

<b>STATE OF NORTH CAROLINA</b>  <b>OFFICE OF STATE PERSONNEL</b>  <b>POSITION DESCRIPTION FORM (PD-102R-92)</b>		Approved Classification:  Effective Date: Analyst:  (This space for Personnel Department Use Only)	
1. Present Classification Title of Position <b>Chemistry Supervisor IV</b>		7. Present 15 Digit Position Number <b>3613-0000-0002-105</b>	Proposed 15 Digit Position Number
2. Usual Working Title of Position <b>Special Agent in Charge (SAC)</b>		8. Department, University, Commission, or Agency <b>Department of Justice</b>	
3. Requested Classification of Position <b>Chemistry Supervisor IV</b>		9. Institution & Division <b>SBI - Crime Laboratory Division</b>	
4. Name of Immediate Supervisor <b>Jerry Richardson</b>		10. Section and Unit <b>Drug Chemistry Section</b>	
5. Supervisor's Position Title & Position Number <b>Assistant Director Position #3613-000-0002-015</b>		11. Street Address, City and County <b>121 East Tryon Road; Raleigh; Wake</b>	
6. Name of Employee		12. Location of Workplace, Bldg., and Room No. <b>SBI Crime Laboratory</b>	

**I. A. PRIMARY PURPOSE OF ORGANIZATIONAL UNIT:**

The primary purpose of the Drug Chemistry Section is to provide the North Carolina Criminal Justice System with trained and experienced chemists who examine and analyze evidence seized in the course of criminal investigations. The forensic services provided include laboratory analysis, technical field assistance, and expert witness testimony in the areas of controlled substances, blood alcohol, blood drug, drug dilution, drug tampering, poisons and clandestine drug laboratories.

**B. PRIMARY PURPOSE OF POSITION:**

The primary purposes of the SAC position are to plan, organize, direct, manage, and control the operations of the Drug Chemistry Section. This position directs and reviews the work of subordinates; develops, modifies, and updates procedures and methods; performs analysis on special cases; assists with special field investigations; oversees budget considerations for Section, including purchasing supplies, equipment, instruments, and training; evaluates and determines specifications for instrumentation; screens and interviews applicants; evaluates, counsels, and disciplines subordinates; sets work standards, including quality control procedures; and consults with Dept. of Justice on proposed legislation dealing with controlled substances.

**C. WORK SCHEDULE:**

Work is generally performed Monday through Friday on an eight-hour flex schedule day. The position holder is required to be on call 24 hours a day, seven days a week, and work overtime as required for court travel and completion of work.

**D. CHANGE IN RESPONSIBILITIES OR ORGANIZATIONAL RELATIONSHIP:**

N/A

**II. A. DESCRIPTION OF RESPONSIBILITIES AND DUTIES:**

Method used (Check One):

Order of Importance: ☒ [X]

Sequential Order: ☐ [ ]

Place an asterisk (\*) next to each essential function. (See instructions for complete explanation.) Please note percentage of time for each function.

**1. PERSONNEL MANAGEMENT (55%)**

The SAC is responsible for the management of the Section and directs the activities of eighteen (18) forensic chemists and (1) secretary. Management duties include: assigning casework and managing the case load for the chemists; assigning special case assignments to senior chemists; assigning laboratory and administrative duties to chemists; Performance Management Evaluations, counseling and discipline of employees; administrative and management reports for the Section; ensuring that new chemists are properly trained and tested in forensic drug chemistry before they are assigned casework; and ensuring that all Section personnel receive the necessary and/or required technical, law enforcement, and management training needed to complete their assigned tasks.

**2. QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS (15%)**

The SAC position is responsible for directing and coordinating programs to ensure the quality, integrity, and scientific accuracy of the chemical analysis conducted and to ensure the integrity of the evidence analyzed by the Section. The SAC position is responsible for maintaining the Section=s Technical Procedures Manual, Quality Assurance Manual and the Section=s Policy and Procedure Manual. The SAC is responsible for initiating new analysis and quality assurance procedures, and updating or modifying old procedures. The SAC must ensure that each chemist conducting casework complete an annual proficiency test and that all casework is reviewed and approved before a laboratory report is issued. The SAC must also ensure that the court testimony of each chemist in the Section is monitored on an annual basis.

**3. SPECIAL CASE ASSIGNMENTS (5%)**

The SAC and the Chemist III positions are assigned the most difficult cases that are submitted to the Drug Chemistry Section from law enforcement officers across the state. These cases include:

**Drug Dilution/Drug Tampering** - cases where drugs are removed from pharmaceutical vials, bottles, syringes, I.V. solutions, etc. and replaced with other substances to cover up the shortage (hospitals, emergency treatment facilities, nursing homes, etc.).

**Steroids** - cases involving anabolic steroids, a class of drugs that are very difficult to isolate, purify and conclusively identify.

**Poisons** - cases involving the poisoning or attempt to poison individuals with a variety of toxic substances - drugs, pesticides, chemicals, etc.

**Clandestine Drug Laboratories** - Clandestine drug laboratories are illegal drug labs where drugs are manufactured, processed or refined. These labs utilize an array of different chemicals - solvents, reagents and precursors depending upon which drug is being manufactured and which specific reaction is being utilized to manufacture that particular drug. Because of the dangers associated with these laboratories (explosive, flammable, toxic, hazardous waste, etc.) and the technical nature of the investigations, SBI policy requires that one of the forensic chemists who is trained and certified in clandestine laboratory investigations, be present at the search and seizure of the clandestine lab. The SAC position coordinates the clandestine laboratory investigations and assists in planning, surveillance, search, seizure, processing, evidence collection, and analysis of the evidence. The SAC position also assists with the required training and annual certification of other chemists and agents in clandestine laboratory investigations.

The SAC position works clandestine laboratory investigations as a Chemist III as part of his assigned duties.

The chemist must complete laboratory and technical assistant reports based upon the investigations and he must give expert testimony in court.

Because of his technical knowledge and safety training, the chemist must take an active role in the investigation, search and seizure of a clandestine drug laboratory.

The chemist helps conduct surveillance on the clandestine laboratory site in order to obtain probable cause for a search warrant and also to help plan the search on the clandestine lab.

During the planning stage of clandestine lab search, the chemist coordinates with local law enforcement, fire and emergency personnel and hazardous waste management. At the time of the search, the chemist must make initial entry into the lab in appropriate safety equipment (Class B suit required by SBI policy), help secure the lab site from suspects/witnesses, assess the explosive/toxic levels in the lab and take appropriate action to render the laboratory safe. This also includes deactivating and/or neutralizing any on-going chemical reactions.

The chemist then coordinates the crime scene search of the laboratory, collects evidence for analysis and coordinates with hazardous waste personnel in the disposing of laboratory chemicals, equipment, and waste products.

The chemist must analyze the chemicals, immediate precursors, by-products, and Afinished-product@ (drug) from the clandestine laboratory and show the synthesis reactions used or Aintended to be used@ in the case where no Afinished product@ is found. This requires that the chemist be familiar with the drug synthesis reactions used in clandestine drug laboratories and to have run these reactions himself.

The chemist must maintain his certification in the use of the safety equipment utilized in clandestine laboratory investigations.

The chemist must train law enforcement officers, fire and emergency personnel, and hazardous waste management personnel in clandestine laboratory investigations and the dangers and safety requirements of these investigations.

#### **4. GENERAL CASE WORK - QUALITATIVE AND QUANTITATIVE ANALYSIS (10%)**

Drug evidence seized by law enforcement officers in the course of criminal investigations must be analyzed to identify unknown material or either to confirm or verify what the officers believe the evidence to contain.

The SAC position works cases as a chemist as part of his assigned duties. The analysis of controlled substances (drugs) involves the chemist first having to determine to which general class of drug the unknown sample (evidence) belongs. The chemist first conducts a series of color tests on the sample using various chemical reagents and also ultraviolet spectrophotometry to help classify the drug as to a general type. Once the drug has been classified, the chemist must then utilize his knowledge of the drug type, depending on the chemical properties of that drug type, to isolate, purify and identify the drug or mixtures of drugs in the unknown sample. Chemical extractions, solvent solubilities and chromatography (gas, liquid, and thin-layer) are used to isolate and purify the drug. Microcrystalline tests that utilize a microscope and various chemical reagents, and infrared spectroscopy are other analytical tools used by the chemist to identify drugs.

Occasionally, new drugs (Adesigner@) are encountered that have been manufactured in clandestine laboratories and known standards of the drug do not exist. In these cases, the chemist must be able to derive the structure of the drug from analytical data that has been obtained, including ultraviolet infrared, nuclear magnetic resonance and mass spectrometry spectral data.

Once the drug has been identified, the chemist must then determine the purity of the drug in the sample. Depending upon what type of drug is present, the chemist utilizes either gas chromatography, infrared spectrophotometry or ultraviolet spectrophotometry to determine the percent purity of the drug and subsequently the total amount of the drug present in the sample.

Because of the large number and variety of drugs and other substances encountered in the SBI laboratory, the

chemist must possess a formidable knowledge of organic chemistry and analytical chemistry techniques to be able to classify, isolate, purify, and identify unknown substances and drugs. Because of the large number of cases submitted to the SBI Laboratory and because no two cases can be assumed to be alike, the chemist must be a problem solver, utilizing his/her knowledge of chemistry with either a minimum amount or no instruction, to identify these unknown substances.

The chemist must also be very familiar with the North Carolina General Statutes, especially the Controlled Substances Act (Drug Law). The chemist not only must identify controlled drugs, but must be able to classify the drugs under the drug law - Schedules I through VI. Some drugs are included in several schedules under the law and the analysis of a particular drug may result in a defendant being charged with a misdemeanor, a felony or a major trafficking offense, depending on the amount of the drug, purity of the drug and the presence of other drugs in the unknown sample. There is no room for error in the chemist's analysis. The results of the analysis could mean the difference in a defendant going to jail, receiving probation, or having criminal charges dismissed.

The chemist must keep abreast of current forensic and chemical literature and research so as to keep up on new drugs and substances being encountered, new extraction and analysis techniques, and changes in the drug laws that would apply directly to his/her analysis of controlled substances.

#### **5. REPORT WRITING AND COURT TESTIMONY (5%)**

The chemical analysis must be documented by the chemist. This documentation is kept in the laboratory case file and includes the chemist's notes, charts, graphs, instrumental data, sketches, photographs and other data that the chemist generates during the analysis. This documentation must conform to the criteria set forth in the Crime Laboratory's quality assurance manuals. The chemist must also issue a written laboratory report.

Laboratory reports are used by police officers in their investigations, district attorneys in their determination of what, if any, criminal charges will be filed against a defendant, and the courts and juries in determining a defendant's guilt. The laboratory report must therefore be written in a clear and concise manner, detailing the results of the analysis in such a way that police officers, lawyers, judges, and juries can understand the report and its application. The chemist's work is checked by a technical and administrative review of the laboratory case file, which includes all of the documentation and the laboratory report produced by the chemist during an analysis.

The chemist must also testify in state and federal courts as to his/her analysis of the evidence. The chemist must first, through his/her education, training and experience, qualify himself/herself to the court as an expert in the field of forensic chemistry before being allowed to testify about the analysis. As an expert witness, the chemist must explain and defend in detail his/her analysis, including the procedures and techniques used; the results of the analysis; and how the results of the analysis apply in the given case.

#### **6. PLANNING, SETTING GOALS, AND OBJECTIVES (5%)**

The SAC position is responsible for setting the direction of the Section by initiating programs and operations that will best meet the future needs of the Bureau. Goals and objectives are set by utilizing input from top management and subordinates as well as staying abreast of criminal trends and advancements in technology. The SAC is responsible for overseeing the budget for the Section; which includes, purchasing supplies, equipment, instruments, and directing the funds needed for training for the chemists. The SAC must evaluate new analysis procedures and instruments and he must determine the specifications that are needed for the instruments.

#### **7. GENERAL LAW ENFORCEMENT DUTIES (5%)**

The SAC position must complete annual in-service training which is required to maintain law enforcement certification and sworn status. This training consists of reviews of policies and procedures, recent court rulings and legal updates, physical screening and training, and bi-annual firearms training. The SAC position participates in crime scene investigations as required.

**II. B. OTHER POSITION CHARACTERISTICS:****1. ACCURACY REQUIRED IN WORK**

Any drug or substances listed on reports must be conclusively identified. Quantitative results must be within the range specified by laboratory guidelines.

**2. CONSEQUENCE OF ERROR**

Errors in an analysis could cause a miscarriage of justice, wrongly convicting the innocent or letting the guilty go free. An error could also damage the credibility of the SAC and the SBI Crime Laboratory.

**3. INSTRUCTION PROVIDED TO EMPLOYEE**

SAC usually operates under no technical direction and has freedom to choose priorities and define goals.

**4. GUIDES, REGULATIONS, POLICIES AND REFERENCES USED BY EMPLOYEE**

Journal articles, textbooks, and standard laboratory reference materials are used frequently in the daily analysis work; North Carolina and Federal Controlled Substance laws; Dept. of Justice, SBI, Crime Laboratory, and Section Policy and Procedure Manuals, Safety Manuals; State of NC Personnel Manual.

**5. SUPERVISION RECEIVED BY EMPLOYEE**

No daily supervision. Normally almost complete freedom to plan daily work and in making management, administrative, and technical decisions in management of the Section.

**6. VARIETY AND PURPOSE OF PERSONAL CONTACT**

Daily contact with other persons; including, police officers, secretaries, court reporters, district attorneys, judges, and lawyers. Personal contact with persons from other state agencies, professional organizations, and private industry is also necessary.

**7. PHYSICAL EFFORT**

Physical work involves moving containers of chemicals and compressed gas cylinders.

**8. WORK ENVIRONMENT AND CONDITIONS**

Work environment exposes SAC to numerous chemical hazards. These include carcinogenic, caustic, and otherwise irritating chemicals - usually on a small scale. More irritating on a daily basis are the dusty, moldy conditions of some evidence, particularly vegetable material. The SAC also has exposure to biohazards that have potential to be life threatening from cuts or punctures from contaminated evidence.

**9. MACHINES, TOOLS, INSTRUMENTS, EQUIPMENT, AND MATERIALS USED**

Light microscope	Electronic balances	Personal computer
Polarizing microscope	Gas Chromatograph	Air Monitoring Equipment
IR Spectrophotometer	High Performance Liquid Chromatography	

UV Spectrophotometer  
Mass Spectrometer

Nuclear Magnetic Resonance Spectroscopy  
Self Contained Breathing Apparatus (SCBA)

**10. VISUAL ATTENTION, MENTAL CONCENTRATION AND MANIPULATIVE SKILLS**

All phases of analytical procedures require close observation, precision and good manipulative skills. Expertise in these areas can mean success or failure in getting results.

**11. SAFETY FOR OTHERS**

Concern must be shown for the safety of others in handling of organic/inorganic chemicals and solvents.

**12. DYNAMICS OF WORK**

Generally the dynamics of work does not change in terms of daily or weekly work assignments. Response to crime scene or clandestine laboratory investigation is required.

**III. KNOWLEDGE, SKILLS & ABILITIES AND TRAINING & EXPERIENCE REQUIREMENTS**

**A. KNOWLEDGE, SKILLS AND ABILITIES**

Some of the knowledge, skills and abilities to perform as the Drug Chemistry Section SAC are as follows:

Thorough knowledge of the principles, concepts, theories, reference sources and laboratory applications of chemistry and other related sciences. Advanced knowledge of the laws, regulations, and agency policies governing areas of responsibility. Considerable knowledge of scientific methodology and of laboratory safety practices. Ability to supervise and evaluate the work of chemists. Ability to independently perform the most complex standardized, non-standardized, and developmental laboratory procedures; to analyze results; interpret and develop methodology; and to understand and solve the most complex theoretical problems. Ability to review and express technical information clearly, both orally and in writing. Ability to perform advanced mathematics and statistical analysis, to perceive colors normally and to make olfactory distinctions, and the ability to establish and maintain effective working relationships.

Management and administrative skills and a working knowledge of State of NC, Department of Justice, and SBI policies, procedures, goals, objectives, laws, regulations, and personnel procedures.

A working knowledge of the methods, procedures and practices used in the investigation of criminal offenses, and of the principles of securing and identifying a variety of crime related evidence.

The ability to analyze evidence which has been seized in a variety of criminal investigations, to prepare comprehensive reports pertaining to the analyses, to present effective court testimony and to apply principles, techniques and procedures of modern criminal investigation.

The ability to use firearms and tools and equipment involved in evidence collection and preservation effectively.

The SAC must be in and maintain a physical condition which permits certification by the North Carolina Justice Standards Commission for law enforcement officers.

**B. 1. REQUIRED MINIMUM TRAINING**

Graduation from a four-year college with a Bachelors Degree in chemistry, including course work in organic, inorganic, analytical and physical chemistry and with strong exposure to instrumental methods of analysis. SAC is also required to complete the SBI Academy.

**2. ADDITIONAL TRAINING/EXPERIENCE**

The SAC position will continue to receive approximately 80 hours of additional law enforcement/chemist training per year. The SAC in this position will have been an employee for at least eight years.

**3. EQUIVALENT TRAINING AND EXPERIENCE**

There is no substitution of training or experience for formal education. There is no substitution of experience for additional training.

**C. LICENSE OR CERTIFICATION REQUIRED BY STATUTE OR REGULATION:**

The SAC is a certified law enforcement officer and must meet the standards set by the Law Enforcement Training and Standards Commission.

The SAC must maintain annual certification in the use of safety equipment for clandestine laboratory investigations as required by SBI Policy and OSHA.

**IV. CERTIFICATION:** Signatures indicate agreement with all information provided, including designation of essential functions.

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**Supervisor's Certification:** I certify that:

- a. I am the Immediate Supervisor of this position; that
- b. I have provided a complete and accurate description of responsibilities and duties; and
- c. I have verified (and reconciled as needed) its accuracy and completeness with the employee.

Signature:

Title:

Date:

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**Employee's Certification:** I certify that I have reviewed this position description and that it is a complete and accurate description of my responsibilities and duties.

Signature:

Title:

Date:

Special Agent in Charge

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**Section or Division Manager's Certification:** I certify that this position description, completed by the above named immediate supervisor, is complete and accurate.

Signature:

Title:

Date:

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Assistant Director

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**Department Head or Authorized Representative's Certification:** I certify that this is an authorized, official position description of the subject position.

Signature:

Title:

Date:

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