driving privilege for not less than 60 days nor more than 6 months for a first offense and not less than 120 days nor more than 1 year for a second or subsequent offense.

That after submitting to a chemical test administered at the request of the arresting officer, you may also have a physician of your choice to administer a chemical test in addition to the one administered at the direction of the police officer.

I have read or have been read the Advice of Rights for Chemical Test and have been advised of administrative penalties that shall be imposed for refusal to take test. I understand that this requested test is in addition to any preliminary road-side test that was taken.

Having been so advised, do you now agree to submit to a Chemical Test to determine the alcohol content of your blood? *(This is not an admission of guilt).*

(Officer Check Reply) ☐ **YES - Agree to submit to a Chemical Test** ☐ **NO - Test Refused (Officer Complete Form DR-15A and File).**

Motor Vehicle Driver's Signature _____ Date _____ Time _____

Signature of Officer _____ I.D. No. _____ Police Agency _____

DR-15 (8-85)
As Ordered AJ-10A

OFFICER'S COPY

OFFICER'S CERTIFICATION OF DRIVER'S REFUSAL TO SUBMIT TO CHEMICAL TEST

(As provided in 16-205.1 of the Maryland Vehicle Law)

I, _____ certify that I am a Law Enforcement Officer, and that on

the ____ day of _____ , 19 ____ at _____ A.M. _____ P.M. _____ I detained in _____
County or Balto. City (Specify)

Name _____
First Middle Last

Address _____
Street Address City State Co. Zip

Driver's License No. _____ State _____

Class of License _____ Expiration Date _____ Date of Birth _____
Month Day Year

Vehicle Tag No. _____ State _____

I had reasonable grounds which I have set forth below on this form, to believe that the person named herein had been driving or attempting to drive a motor vehicle upon the highways of this state or on any private property that is used by the public in general while in an intoxicated condition or while under the influence of alcohol.

Reasonable Grounds _____

_____

_____

_____

_____

_____

_____

_____

_____

_____ Refer Summons No. _____

I do solemnly declare and affirm under penalty of perjury that the contents of the foregoing document are true and correct to the best of my knowledge and belief, and after being advised of administrative penalties that shall be imposed for refusal, as provided in the Advice of Rights to a Chemical Test, Form DR-15, the person named herein refused to take the chemical test for alcohol when requested by this officer.

Signature of Officer _____ Printed Name of Officer _____

I.D. No. _____ Law Enforcement Agency _____ Barrack _____ or Dist. _____

ATTN: ARRESTING OFFICER/TROOPER TO BE COMPLETED ONLY IF TEST IS REFUSED;
DO NOT FORWARD M.V.A. COPY IF THE TEST IS TAKEN.

IF TEST IS REFUSED, M.V.A. COPY MUST BE SENT WITHIN 72 HOURS

DR-15A (as ordered) - AJ-10 (8-85)

APPENDIX H

LOG OF TESTS FOR ALCOHOL INFLUENCE ARREST

The Log of Tests for Alcohol Influence Arrests is designed to be an all inclusive record containing all information regarding tests for alcohol intoxication. It is to include both blood and breath tests as well as the refusal to take any test. In addition, all tests required of Breathalyzer operators and Breathalyzer maintenance technicians, as stated in the Regulations of the Toxicologist, shall be recorded in this log. In order to ensure uniformity of all records for field inspections and other purposes for which the records may be required, strict attention should be paid to the following:

1. All arrests for violation of the Transportation Article, Section 21-902, a, b, c, and d, shall be entered in the log. If an error is made while making the entry, it shall be corrected by drawing one single line through the entire entry, placing the officer's initials at the end of that entry, and moving down to the next line and reentering the test data, using the same case number.

2. Pages in the log are prenumbered and may not, under any circumstances, be removed. The log will not be broken down into sections for blood, breath or refusal. All entries will be made in sequential order. At the beginning of the new calendar year, the next unused page will be used to start the new year.

3. All entries in the log must be made on a timely basis, i.e. printed legibly at the time of test or refusal.

4. All tests are to be recorded at the arresting agency if that agency has a log, otherwise at the testing agency.

5. Attached is a sample of the revised Form 36B. The following is an explanation of the information to be entered. For brevity, each column on the new log has been numbered to explain the entries. If the information is not applicable, place N/A in column.

   (1) Case number - This is the local level case number.

   (2) Date and time of test or refusal.

   (3) Accused full name or simulator test - When conducting a simulator test, the following terminology will be used:

(a) Simulator Test (Operator): This will be used when an operator conducts a bi-monthly test in a situation where he has not tested a subject as required by the Regulations. The results of this test will be recorded to the third decimal place, i.e. 0.098%.

(b) Simulator Test (Maintenance): This will be used by the breathalyzer maintenance technician only to identify that he has tested the instrument in accordance with the Regulations. The results will be recorded to the third decimal place, i.e. 0.098%.

(4) Age - The age of the person being tested.

(5) Race/Sex - The following codes for race shall be used:

Code 1 - Black, Colored, American Negro
Code 2 - White, Caucasian, Asiatic, Indian
Code 3 - Mongoloid, Oriental, Asiatic
Code 4 - American Indian

The following codes for sex shall be used:

M - Male
F - Female

(6) Type test - blood or breath.

(7) Subject analysis - The percent Blood Alcohol Concentration (BAC) of the accused. It is emphasized that the results of the test of the accused will continue to be recorded to the second decimal place. The third decimal place will be dropped and no attempt will be made to round off. A 0.299% BAC will be reported as a 0.29%.

(8) Breathalyzer Serial No. & Model - The serial number of the instrument and model number.

(9) Validation Solution - The Validation Solution is the prepared simulated alcohol test which validates the breath test of the accused. The Validation Solution will always be prepared to a 0.100% BAC. The results of this test must come within +/- 0.010% of the 0.100% value or between 0.090% and 0.110% to validate the test. Validation test results outside of the range will cause the test of the person to be voided.

(a) Val. - Value of solution as marked on simulator by the maintenance technician.

(b) Anal. - The results of the validation test. To be recorded to the third decimal place, i.e. 0.095%.

(10) Test refused - yes or no.

(11) Arresting officer & No. - Self-explanatory.

(12) Medical personnel or breathalyzer operator & No. - Self-explanatory.

(13) Trial date - The date the case is finally adjudicated.

(14) Final disposition - enter one of the following codes:

G/A	-	Guilty A
G/B	-	Guilty B
G/C	-	Guilty C
G/D	-	Guilty D
NG	-	Not Guilty
PBJ	-	Probation Before Judgement
O	-	Other (i.e. warrant case)
NP	-	Nolle Pross.
S	-	Stet

(15) Comments - May be used when test conducted at another certified agency for arresting agency, or other necessary information not identified.

6. The current Log of Test pages, dated (3/78) will be placed at the end of the revised Log of Tests, dated (1/81). Upon adjudication of these cases, the pages may be filed in accordance with established policy.

Attachment

FINAL DISPOSITION CODE

G/A – Guilty A
G/B – Guilty B
G/C – Guilty C
G/D – Guilty D
N. G. – Not Guilty
PBJ – Prob. Before Judgment
N. P. – Nole Pross
S – Stet
O – Other (i.e., Warrant Case)

MARYLAND STATE POLICE

CHEMICAL TEST FOR ALCOHOL UNIT

LOG OF TESTS

FOR

ALCOHOL INFLUENCE ARRESTS

_____

(Enforcement Agency)

A - _____

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		(10)	(11)	(12)	(13)	(14)	(15)
Case No.	*Time & Date*	*Accused or Simulator Test*	*Age*	*Race/ Sex*	*Type Test*	*Subj. Anal.*	*Breathalyzer Serial Number and Model*	*Validation Solution* (a) *Val.*	(b) *Anal.*	*Test Refused*	*Arresting Officer and Number*	*Medical Personnel or Breathalyzer Operator and No.*	*Trial Date*	*Final Disposition*	*Comments*

H-4

MSP FORM #36B (1/81)

APPENDIX I

OPERATION OF THE BREATHALYZER

Once it was established that a close correlation existed between the concentration of alcohol in the body and the degree of intoxication, the next step scientifically was to ascertain what body substance would provide the most accurate and the most practicable examinations.[1]

Because breath is probably the easiest obtained body substance and the results known within minutes of testing, it is the preferable substance for testing. The scientific basis for breath testing is the well established critical relationship which exists between the concentration of alcohol in the blood and the concentration of alcohol in the air in the lung -- called alveolar air. Since the amount of carbon dioxide in air exhaled from the lungs is relatively constant, by measuring the carbon dioxide content of a given breath sample, the fractional amount of alveolar air present in the sample can be ascertained. The amount of alcohol in the blood is then determined by measuring the amount of alcohol in the sample.

The Breathalyzer uses the relationship between alveolar (lung) air and blood. It is based upon the principle that the ratio between the amount of alcohol in the blood and the amount in the alveolar breath (lung air) is a constant 2100 to 1 ratio. A fixed volume of deep alveolar (lung) air is collected and then passed through an alcohol sensitive reagent. A color change in the reagent will result if alcohol is present in the sample. The color change is photometrically measured and the blood alcohol concentration (BAC) is indicated.

The chemical reagent that is used consists of three milliliters of 50 percent by volume sulphuric acid and water, 0.025 percent potassium dichromate, and 0.025 percent silver nitrate. The sulphuric acid and water are 50 percent by volume. The purpose of the sulphuric acid and water is to trap and hold the alcohol from the sample that is passed through it. The potassium dichromate is the active ingredient. It is a yellow substance, which, when it reacts with alcohol, changes color from yellow to green resulting from a reduction of the dichromate. The degree of color change is proportional to the amount of alcohol that has been oxidized. The change in color (reduction of the dichromate) is measured by the Breathalyzer. The silver nitrate is the catalytic agent used to speed up the reaction time of the potassium dichromate.

To activate the Breathalyzer, the defendant blows into the device through a mouthpiece until he has emptied his lungs in one breath.[2] The instrument is so designed that only the last 52.5 cubic centimeters of air that has been blown into it has been trapped. This air is called alveolar or deep lung air. This air is then forced, by weight of a piston, through a test container (ampoule) that has a solution of sulphuric acid, potassium dichromate and silver nitrate. The color of the substance is yellow. As the breath sample passes through the solution in the test ampoule, the alcohol, if any, is extracted by the sulphuric acid and the potassium dichromate

oxidizes the alcohol, thereby causing the test solution to lose some of its yellow color. The greater the alcoholic content of the breath sample, the greater will be the loss in color of the test solution. By causing a light to pass through the test ampoule and through the control ampoule, which remains sealed and therefore unaffected by chemical changes resulting from exposure to the breath sample, the amount of the color change can be measured by photoelectric cells which are connected to a Galvanometer. By balancing the Galvanometer, a reading can be obtained from a gauge which has been calibrated in terms of percentage of alcohol in the blood.

FOOTNOTES

1. For additional comments, see Watts, "Some Observations on Police Administered Tests for Intoxication." 45 N.C. L. Rev. 34 (1966).

2. For a detailed explanation, see State v. Baker, 355 P.2d 806 (Wash. 1960).

APPENDIX J

ANALYSIS OF BLOOD FOR ETHYL ALCOHOL

While breath testing is the most efficient and expedient form of testing, Maryland law does authorize the administration of blood testing of a defendant under certain situations. (See Courts and Judicial Proceedings Article, Section 10-305.)

If the chemical test is to be performed on a blood specimen, the withdrawal of blood may only be accomplished by a qualified medical person who is defined in Sec. 10-304, Courts and Judicial Proceedings Article, as "... any person permitted by law to withdraw blood from humans." This has been interpreted to permit only a physician or other medical personnel to withdraw the blood and then only under clinical-like conditions.[1]

Only physicians and approved registered nurses may be employed to withdraw blood at the local installations. Approved registered nurses are issued a card signed by the Toxicologist and the Director, Crime Laboratory Division. When an accused is being treated at a local hospital, the physician may direct any competent medical technician to withdraw blood at the direction of the officer. The directing officer's agency is responsible to pay all reasonable costs for blood alcohol withdrawal in these circumstances because the accused is injured and may not be removed to a contracting hospital, as in the case of an uninjured person.

If the breath test equipment is not available and the accused is transported to a hospital, the officer must determine if the hospital is a participating hospital in the State's blood alcohol program. If not, a local registered nurse who has contracted with the State Police to withdraw blood at the local installation must be contacted. This nurse has agreed to assist the State Police in blood alcohol withdrawal and will accept the payment schedule established.

The laboratory analysis of the blood must be performed by a person who has received training in a program and on equipment approved by the Toxicologist, and is either a police officer, police employee, or an employee of the Office of the Chief Medical Examiner.[2] (See Courts and Judicial Proceedings Article, Section 10-304.) The equipment used must also have been approved by the Toxicologist.[3] (See Appendix O.)

Statutory immunity has been created to protect physicians and other authorized medical personnel as well as the licensed hospital from being civilly liable for taking a blood sample without the consent of the individual where the sample was withdrawn at the request of a police officer.[4] This immunity provision also applies to any resident, intern, registered nurse, or health career technician who would handle the blood sample in the course of their duties.[5] However, any test that is performed negligently or

blood sample taken in a negligent fashion or not in accordance with accepted medical practices may result in the responsible person being held civilly liable.[6]

Statutory immunity has also been extended to medical personnel performing any chemical testing or the taking of blood samples at the direction of a police officer from a driver of a motor vehicle involved in an accident resulting in the death of another person, unless the action or omission to act amount to gross negligence.[7]

Maintaining the Chain of Custody

Since the defendant's attorney may request the presence of the technician and not permit the State to simply admit an official copy of the chemical test results, the chain of custody must be maintained. Failure to do so can result in the exclusion of the test results.

The chain of custody may be proved by a witness other than the individual who actually withdrew the blood, if that witness were present at the taking of the blood sample and can accurately testify to its custody and identity.[8] The testimony of the police officer who was present at the withdrawal of the blood is sufficient to identify the blood sample and the testimony of the physician is not necessary.[9] The chain of custody is sufficiently proved whenever a police officer testifies to being present at the withdrawal of the blood and that the officer sealed and labeled the container which was then sent to the appropriate State agency for analysis.

Under Maryland law, the chain of custody is not required to be established beyond the possibility of any doubt; rather, the standard is one of reasonable probability wherein it can be shown that the evidence is properly identified and it is unlikely that the evidence was tampered with.[10]

Taking of Blood Specimen Without Consent of the Individual

The taking of a blood sample without the consent of an individual most often occurs after a motor vehicle accident involving the individual as a driver and who is transported unconscious to a medical facility for treatment. In the landmark decision, Schmerber v. California,[11] objections to the taking of blood without the defendant's consent were based on violations of the defendant's right against self-incrimination (Fifth Amendment) and the right against unreasonable searches and seizures (Fourth Amendment). The United States Supreme Court held that the right against self-incrimination applied only to testimonial or communicative evidence and that the taking of blood was neither. The Court also held that the taking of blood constituted a search; however, for the purpose of ascertaining the blood alcohol content of the person, the taking of blood did not constitute an unreasonable search. The Court reasoned that, since the presence of alcohol in the blood diminishes once drinking has ceased, that an emergency existed. Where there is a danger of the destruction of evidence (the diminishing of alcohol in the blood), an emergency is present and the search (the taking of the blood) is permitted.

While this constitutional principle is well established, it has been legislatively modified by state implied consent laws which prohibit the non-consensual taking of blood and apply a statutory exclusionary rule to evidence so obtained.[12] This exclusionary rule was held to apply to prosecutions for violations of vehicular homicide as well as DWI offenses;[13] however, legislation now authorizes compulsory alcohol testing of individuals involved in motor vehicle accidents resulting in the death of another person and restricts the exclusionary rule of Section 10-309 to violations of Section 21-902 (Driving While Intoxicated.)[14] Under Section 16-205.1(c), the officer will advise the person arrested that they must submit to a chemical test as directed by the officer. If the test is a blood alcohol test and the individual refused to have blood withdrawn, no force would be used. The State's Attorney's office will be contacted for advice.

The Section 10-309 exclusionary rule has also been held inapplicable to situations where the person is transported to a medical facility and blood is withdrawn without the driver's consent as part of the medical treatment of that person.[15] In such cases, the test results of the alcohol content of the blood are admissible into evidence.[16]

APPENDIX J

FOOTNOTES

1. Robinson v. State, 18 Md. App. 678, 308 A.2d 734 (1973).
2. Section 10-304, Courts and Judicial Proceedings Article.
3. Ibid.
4. Section 20-110, Health General Article.
5. Ibid.
6. Ibid.
7. Section 16-205.1(c), Transportation Article.
8. Section 665, 2 Wharton's Criminal Evidence (12th Ed.).
9. Mora v. State, 263 S.E. 2d 787 (Tex. 1954). See also State v. Fornier, 167 A. 2d 56 (N.Y. 1961) where the chemical analysis is admissible even though neither the physician nor the police officer testified; however, the officer had signed a transmittal slip to the blood sample that identified the person arrested and the officer.
10. Nixon v. State, 204 Md. 475, 105 A.2d 243 (1954); Brooks v. State, 24 Md. App. 334, 330 A.2d 670 (1975).
11. 384 U.S. 757, 86 S.Ct. 1826, 16 L.E.2d 908 (1966).
12. Section 10-309, Courts and Judicial Proceedings Article.
13. State v. Loscomb, 435 A.2d 764 (Md. 1981).
14. Effective July 1, 1982.
15. State v. Moon, 436 A.2d 420 (Md. 1981).
16. Ibid.

APPENDIX K

PROCEDURES FOR SUBMITTING BLOOD SAMPLES FOR ALCOHOL DETERMINATION IN DRIVING WHILE INTOXICATED CASES

A. Approved Equipment.

All blood samples submitted to the laboratory must, by law, be packaged in approved equipment. No sample will be processed which is not in the approved container. The following blood collection kits have been approved for use by the Toxicologist in accordance with Section 10-304 of the Article of Courts and Judicial Proceedings.

1. The Becton-Dickinson Blood Alcohol Kit, manufactured by Becton-Dickinson, Division of Becton, Dickinson and Company, Rutherford, New Jersey 07070. This kit may be ordered through the local distributor, Maryland Police Supplies, Inc., 7112 Darlington Drive, Baltimore, Maryland 21234.

2. The Venoject Blood Collection Kit manufactured by Terumo Medical Corporation, Elkton, Maryland 21921. (Distributor- Maryland Police Supply)

3. All blood samples must be collected in accordance with the Regulations of the Toxicologist, effective January 1, 1975, and the Article of Courts and Judicial Proceedings, Sections 10-302 through 10-309.

B. Method of Submitting Sample.

1. In an effort to reduce the amount of paper work performed by the submitting officer, the MSP Form 34 has been revised. This form replaces the Medical Personnel Payment Voucher, Police Officers Report, contained on the front of the Blood Collection Kit, and the Request for Laboratory Examination Form. The proper completion of the revised Form 34 is necessary before the sample can be received by the laboratory. Several new sections have been added; consequently, the form will be explained below. It is emphasized here that the Form 34 does not eliminate the use of the other material contained within the kits. All of the other forms, seals, and labels contained in the kit must be completed.

   a. MSP Form 34 (10-74).

      (1) Law enforcement agency requesting alcohol analysis.

      (2) Assignment of arresting officer.

      (3) Accused's complete name.

      (4) Arrest Date.

(5) Arrest Time.

(6) Type sample submitted for analysis.

(7) Date and time first sample taken.

(8) Location sample taken at - barrack, police station, hospital.

(9) Arresting officer and I.D. No.

(10) Installation Commander - his official representative may initial for his signature,i.e. Duty Sergeant, Lieutenant, etc.

(11) Where copy of official results will be sent and the name of the individual. (Arresting officer's name will also be placed on official results, but this insures that the proper agency officials will receive the communication for proper dissemination.)

(12) The complete name and title of the medical personnel to include the certificate number issued by the State Police. As will be noted, the block requiring the certificate number is no longer shown on the form. This information must be included by the officer. In the case of an M.D. (physician), no certificate number is necessary because the law provides for his approval. This block is only filled in when the medical personnel is off duty.

(13) When the medical personnel are on duty at one of the participating hospitals or when a doctor is on duty at a hospital, this section is completed. Again, the certificate number will be included. If an accused has blood withdrawn from a hospital not approved but a "physician" withdraws the blood, the amount to be paid for such withdrawal is $10.00. This price is fixed and cannot be increased. The arresting officer should be sure that a non-participating hospital is aware of this fact.

(14) Total time used for specimen collection. This includes travel time when the nurse or physician is off duty. No medical technician of an approved hospital pathology laboratory is approved or allowed to withdraw blood while off duty. He must be on duty at the hospital.

(15) Total time spent in court, to include travel time. It will be necessary that an additional form be completed and forwarded to the Chemical Test for Alcohol Unit after each court date. Do not hold until the case is finally adjudicated.

(16) Court Date - This section completed each time the medical personnel appear in court for the case. If additional court appearances are required, additional forms must be submitted.

(17) This section is used when the evidence is personally delivered to the Chemical Test for Alcohol Unit, or when transferred from one officer to another. No other sections in the "LABORATORY USE ONLY" part will be used by the law enforcement agency.

(See following sample copy of Form 34)

MARYLAND STATE POLICE
CHEMICAL TEST FOR ALCOHOL UNIT
ALCOHOL ANALYSIS - MEDICAL PERSONNEL PAYMENT AUTHORIZATION

CASE NO (MSP HQ ONLY) | CASE NO (LOCAL AREA USE)

ARREST INFORMATION

DEPARTMENT (1)		BARRACK/STATION (2)	
ACCUSED NAME (3)		ARREST DATE / (4) /	TIME : (5) ☐ AM ☐ PM
TEST TYPE ☐ BLD (6) ☐ URN			
1ST SAMPLE DATE & TIME / (7) / : ☐ AM ☐ PM	2ND SAMPLE DATE & TIME / / : ☐ AM ☐ PM	LOCATION SAMPLE TAKEN (8)	
ARRESTING OFFICER & ID NO (9)		INSTALLATION COMMANDER (10)	
SEND RESULTS TO (11)			

MEDICAL PERSONNEL PAYMENT AUTHORIZATION

MEDICAL PERSONNEL NAME - IF OFF DUTY HOME ADDRESS (INCLUDE ZIP CODE)
(12)

IF ON DUTY (HOSPITAL ADDRESS)
(13)

SPECIMEN COLLECTION TIME	COURT APPEARANCE TIME & DATE
☐ ON DUTY ___ HR (14) ☐ OFF DUTY ___ HR	☐ ON DUTY (15) HR ☐ OFF DUTY ___ HR / (16) /

LABORATORY USE ONLY

CHAIN OF CUSTODY

RECEIVED FROM	BY	DATE	TIME
	(17)	/ /	: ☐ AM ☐ PM
		/ /	: ☐ AM ☐ PM

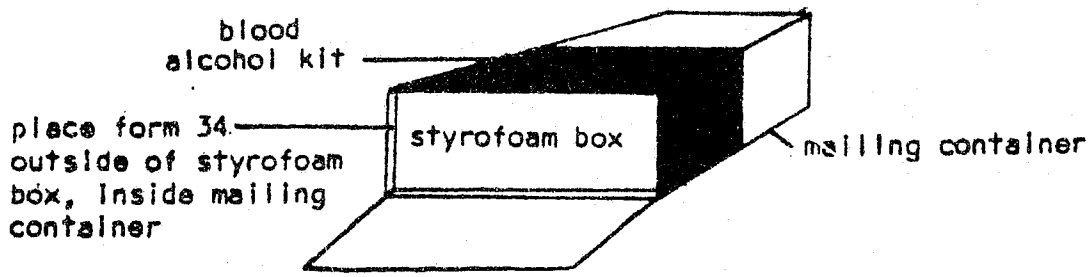
CONDITION OF KIT (SEALS & MARKINGS)

TESTED BY	DATE	1ST SAMPLE	2ND SAMPLE	ANALYSIS CONTROL NO.	CASE NO
	/ /	0. % ETHYL ALCOHOL	0. % ETHYL ALCOHOL		

MSP FORM 34 (10 74) HEADQUARTER'S FILE COPY

2. When the form is completed, the last copy, Arresting Officer, will be removed by the submitting agency and retained. The remaining four copies will be forwarded with the blood alcohol kit. Should the kit be hand-carried, the officer's copy will not be removed until the chain of custody is completed by Chemical Test for Alcohol Unit personnel at Maryland State Police Headquarters.

   a. Blood Alcohol Kit - The form will be placed in the cardboard mailing container outside the inside blood vial container. Do not place the form inside the sealed vial container.



3. All samples of blood being submitted for alcohol analysis will be mailed by First Class Mail to:

   CHEMICAL TEST FOR ALCOHOL UNIT
   Maryland State Police Headquarters
   Pikesville, Maryland 21208

   a. Samples may be hand-carried to the Chemical Test for Alcohol Unit between 8:00 A.M. and 4:00 P.M., Monday through Friday. Arrangements should be made before hand carrying samples.

   b. It is urged that samples be mailed when possible.

C. Reporting Results of Blood Alcohol Analysis.

1. Three copies of the results of blood analysis (MSP Form 33 - Official Copy - Results of Chemical Test) will be mailed to the submitting agency as provided in B-(12). The original copy is to be retained by the police agency for court purposes; the other copies should be distributed as follows: one copy should be mailed or personally delivered to the accused in accordance with Section 10-304 of the Article of Courts and Judicial Proceedings; one copy for the State's Attorney's Office. All copies will be signed and are admissible as evidence in court. (A sample copy of Form 33 is provided with this notice.)

2. No sample will be received or analyzed which fails to meet the above procedures. Whenever a sample is received which fails to meet any provisions as provided by law, or the Regulations of the Toxicologist, a letter explaining such rejection will be forwarded to the submitting agency. (A sample copy of the letter of rejection is provided with this notice.)

3. Additionally, a letter from the Toxicologist approving the equipment, i.e. blood alcohol kit, laboratory equipment, and the chemists will be provided with each Official Copy - Results of Chemical Test (Form 33). This letter should also be taken to court as evidence of equipment approval, as outlined in Section 10-304 of the Article of Courts and Judicial Proceedings. (A sample copy of the Toxicologist's letter is provided with this notice.)

D. Disposition of Alcohol Chemical Test Case.

1. MSP Form 171, Disposition of Alcohol Chemical Test Case, will be completed when the case is finally adjudicated.

2. This form is very important as samples are retained for any possible appeal. Having limited storage space, it is important that officers submit the form at the completion of the case. This enables the proper destruction of evidence no longer necessary for prosecution. (A sample copy of the Disposition of Alcohol Chemical Test Cases is provided with this notice.)

STATE OF MARYLAND

OFFICIAL COPY - RESULTS OF CHEMICAL TEST

Case No._____

Citation No._____

NAME OF PERSON ARRESTED_____

DATE OF ARREST_____ TIME OF ARREST_____

DATE SPECIMEN COLLECTED_____ TIME SPECIMEN COLLECTED_____

TYPE OF SPECIMEN COLLECTED: BLOOD_____ BREATH_____

This is to certify that the above specimen was obtained using equipment approved by The Toxicologist under the Post Mortem Examiner's Commission from the above named person at the direction of the arresting officer.

The specimen was tested for alcohol with equipment approved by The Toxicologist under the Post Mortem Examiner's Commission at the direction of the arresting officer. The serial number of the test equipment is _____.

Said specimen was found to contain _____% ethyl alcohol by weight.

The above named defendant is hereby notified that the results of the chemical test will be presented as evidence at the criminal trial without the presence or testimony of the technician or analyst who performed the test unless the defendant or defense attorney notifies the State's Attorney and the court in writing no later than ten (10) days before trial that the defendant desires the technician or analyst to be present in court.

I, the undersigned technician or analyst, am a "qualified person" as defined in Section 10-304 of the Courts and Judicial Proceedings Article, and I certify that the result of the test is as stated above.

_____

Chemical Test Technician or Analyst and No. Police Agency - Station/Barracks

_____

Arresting Officer and No. Police Agency - Station/Barracks

_____

Defendant Signature (Breath Test Only) Date and Time Defendant Received Copy

Distribution: Original-Arresting Officer for Court
1st copy-State's Attorney's Office
2nd copy-Defendant

MSP Form #33 (7-84)

HARRY HUGHES
GOVERNOR

FRANK A. HALL
SECRETARY
PUBLIC SAFETY AND
CORRECTIONAL SERVICES

STATE OF MARYLAND

DEPARTMENT OF
PUBLIC SAFETY AND CORRECTIONAL SERVICES

MARYLAND STATE POLICE
PIKESVILLE, MARYLAND 21208-3899
AREA CODE 301 486-3101
TTY FOR DEAF AREA CODE 301 486-0677

CALVIN A. LIGHTFOOT
DEPUTY SECRETARY

COLONEL W. T. TRAVERS, JR.
SUPERINTENDENT
MARYLAND STATE POLICE

TO:

SUBJECT: Improperly Submitted Sample for Alcohol Analysis In Drunk Driving Cases.

1. The Chemical Test for Alcohol Unit has received a _____ sample for analysis from a member of your command, as follows:

Defendant _____ Case No. _____

Date Arrested _____ Time Arrested _____

Officer _____

2. This sample cannot be analyzed for the following reasons(s), and, therefore, it will be destroyed.

_____

_____

_____

_____

_____

3. This notification is not intended as a reflection on any individual or department. By explaining in writing, however, why an analysis cannot be accomplished, we would hope that when submitting samples in the future they will conform with detailed directions contained in the kit.

4. Should you require further information or clarification, please feel free to contact me at 653-4375.

F. J. Kirckhoff, Sergeant
Supervisor
Chemical Test for Alcohol Unit

FJK:ebs

DISPOSITION OF BLOOD ALCOHOL CHEMICAL TEST CASE

(1) DEFENDANT_____

(2) DATE OF ARREST_____

(3) SUMMONS NUMBER_____

(4) ARRESTING OFFICER_____

(5) DEPARTMENT_____

(6) DISPOSITION_____

(7) DATE OF DISPOSITION_____

(8) COURT_____

THIS FORM TO BE RETAINED BY ARRESTING OFFICER UNTIL FINAL DISPOSITION OF CASE. IT MUST BE FORWARDED TO THE CHEMICAL TEST FOR ALCOHOL UNIT, MARYLAND STATE POLICE HEADQUARTERS, PIKESVILLE, MARYLAND 21208.

MSP 171 (6-81)

This form is included in all blood test kits. It is important that the arresting officer fill the form out and mail it to the Chemical Test for Alcohol Unit, Maryland State Police Headquarters, Pikesville, Maryland 21208 upon disposition of the case so that specimen samples retained by the laboratory may be destroyed.

(1) Defendants full name
(2) Date of arrest
(3) Uniform Traffic Summons Number
(4) Arresting officers name and number
(5) Arresting officers department
(6) Disposition of case - Guilty, Not Guilty, Nolle Prosqui, Probation, etc.
(7) Date case heard or disposition made
(8) Court where case is heard or States Attorney's Office instituting Nolle Prosqui

APPENDIX L

ADMISSIBILITY OF TEST RESULTS

By statute, the test results of a chemical test analysis are admissible without the need for accompanying testimony from the technician who administered the test.[1] An official copy of the test results may be admitted into evidence without the technician's testimony provided the State so notifies the defendant or his attorney in writing at least twenty days prior to trial. If the defendant desires the technician to testify, he must notify the State and the court in writing of his request no later than ten days before trial. A timely and proper notice by the defendant will prevent the submission of the test results into evidence without the technician's testimony. Failure to provide a timely and proper notice by the defendant will constitute a waiver of the right to have the technician present to testify.

If the State voluntarily notifies the defendant that the technician or chemist will appear, the defendant is not required to comply with the requirements of this provision.[2]

Chemical test results are admissible without testimony from the technician who administered the test if the test was conducted pursuant to the statutory implied consent provisions. If the test was conducted as a part of medical treatment, then, the test results may not be admitted under the Business Records exception to the Hearsay Rule and the administering technician must testify.[3]

FOOTNOTES

1. Section 10-306, Courts and Judicial Proceedings Article.

2. Knight v. State, 41 Md. App. 691 (1979).

3. Moon v. State, 300 Md. 354, 478 A.2d 695 (1984).

APPENDIX M

TESTIMONY OF THE OFFICER

The critical witness in practically all DWI cases is the arresting officer. If the chemical test technician is not required to appear at trial, the State's case will usually consist of the arresting officer's presentation on the witness stand, although other witnesses may be called if their testimony would be relevant. Proving the elements of the DWI offense must therefore be accomplished through the officer's testimony and admission into evidence of the relevant documentation. Prior to trial, the officer and the State's Attorney should review and have on file:

- o the professional background of the officer, including training and experience related to detection and handling of intoxicated drivers
- o background and training to administer the Breathalyzer
- o the officer's observations of the defendant's driving behavior
- o if no direct observation, the indirect or circumstantial evidence showing the erratic driving behavior of defendant, including testimony of witnesses and accident reports
- o documentation required for trial, including forms certifying acknowledgement by the defendant of the penalties for refusing to take the Breathalyzer test, arrest report, alcoholic influence report,[1] chemical test results, results of physical tests performed at the scene, accident report and prior driving record.

The essential elements of driving while intoxicated and driving while under the influence of alcohol are:

- o Location (venue)
- o Identification of defendant
- o Driving of vehicle by defendant
- o Intoxication of defendant

Location -- While this element is not difficult to prove, one potential problem that could arise is the stopping of the defendant by an officer out of the officer's jurisdiction. An illegal arrest could result in suppression of all evidence incident to the arrest.

Identification -- No special problem of proof inherent in this element; however, this issue could be contested, particularly

where the defendant had no identification and the officer had to indirectly verify the driver's identity. Photographing DWI suspects at the time of arrest may facilitate the identification of the defendant at trial.

Driving -- In Thomas v. State,[2] the State did not prove that the defendant was driving a motor vehicle while intoxicated, and, accordingly, the conviction was reversed.[3]

Intoxication -- This element will almost always be contested. The direct examination of the officer will often be the sole basis for proving this element. It is imperative that testimony of the officer's observations, experience and training involving intoxicated persons and the officer's opinion of the degree of intoxication of the defendant be presented in a strong, clear and concise manner.

Officers should be prepared to provide the following information:

- o name and occupation
- o length of time with law enforcement
- o assigned duties on the date in question
- o marked or unmarked police car (if unmarked, the officer should state how visible the lights were)
- o in uniform or not (if not, the officer should indicate the manner of police identification to the driver)
- o location of the offense.

Actual Observation

The next series of questions cover the actual observations of the defendant by the officer. The State's Attorney should guide the officer through the testimony on the erratic driving behavior of the defendant that gave rise to the officer's reasonable belief that the defendant was driving while intoxicated. If appropriate, and time permitting, diagrams can be prepared showing the location of the incident and allowing the officer to graphically illustrate the defendant's driving behavior. For example, the officer could diagram change of lanes, following too closely, running a red light or stop sign, going off the edge of the roadway, etc. The officer should also testify as to the weather conditions, traffic conditions at the location, and the lighting conditions when the vehicle was first observed and at the location of the roadside tests, if given. (Case building by following the DWI process explained in Section I will establish these facts.)

The next set of questions covers the stop of the vehicle and include identifying the driver. Topics covered should include the following:

- o distance the officer followed the vehicle before the stop
- o exact location of the stop
- o descriptions of how the defendant stopped the vehicle, noting any unusual behavior that would indicate unsafe operation of the vehicle
- o approaching the defendant's vehicle and initial contact
- o request for identification
- o description of how the defendant produced the identification
- o identification of the defendant in court as the driver and, for the record, how the driver was dressed
- o whether the defendant was requested to get out of the vehicle and, if so, the manner in which that task was accomplished
- o description of the defendant's physical appearance and demeanor.

The officer should testify as to any conversation with the defendant. Questions could include:

- o where defendant had been
- o where the defendant was going
- o where the defendant was
- o if an accident, what happened
- o any admission of drinking
- o if so, how much, where, and the time and place of the last drink.

It is at this point in the narrative that the officer would testify as to the administration of any roadside sobriety tests. The following areas should be covered for every roadside test:

- o request to perform roadside test
- o description of the physical location where the tests were given
- o identification, explanation and instructions of the roadside test
- o demonstration to the court by the officer of how the test was to be performed
- o analysis of defendant's performance

- o demonstration in court by the officer of how the defendant performed the test (objections on grounds of accuracy can be rebutted by the trooper testifying that the reenactment was substantially accurate)

- o observations of the defendant for any injury affecting the defendant's driving performance

- o questioning defendant as to any possible injury

- o questioning defendant as to any medication.

The next line of questioning should set the foundation for the officer's opinion as to the degree of intoxication of the defendant and the placing of the defendant under arrest.

- o training of the officer in dealing with persons consuming alcoholic beverages

- o description of the training program

- o experience of the officer in arresting persons who had been drinking

- o experience of the officer in arresting drivers of motor vehicles who had been drinking

- o opinion of the officer based on the officer's training, experience, and observations of the defendant (ask the officer to explain use of terms such as "mildly, moderately, extremely", etc. in describing the defendant's degree of intoxication)

- o placing the defendant under arrest.

Indirect or Circumstantial Evidence

An officer may not have had any direct observation of the defendant's driving behavior at an accident scene since the officer's initial observations of the defendant were at the accident scene.

If there were witnesses to the accident and to the defendant's prior driving behavior, the officer should have identified the witnesses and taken their statements. The State's Attorney should have this information prior to trial so that the witnesses may be summoned and properly prepared to testify at trial.

When there are no witnesses, the substance of the officer's investigation indicating the cause of the accident and establishing that the defendant was driving while intoxicated is critical. Once at the accident scene, the officer can actually observe the defendant; however, the officer will have to provide indirect or circumstantial evidence that the defendant was driving. If circumstantial evidence can show that the defendant was in

actual physical control of the vehicle at the time of the accident, the element of driving will have been proven. The officer could then testify as to what occurred subsequent to the officer's arrival.

The circumstantial evidence will involve a reconstruction of the accident showing the location of the defendant's vehicle, the location of the defendant in or near the vehicle, and the presence of any physical conditions such as skidmarks, knocked-over utility poles or tree, and so on. From the physical evidence present at the accident, the officer should be able to provide an analysis of the cause of the accident and whether the intoxicated condition of the defendant was the probable cause.

FOOTNOTES

1. See page 44 for the Alcohol Influence Report.

2. 277 Md. 314, 353 A.2d 256 (1976).

3. Since the Thomas decision, the definition of "drive" was amended to include ". . . be in actual physical control of a vehicle . . ." In upholding a DWI conviction, the Virginia Supreme Court in Lyons v. City of Petersburg, 221 Va. 10, 266 S.E.2d 880 (1980) stated that the defendant was in possession of the vehicle even though the defendant was found, intoxicated, seated behind the steering wheel with no evidence of the engine running or the car in gear. There are no Maryland cases on this point.

APPENDIX N

IMPORTANT COURT DECISIONS RELATING TO DWI ENFORCEMENT

Robert Buck Werkheiser - Court of Appeals of MD., 299 Md. 529, 474 A.2d 898 (1984).

The failure of State to obtain chemical test in fatal motor vehicle collision, although amounting to a violation of due process, does not require dismissal of charges to remedy State's failure.

Carole Ann Willis - Court of Special Appeals of MD._____ Md.App._____, 460 A.2d 1043 (1984).

Two hour countdown commences when the accused is stopped or detained on suspicion of driving or attempting to drive while intoxicated or under the influence. A detention involves some display of force or authority, actual or implied.

Jacob Edward Sites - Court of Appeal of MD. _____Md._____481 A.2d 192 (1984).

Does person arrested for DWI have a right to consult with counsel before deciding to submit to a chemical test? The court stated that person has a right to consult with counsel, but cautioned that the individual may not delay test.

Joseph Austin Briscoe - Court of Special Appeals of MD. ____Md.App.___, 479 A.2d 1305 (1984).

Blood alcohol test must conform to other statutory requirements contained in Courts and Judicial Proceedings, 10-302 to 10-309 for the State to enjoy statutory presumption outlined in 10-307.

Edward G. Welsh vs. Wisconsin - ____ U.S.____, 104 S.Ct. 1805 (1984).

There is no hot pursuit in a hit and run motor vehicle accident case to allow State to enter dwelling of suspect without a warrant to arrest driver for driving while intoxicated in order to obtain blood alcohol test.

Berkemer vs. McCarty - U.S. Supreme Court _____U.S._____, 104 S.Ct. 3138 (1984).

Miranda warnings need not be given prior to general on-the-scene questioning of DWI suspects by police officers. Once a defendant has been placed in custody, however, they must be advised of their Miranda rights prior to any further questioning.

Moon vs. State - (Reconsideration of Moon) 300 Md. 354, 478 A.2d. 695 (1984).

The court holds that the technician conducting alcohol tests for a hospital must testify at trial concerning those test results and procedures, since allowing the admission of such test results under the business records exception to the hearsay rule violates the defendant's constitutional right to confrontation.

APPENDIX O

REGULATIONS OF THE TOXICOLOGIST

OFFICE OF THE CHIEF MEDICAL EXAMINER

POST MORTEM EXAMINERS COMMISSION

STATE OF MARYLAND

REGARDING

BREATH AND BLOOD FOR ALCOHOL

YALE H. CAPLAN, Ph.D., D-ABFT
TOXICOLOGIST

RUSSELL S. FISHER, M.D.
CHIEF MEDICAL EXAMINER
BERT F. MORTON, M.D.
DEPUTY CHIEF MEDICAL EXAMINER
ANN M. DIXON, M.D.
ASSISTANT MEDICAL EXAMINER
HORMEZ R. GUARD, M.D.
ASSISTANT MEDICAL EXAMINER
H. ROBERT RUBIN, M.D.
ASSISTANT MEDICAL EXAMINER
THOMAS D. SMITH, M.D.
ASSISTANT MEDICAL EXAMINER
YALE H. CAPLAN, PH.D.
TOXICOLOGIST
BERNARD C. THOMPSON, PH.D.
ASSISTANT TOXICOLOGIST
KENNETH G. ORLOFF, PH.D.
SERIOLOGIST
DOROTHY HARTELL, CMA-A
ADMINISTRATIVE SUPERVISOR

STATE OF MARYLAND
DEPARTMENT OF POST MORTEM EXAMINERS
OFFICE OF THE CHIEF MEDICAL EXAMINER
111 PENN STREET
BALTIMORE, MARYLAND 21201

TO WHOM IT MAY CONCERN:

The attached regulations are set forth pursuant to the responsibility charged to the Toxicologist of the Office of the Chief Medical Examiner, under the Post Mortem Examiners Commission under Section 10-304 of the Courts and Judicial Proceedings Article, Annotated Code of Maryland.

These regulations are issued with regard to the training and certification of personnel performing tests of breath and blood for the purpose of determining the alcohol content in the body of drivers suspected of driving while under the influence of alcoholic beverages and the approval and certification of equipment used in conducting such tests.

These regulations supersede any previous regulations issued by this Office and are effective April 1, 1983.

Yale H. Caplan

Yale H. Caplan, Ph.D., D-ABFT
Toxicologist

DEFINITION OF TERMS

USED IN THE TEXT

Toxicologist:	The term Toxicologist refers to the Toxicologist of the Office of the Chief Medical Examiner under the Post Mortem Examiners Commission.
CTAU:	The term CTAU refers to the Chemical Test for Alcohol Unit, Crime Laboratory Division, Maryland State Police.
State:	The term State refers to the State of Maryland.
Agency:	The term Agency refers to any law enforcement organization approved to participate in the State of Maryland's Alcohol Testing Program.

SECTION I
ALCOHOL TESTS GENERALLY

A. Definition of "percent by weight" in alcohol tests

Section 10-307 of the Articles of Courts and Judicial Proceedings (Chemical Tests for Intoxication-Results of Analysis and Presumptions) states that the results of chemical tests for intoxication be expressed as "percent by weight" of alcohol in the subject's blood as determined by an analysis of breath or blood. "Percent by weight" without any qualification is inexact. An exact scientific term would be either "percent, weight by volume" or "percent, weight by weight".

In regard to chemical tests of breath or blood for alcohol in the State of Maryland, "percent by weight" is defined as "percent, weight by volume". This is further explained to be the weight of alcohol in grams contained in 100 milliliters (cubic centimeters) of blood. This method of reporting conforms to the Uniform Vehicle Code adopted by the American Medical Association to serve as a model for all states.

The breath testing devices are scientific instruments which determine the concentration of alcohol in a person's blood expressed as "percent by weight" (grams per 100 milliliters of blood). It does this by analyzing a specific volume of expired breath. The weight of alcohol in the breath sample is determined and the quantity of the alcohol converted to its equivalent value in blood.

B. Radio Frequency Interference

A statistical study of the results of over 18,000 Validation Tests conducted on approximately 100 Breathalyzer Instruments (Model 800, 900 and 900A) during January 1, 1982 through September 30, 1982 indicates that common radio frequencies do not interfere with tests properly conducted in accordance with these Regulations.

C. Precision and Accuracy of Alcohol Tests

No scientific measurement is unequivocally precise. All such measurements have an accepted scientific range of accuracy. For the Beathalyzer and blood tests for alcohol, the accepted scientific range of accuracy is plus or minus 0.01% (one hundreth of one percent) of the reported result.

SECTION II
TESTS OF BREATH FOR ALCOHOL (EVIDENTIARY)

A. Instrumentation

All instrumentation to be used in the State for the purpose of testing of breath for alcohol must be approved by the Toxicologist. Manufacturers of breath testing instruments may not offer for sale to police agencies instruments that have not been approved, and must report the sale of all such approved instruments to the CTAU. The CTAU will then advise the Toxicologist of such sale and purchase.

1. The Breathalyzer

The Breathalyzer, Models 800, 900 and 900A, as manufactured by Smith & Wesson Company/G.O.E.C., Pittsburgh, Pennsylvania or the Smith & Wesson Electronics Company, Eatontown, New Jersey, or the Stephenson Corporation, Eatontown or Red Bank, New Jersey, are approved for chemical testing of breath for alcohol.

2. Other Breath Testing Instrumentation

Other instrumentation that may become available will be evaluated on an individual basis and a list of such approved instrumentation will be made available by the Toxicologist.

3. Breath Alcohol Simulation Equipment

The Alcohol Breath Simulator, all models as manufactured by the companies listed in A.1. above are approved for use in conjunction with the breath testing instruments. Other Alcohol Breath Simulator devices will be evaluated on an individual basis and a list of such approved equipment will be made available by the Toxicologist.

4. Certification of Instruments

All approved breath testing instruments must be certified by the Toxicologist prior to being used in the State, and all breath testing instruments will be recertified by the Toxicologist on a regular basis. Agencies will be notified as to the date and time of such recertification. New instruments or instruments removed from the field for factory repair must be certified or recertified by the Toxicologist prior to being placed into or returned to service. Such certification or recertification shall be accomplished by forwarding a request to the CTAU, who shall notify the Toxicologist. Instruments which are repaired by a certified Breathalyzer Maintenance Technician may be returned to service without being recertified by the Toxicologist.

All certified instruments must be available for inspection by the Toxicologist or his representative at all times.

5. Instrument Test Ampoules

Certified Test Ampoules as distributed by the Smith & Wesson Company are approved for use in conjunction with the Breathalyzer instruments. A list of ampoules distributed by other manufacturers that are approved will be made available by the Toxicologist.

6. Instrument Calibration and Validation Standard

a. Alcohol Simulator Stock Solution will be prepared and certified by the Toxicologist and distributed to all participating Agencies by the CTAU.

b. The Alcohol Simulator Stock Solution shall be used to prepare the field Alcohol Breath Simulator solutions (Validation Test Solution) as follows: 10 mL of the Alcohol Simulator Stock Solution will be measured with a Class A volumetric TD pipette into a 500 mL Class A volumetric TC flask. Distilled water will be added to 500 mL The mixture is then transferred into the Alcohol Breath Simulator (Breath alcohol simulated concentration is 0.100%).

7. Instrument Maintenance Tests

A certified Breathalyzer Maintenance Technician will perform a Simulator Test (Maintenance) on each certified instrument twice each month. The first test will be conducted between the first and the 15th day of each month. The second will be conducted between the 16th and the last day of each month. These tests must be conducted using a freshly prepared Validation Test Solution (0.100%). The results of the test must not be less than 0.095% or greater than 0.105% using the 0.100% solution. Instruments failing to meet this tolerance must be removed from further use until repaired. Instruments which are repaired by a certified Breathalyzer Maintenance Technician to meet the above tolerance may be returned to service by the Breathalyzer Maintenance Technician.

B. Personnel

Requests for the training of Breathalyzer Operators or other personnel should be submitted in writing to the Supervisor, CTAU.

1. Classifications, Qualifications and Certification Requirements

a. Breathalyzer Operator

(1) A Breathalyzer Operator must be a full time police officer or a full time laboratory technician of a participating Agency.

(2) Initial Certification

The individual must successfully complete the Basic Breathalyzer Operator Course. Initial cerfication shall be valid for a period of 15 months.

(3) Renewal of Certification

Each Operator must successfully complete the Breathalyzer Certification Renewal Course prior to the expiration of his initial certification or each subsequent renewed certification period. Successful completion will extend certification for an additional period of 13 months.

(4) Reinstatement of Expired Certification

(a) Any Operator whose certification to conduct breath tests has expired may be reinstated within three years of the time he has completed his last Breathalyzer Basic Course or Renewal Course under the following conditions

(i) If the Operator's certification has expired and not more than ninety (90) days have elapsed since the time of such expiration, the Supervisor, CTAU, may reinstate such Operator.

(ii) If more than ninety (90) days have elapsed, the Supervisor, CTAU, shall contact the Toxicologist, and the necessity for the Operator demonstrating his proficiency to the Toxicologist or his representative by written and/or practical examination will be considered on an individual basis.

(b) Any Operator who applies for reinstatement more than three years following his last Basic Course or Renewal Course must again complete the Basic Course to be qualified.

(5) Suspension and Revocation of Certification

(a) Any Operator who fails to meet the requirements as described in these Regulations for continuing certification shall be suspended by the Supervisor, CTAU. Operators so suspended may be reinstated within one hundred twenty (120) days following such suspension without consultation with the Toxicologist after satisfactorily fulfilling the requirements for recertification.

If more than one hundred twenty (120) days have elapsed, such Operator's Certification shall be revoked.

(b) Suspension for cause.

(i) The Toxicologist, or his representative, may at any time require an Operator to demonstrate his ability to properly operate the breath testing instrument on which he is certified.

(ii) An Operator's certificate may be revoked only by the Toxicologist based on information acquired by him, his representative, or furnished by the Operator's Supervisor that the Operator's performance is unsatisfactory. If revoked, the Operator shall return all certificates and manuals to the Toxicclogist.

(iii) The Supervisor, CTAU, may suspend the certificate of any Operator and recommend revocation to the Toxicologist when in the Supervisor's judgment the Operator's performance is unsatisfactory.

(iv) The Supervisor, CTAU, shall immediately notify the Toxicologist in writing of any such suspension and furnish a copy of such notice to the suspended Operator, who shall not be permitted to operate breath testing instruments until such time as the suspension is removed.

(v) The Toxicologist, upon receipt of the notification of suspension, will initiate an inquiry culminating in

either revocation of the Operator's certificate of removal of the suspension.

b. Breathalyzer Maintenance Technician

A Breathalyzer Maintenance Technician must be a certified Breathalyzer Operator with at least one year of experience as an Operator. The one year of experience as an Operator may be waived at the discretion of the Toxicologist. The individual must have successfully completed the Breathalyzer Maintenance Course. He must demonstrate his proficiency to the Supervisor, or an approved Instructor, CTAU, who will recommend certification of qualified individuals to the Toxicologist.

c. Breathalyzer Instructor

A Breathalyzer Instructor must be a certified Breathalyzer Operator and a certified Breathalyzer Maintenance Technician and have successfully completed an approved course for instructors of alcohol test programs. He should have instructional experience and should display special aptitude and interest for the position. He must have assisted in at least one Basic Breathalyzer Operator Course and be recommended by the Supervisor, CTAU. He must be personally examined and approved by the Toxicologist.

d. Breathalyzer Principal Instructor

The Breathalyzer Principal Instructor must meet all requirements for the Instructor. He must also be a member of the Maryland State Police and assigned on a full time basis as Supervisor, CTAU. He must be personally approved by the Toxicologist.

2. Training Courses

a. Breathalyzer Operator Courses

All Breathalyzer Operator Courses must be directed by the Principal Instructor with the assistance of Breathalyzer Instructors. If the Principal Instructor is unavailable, a Breathalyzer Instructor or other qualified person may be permitted to direct courses after securing the written approval of the Toxicologist.

(1) Basic Breathalyzer Operator Course

(a) The course shall be comprised of a minimum of 35 hours of lecture and laboratory instruction including:

A study of the mathematics of the metric system.
A study of the properties, physiology and pharmacology of alcohol.
A study of the theory, operating principles, and maintenance requirements of the Breathalyzer.
A review of Maryland Statutes, Regulations and cases affecting DWI Enforcement and testing.
Laboratory experiments on human subjects using approved instrumentation.

(b) A written examination consisting of no less than fifty questions shall be given at the conclusion of the course. In addition, the individual shall satisfactorily demonstrate his ability to use the instrumentation. The cumulative passing score shall be ninety (90) percent.

(2) Breathalyzer Certification Renewal Course

(a) The course shall be comprised of 6 hours of instruction including a review of Breathalyzer theory, method and procedures, as well as a review of current and contemporary issues.

(b) A written examination consisting of no less than 25 questions shall be given at the conclusion of the course. The passing score shall be eighty (80) percent.

b. Breathalyzer Maintenance Course

(1) The Breathalyzer Maintenance Course as offered by Maryland State Police, CTAU, and the Smith & Wesson Company is approved. Other courses may be approved by the Toxicologist on an individual basis. Such courses shall be comprised of a minimum of 28 hours of training including:

A review of Breathalyzer theory, methods, and developments.
Takedown and maintenance of instrument.
Preparation of alcohol simulator solutions.

(2) Agencies with Instructors on their staff may train their own Maintenance Technicians with the approval of the Supervisor, CTAU, and the Toxicologist

(3) All Maintenance Technicians who have completed the training described in (1) and (2) above will be tested by the Toxicologist or his representative prior to certification.

c. Breathalyzer Alcohol Supervisor/Instructor Course

A list of approved Breathalyzer Alcohol Supervisor/Instructor courses will be made available by the Toxicologist.

3. Duties

a. Breathalyzer Operators

(1) Perform Breathalyzer tests for alcohol according to the guidelines set forth in these Regulations.

(2) Perform a Validation Test using an Alcohol Breath Simulator following each subject test. If the result of this Validation Test deviates greater than plus or minus 0.010% from the 0.100% stated strength of the simulator solution, (i.e. less than 0.090% or greater than 0.110%) the test of the subject must be voided.

Information on voided subject tests must appear in the "Comments" column of the Log of Tests for Alcohol Influence Arrests.

(3) Perform at least two (2) Breathalyzer tests per month. The first test should be between the 1st and the 15th of the month, and the second test should be between the 16th and the last day of the month. These tests may be either subject or simulator tests. Simulator tests should be recorded as Simulator Test (Operator). Information on all tests performed by a Breathalyzer Operator must appear in both the Log of Tests for Alcohol Influence Arrests (MSP Form 36B) and the Breathalyzer Operator's Log (MSP Form 36A).

(4) Notify the Breathalyzer Maintenance Technician of the following:

(a) That an instrument's results deviated greater than plus or minus 0.010% from the 0.100% stated strength of the simulator solution (Validation Test Solution).

(b) Mechanical problems with either the Breathalyzer or the Simulator.

b. Breathalyzer Maintenance Technician

(1) The Breathalyzer Maintenance Technician will conduct an inspection of all Breathalyzer instruments and related breath testing equipment twice each month. The first between the 1st and 15th, and the second between the 16th and the last day of the month. He should allocate sufficient time for the inspection so that records may be checked and the instrument maintained as necessary. Additionally, he will:

(a) Complete or have completed all required reports to be forwarded to the CTAU.

(b) Conduct Breathalyzer inspections in accordance with the Breathalyzer Field Inspection Report. The completed report must be forwarded directly to the CTAU within 24 hours of the inspection. In those cases where a certified instrument is down for repairs, a Breathalyzer Field Inspection Report (MSP Form 37) shall be forwarded to the CTAU, noting this fact. A copy of this form shall be maintained in the Agency file.

(c) Prepare a 0.100% simulated breath alcohol solution for validation of the Breathalyzer tests. A new Validation Test Solution will be prepared during the bimonthly inspection or when the tolerance of plus or minus of 0.010% of the 0.100% stated concentration is not achieved. The results of this test will be printed in the Log of Tests for Alcohol Influence Arrests (MSP Form 36B) and the individual's Breathalyzer Operator's Log (MSP Form 36A) as Simulator Test (Maintenance).

If the instrument fails to achieve a result within plus or minus 0.005% of the expected value, the Breathalyzer Maintenance Technician will initiate repairs, completing the Chemical Test Equipment Repair Report (MSP Form 28). One copy of the report will be forwarded to the CTAU. The original report will be filed at the field installation. If the technician

cannot repair the instrument in the field and the instrument must be forwarded to the factory for repairs, the technician will so note on the Equipment Repair Report. When the instrument is returned from the factory, it must be recertified by the Toxicologist before being placed into service.

(i) Requests to have instruments recertified after factory repairs will be initiated through the CTAU.

(ii) All requests for instrument certification will be handled by appointment only.

(2) The Alcohol Influence Summary (MSP Form 34A) will be completed by the Breathalyzer Maintenance Technician or a Departmental Supervisor by the 10th of each month for the preceding month. It will be submitted directly to the CTAU.

(3) The Breathalyzer Maintenance Technician will forward to the Toxicologist's office on a monthly basis an exact photocopy of the Log of Tests for Alcohol Influence Arrests (MSP Form 36B) and the Breathalyzer Operators Log (MSP Form 36A) for each Operator. The copies of these records are to be received in the Toxicologist's office by the 15th of each month for the preceding month.

C. Required Records

1. Log of Tests For Alcohol Influence Arrests

Each Agency is required to keep a permanent log for each instrument. The CTAU will notify Agencies as to the type of log to be used and will pre-number and record the numbers of all pages. Pages may not be removed except by the CTAU. All arrests for violation of Transportation Article, Section 21-902 shall be entered in the log. In addition, all Simulator Tests (Operator and Maintenance) must be entered in the log. The log must be available for inspection by the Toxicologist or his representative at all times.

2. Breathalyzer Operator Log

Each Agency is required to keep an individual log on each certified Breathalyzer Operator. This log will contain the date of each breath test conducted by the Operator, noting the type of test as to subject tested or Simulator Test (Operator) and the results of the

test. The log must be available for inspection by the Toxicologist or his representative at all times.

3. Breathalyzer Instrument Report Forms

A Breathalyzer Field Inspection Report (MSP Form 37) recording the results of the Simulator Tests (Maintenance) will be completed and forwarded to the CTAU within 24 hours of the inspection. Any repairs to instruments will be recorded on Chemical Test Equipment Repair Report (MSP Form 28). The original should be filed at the field facility and a copy shall be forwarded to the CTAU.

D. Testing Requirements

1. All Breathalyzer tests will be conducted in accordance with the approved procedures (see Appendix 1) and recorded on the Breathalyzer Operational Check List (MSP Form 35).

2. The Alcohol Breath Simulator will be used for all Simulator Tests (Operator) and Simulator Tests (Maintenance) and Simulator Tests (Validation).

3. Each Operator is required to perform at least two tests per month. The first test will be conducted between the 1st and 15th day of each month. The second test will be conducted between the 16th and the last day of each month. Special exceptions to this requirement will be allowed in the case of sick leave, annual vacation, temporary assignment outside the area, or the absence of the instrument due to repairs. The reason for failure to perform the required tests will be entered on the Breathalyzer Operator Log. The Supervisor, CTAU, shall be notified if the above exceptions exceed one month.

E. Agency Requirements

1. Minimum Requirements

a. All Agencies requesting approval to conduct Breathalyzer Tests must:

1) Offer 24 hour police service.

2) Be housed in a facility exclusive for its use. Such facility must have an area designated exclusively for the storage and use of Breathalyzer instruments and related accessories.

3) Must have a minimum of 20 full-time sworn police officers.

b. Agencies that desire to be approved to conduct Breathalyzer tests shall make written formal application to the Toxicologist.

2. Breathalyzer Maintenance Technician

The responsibility for the supervision and maintenance of breath alcohol testing equipment and related records will be that of the Breathalyzer Maintenance Technicians.

a. All Agencies certified to conduct Breathalyzer tests must have a certified Breathalyzer Maintenance Technician. Should a vacancy occur in an Agency with only one technician, the Agency is responsible for making arrangements with another certified Agency to have the required instrument maintenance checks performed.

b. Should a vacancy occur in the Maintenance Technician position, the Agency must take steps to have another technician trained within 90 days of the original technician's vacancy. Exceptions to this will be considered by the Toxicologist on an individual basis.

3. Submission of Copies of Logs to Toxicologist's Office

Each Agency approved to conduct tests of breath for alcohol must prepare and send on a monthly basis to the Toxicologist's Office an exact photocopy of the Log of Tests for Alcohol Influence Arrests (MSP Form 36B) and an exact photocopy of the Breathalzyer Operators Log (MSP Form 36A) for each operator. The copies of these records are to be received in the Toxicologist's Office no later than the 15th of each month for the preceding month.

SECTION III
TESTS OF BREATH FOR ALCOHOL (PRELIMINARY)

A. Instrumentation

1. Preliminary Breath Testing (PBT) Devices are portable screening devices designed for roadside testing of subjects. The Transportation Article, Section 16-205.2, authorizes preliminary breath testing of drivers stopped for suspicion of driving while intoxicated or under the influence of alcohol. Such tests must be conducted with equipment approved by the Toxicologist.

2. Approval of PBT Devices is contingent upon Agencies and Officers fulfilling and on a continual basis adhering to training and other administrative requirements stated in these Regulations.

3. The Alco-Sensor, manufactured by Intoximeters, Inc., St. Louis, Missouri, is approved for use in the State of Maryland. Other PBT Devices that may become available will be evaluated on an individual basis and a list of such approved devices will be made available by the Toxicologist.

4. All PBT Devices used in Maryland must be registered with the CTAU. The CTAU shall maintain records of all registered PBT Devices.

5. Each PBT Device used to test suspected drinking drivers will be checked once each month using a simulated 0.100% alcohol solution. This test may be performed by any approved Operator.

   a. The results of this test must be recorded in the PBT Log by the Operator.

   b. The results of this test will be recorded in the "Accused Name or Calibration Test" column as "Monthly Test."

   c. The results of this test must be between 0.09% and 0.11%.

      PBT Devices that do not achieve this result must be withdrawn from use and recalibrated to read 0.10% using a 0.100% simulated alcohol solution. Calibration and repairs to PBT Devices must only be made by those persons trained for this purpose.

      After recalibration, the results must be recorded in the PBT Log and "Calibration Test" should be recorded in the "Accused Name or Calibration Test" column.

B. Approval to Conduct Preliminary Breath Tests

Preliminary breath tests of suspected intoxicated drivers may be conducted only by police officers who have received training in the use of the PBT Devices in a training program approved by the Toxicologist. A certificate issued to an individual will be evidence of satisfactory completion of the course of instruction.

1. All PBT classes will be instructed by persons who have received instructor training from the CTAU and follow the approved course outline.

2. A roster (on the form provided) of students successfully completing the course will be forwarded to the CTAU immediately upon completion of the course.

C. Training and Administration of Program

1. The CTAU shall coordinate this program and provide instructor training for all other Agencies. Agencies requiring training will request same from the Superintendent, Maryland State Police. The course of instruction will consist of at least two (2) days and must be approved by the Toxicologist.

2. Approved PBT Instructors will train Agency personnel. The course of instruction will be one (1) day and must be approved by the Toxicologist.

D. Testing Procedures

1. Drivers stopped for suspicion of driving while intoxicated or under the influence of alcohol may be administered a preliminary breath test after being advised of their rights utilizing Preliminary Breath Test Advisements of Rights (MSP Form 102).

   a. This form will be forwarded to the PBT supervisor at the end of the officer's shift.

   b. The PBT supervisor will use the form to assure PBT data has been recorded in the appropriate log. The form may then be destroyed.

2. The results of preliminary breath tests will be used by the arresting officer only as a guide to determine whether the driver should be arrested for driving intoxicated or under the influence. The Preliminary Breath Test does not replace the probable cause for the arrest.

3. The results from the PBT Device will not be given to the suspected drinking driver. The driver will be advised he is under arrest based upon his driving and physical condition. The results of the PBT may be given to the driver after he submits to an evidentiary test.

E. Required Records

1. The results of preliminary breath tests, offered, refused, calibration, and subjects tested will be recorded on the PBT Log. The form of this log must be approved by the Toxicologist and will be distributed to approved agencies by the CTAU. A copy of this log will be forwarded to the CTAU by the 15th of each month for the preceding month.

   a. Pages in the log will be consecutive, starting with Page 1. Pages will not be renumbered at the beginning of each new year, but will continue in numerical order.

   b. A new page will be initiated to start a new year.

2. A summary of preliminary breath tests offered, refused, and subjects tested during each month will be forwarded to the CTAU by the 15th of the month for the preceding month. The summary will be completed on the form approved by the Toxicologist.

SECTION IV
TESTS OF BLOOD FOR ALCOHOL

A. Laboratories and Procedures for Analysis

1. Laboratories

a. All tests of blood for alcohol will be performed in centralized facilities designated by the Toxicologist. The Toxicologist will periodically inspect and certify such facilities. No laboratory other than those designated by the Toxicologist shall carry out such determinations for the purpose of sustaining charges related to violation of Section 21-902 of the Transportation Article and in accordance with Sections 10-302 to 10-309 of the Articles of Courts and Judicial Proceedings (Annotated Code of Maryland).

b. The Maryland State Police Crime Laboratory Division, Chemical Test for Alcohol Unit is the approved facility to conduct chemical tests for alcohol as indicated in IV, A, 1a. above.

2. Instrumentation and Procedures for Analysis

a. All procedures for the chemical testing of blood for alcohol must be approved by the Toxicologist. The Toxicologist will notify certified designated laboratories of acceptable procedures.

b. The Laboratory shall analyze samples for alcohol using a gas chromatographic head-space method with the Perkin-Elmer F-45 gas chromatographic instrument.

Blood samples (0.5 mL) shall be diluted with 4.5 mL of water containing n-propanol as internal standard.

Analyses shall be conducted in duplicate and results shall not deviate greater than plus or minus 0.010%.

Such instrumentation and analytical procedures will be calibrated with Alcohol Reference Standard Solutions prepared under the direction of the Toxicologist. An Alcohol Reference Standard Solutions shall be analyzed immediately adjacent to each test case. Results of such solutions shall not deviate greater than plus or minus 0.010% from the stated concentration of the solution.

c. Instrumentation used in such analytical procedures shall be located in a restricted area within the Crime Laboratory Division, Chemical Test for Alcohol Unit. Blood samples shall be stored in an area accessible only to Chemical Test for Alcohol Program personnel and certified Chemical Test for Alcohol Chemists. Instrumentation used in such analytical procedures shall not be used for any purpose other than performing tests of blood for alcohol.

B. Personnel

1. Qualified Medical Personnel

Qualified medical person means any person permitted by law to withdraw blood from humans. This includes a physician or registered nurse licensed to practice in the State of Maryland, laboratory technicians acting for a pathologist in approved hospital pathology laboratories, phlebotomists acting under the direction of a physician and other persons whose qualifications have been approved by the Toxicologist and the Maryland State Police. Qualified medical personnel are qualified to withdraw blood for the testing of blood for alcohol content.

2. Chemist

a. Chemists performing tests of blood for alcohol must be approved by the Toxicologist. The Toxicologist will review the credentials of such chemists, direct a program of training as necessary, and set standards for maintenance of proficiency. Qualified chemists will be certified by the Toxicologist on a regular basis.

b. Requirements for Certified Chemists

1) Each certified Chemist must perform at least 5 analyses on each of the two aqueous Alcohol Reference Standards provided by the Toxicologist. These analyses must be conducted on a monthly basis and recorded in a log kept at the laboratory for this purpose. Instrument data supporting log entries must be available with the log for inspection at all times.

2) The Toxicologist will submit on a regular basis to each Certified Chemist blood samples to be tested for alcohol content. These samples are to be tested promptly and results reported to the Toxicologist in writing by the stated deadline.

3) Each Certified Chemist must attend Retraining Classes as scheduled by the Toxicologist.

C. Procedures for Administering a Chemical Test of Blood for Alcohol

1. Withdrawal of Sample

The sample must be withdrawn by qualified medical personnel.

2. Blood Sampling Equipment

Blood sampling equipment must be approved by the Toxicologist. A list of such approved equipment will be maintained by the Toxicologist.

3. Witnessing of Sample Withdrawal

The arresting officer or another police officer should, where possible, witness the withdrawal of the blood sample to ensure the admissibility of such evidence at time of trial.

4. Completion of Forms

The police officer must fill out all forms contained in the equipment and be certain all seals are signed and properly affixed.

5. Transportation of Sample to Laboratory

The sample will be transported to the laboratory in containers provided with the sampling equipment. Samples will be forwarded by first class mail whenever possible. Samples may be sent by certified mail or messenger as necessary.

6. Required Records

All tests of blood for alcohol shall be recorded in the Log of Tests for Alcohol Influence Arrests.

7. State of Maryland Official Copy Results of Chemical Tests

Three copies of laboratory reports will be provided each Agency for each test performed. The first copy is for Agency use, the second copy will be held by the Agency and made available to the accused subject tested and the third copy will be forwarded to the State's Attorneys Office.

SECTION V
OFFICIAL REPRESENTATIVE OF TOXICOLOGIST

The Supervisor, CTAU, Maryland State Police, shall act as the authorized representative of the Toxicologist for all matters relating to the training of police personnel and the maintenance and inspection of instruments and equipment used for testing and coordination of the State Alcohol Testing Program.

SECTION VI
AMENDMENTS

Amendments to these Regulations will be issued when necessary. A list of such amendments will be made available by the Toxicologist.

Yale H. Caplan, Ph.D., D-ABFT
Toxicologist
Office of the Chief Medical Examiner
Post Mortem Examiners Commission
State of Maryland

April 1, 1983

APPENDIX 1

APPROVED METHOD FOR CONDUCTING MODEL 800, 900 and 900A BREATHALYZER TESTS FOR DETERMINING BLOOD ALCOHOL CONCENTRATION

1. The subject to be tested must have nothing to eat or drink and should not smoke within 20 minutes prior to the time a breath sample is taken.

2. The instrument must be allowed to warm up to its operational temperature which is 50° ± 3°C.

3. Approved Breathalyzer Solution ampoules must be used as reference ampoule and test ampoule.

4. A reference ampoule must be selected and checked with an approved ampoule gauge. The ampoule must fit into the large end of the gauge and must not fit into the small end of the gauge. The meniscus of the solution must be above the top of the gauge when the ampoule is seated in the gauge. There must be no fluid in the top of the ampoule. The ampoule is placed in the left ampoule well of the instrument.

5. A second ampoule is then selected as a test ampoule and checked as in the case of the reference ampoule.

6. The top of the ampoule is then broken off and a clean bubbler tube inserted. The ampoule is then placed into the right ampoule well of the instrument and connected by a rubber tube to the metal capillary tube.

7. The control knob is turned to the TAKE position: The retractable breath tube is then connected to the purging bulb and room air is pumped through the collection chamber. After the chamber has been flushed the control knob should be turned to the ANALYZE position.

8. When the room air sample has left the collection chamber and bubbled through the test ampoule a red "empty" indicator light is illuminated. Wait for 90 seconds then turn the photometric light on and balance the photometric system. After this is completed, the photometric light should be turned off.

9. After balancing the photometric system, the blood alcohol pointer must be set on the START LINE.

10. A new mouthpiece should be selected and attached to the retractable breath tube. The control knob must be turned to the TAKE position. The subject who is being tested must deliver deep lung breath into the instrument by blowing into the mouthpiece and retractable breath tube for as long as possible. The time this sample is delivered must be recorded.

11. The control knob must be turned to the ANALYZE position. When the last of the sample enters the test ampoule, a red "empty" indicator light is illuminated. A 90 second waiting period must then be observed. After the waiting period, the photometric light should be turned on. If there is any alcohol in the sample, the galvanometer or panel meter needle will move off center. The photometric system is then rebalanced. The blood alcohol pointer will indicate the blood alcohol concentration. The result from this test must be recorded by depressing the pointer and imprinting the result on the test record form. The result is reported to the second decimal place, the third decimal place is to be dropped (for example, a reading of 0.148% is reported as 0.14%). If the results of the test exceeds 0.40%, record the result as 0.40%+ and conduct the remaining steps using another ampoule having the same Breathalyzer Solution Control Number (Lot #).

12. The control knob must then be turned to the TAKE position. The retractable breath tube is then connected to the purging bulb and room air is pumped through the collection chamber. After the chamber has been flushed, the control knob should be turned to the ANALYZE position.

13. When the air sample has left the collection chamber and bubbled through the test ampoule a red "empty" indicator light comes on. After the 90 second waiting period, the photometric light should be turned on and the photometric system balanced. After this is done, the photometric light should be turned off.

14. After balancing the photometric system, the blood alcohol pointer must be set on the START LINE.

15. The retractable breath tube is then connected to the delivery tube of a Breath Alcohol Simulator containing the Validation Test Solution (0.100%). The control knob must be turned to the TAKE position. A sample from the Breath Alcohol Simulator is delivered into the instrument.

16. The control knob must be turned to the ANALYZE position. When the last of the sample leaves the collection chamber and bubbles through the test ampoule, a red "empty" indicator light will illuminate. A 90 second waiting period must then be observed. After the waiting period, the photometric light should be turned on. The photometric system is then rebalanced. The result of this test must be recorded by depressing the pointer and imprinting the result on the test record form. The result is reported to the third decimal place. The Breath Alcohol Simulator result must not be lower than 0.090% or greater than 0.110%.

This validates all components of the testing procedure and assures the accuracy of the test conducted on the subject.

17. After completing the breath alcohol test as described, the control knob must be turned to the OFF position and all ampoules removed from the instrument. The test results should be recorded in the Breathalyzer Operators Log and the Log of Tests for Alcohol Influence Arrests.

Yale H. Caplan, PhD., D-ABFT
Toxicologist

Revised 1/1/81

REGULATIONS OF THE TOXICOLOGIST
OFFICE OF THE CHIEF MEDICAL EXAMINER
POST MORTEM EXAMINERS COMMISSION
STATE OF MARYLAND
REGARDING TESTS OF
BREATH AND BLOOD FOR ALCOHOL

Amendment No. 1 Effective July 10, 1984

Sections - II A. Instrumentation

1. The Breathalyzer (p. 3)

II A. Instrumentation

5. Instrument Test Ampoules (p. 4)

II B. Personnel

2. Training Courses

b. Breathalyzer Maintenance Course (p. 8,9)

- are deleted in their entirety and replaced as follows:

Section II A. Instrumentation

1. The Breathalyzer

The Breathalyzer, Models 800, 900 and 900A, as manufactured by Smith & Wesson Company/G.O.E.C., Pittsburgh, Pennsylvania, Smith & Wesson, Springfield, Massachusetts, the Smith & Wesson Electronics Company, Eatontown, New Jersey, the Stephenson Corporation, Eatontown and Red Bank, New Jersey, the National Draeger, Inc. Breathalyzer Division, Pittsburgh, Pennsylvania, are approved for chemical testing of breath for alcohol.

Section II A. Instrumentation

5. Instrument Test Ampoules

Certified test ampoules as distributed by the Smith & Wesson/Company/G.O.E.C. and the National Draeger, Inc. Breathalyzer Division, Pittsburgh, Pennsylvania are approved for use in conjunction with the Breathalyzer instruments. A list of ampoules distributed by other manufacturers that are approved will be made available by the Toxicologist.

Amendment No. 1 (Continued) July 10, 1984

Section II B. Personnel

2. Training Courses

b. Breathalyzer Maintenance Course

(1) The Breathalyzer Maintenance Course as offered by Maryland State Police, CTAU, is approved. Other courses may be approved by the Toxicologist on an individual basis. Such courses shall be comprised of a minimum of 28 hours of training including:

A review of Breathalyzer theory, methods, and developments.
Takedown and maintenance of instrument.
Preparation of alcohol simulator solutions.

(2) All Maintenance Technicians who have completed the training described above will be tested by the Toxicologist or his representative prior to certification.

Yale H. Caplan, Ph.D., D-ABFT
Toxicologist