CS-214 Rev 11/2013

<b>Position Code</b>	
1	

# State of Michigan Civil Service Commission

Capitol Commons Center, P.O. Box 30002 Lansing, MI 48909

# POSITION DESCRIPTION

This position description serves as the official classification document of record for this position. Plea	se
complete this form as accurately as you can as the position description is used to determine the proper	
classification of the position.	

2. Employee's Name (Last, First, M.I.)	8. Department/Agency
	Department of Environment, Great Lakes, and Energy
3. Employee Identification Number	9. Bureau (Institution, Board, or Commission)
4. Civil Service Position Code Description	10. Division
Toxicologist-A 12	Air Quality Division
5. Working Title (What the agency calls the position)	11. Section
Toxicologist	Air Quality Evaluation Section
6. Name and Position Code Description of Direct Supervisor	12. Unit
Brain J. Hughes, Toxicologist Manager - 14	Toxics Unit
7. Name and Position Code Description of Second Level Supervisor	13.Work Location (City and Address)/Hours of Work
Thomas Shanley, State Administrative Manager - 15	Constitution Hall, Lansing, MI
	Monday-Friday, 8:00 AM – 5:00 PM

# 14. General Summary of Function/Purpose of Position

This position is to provide toxicological and risk assessment expertise for programs to control toxic chemicals in the air. The Senior Toxicologist in the Air Quality Division (AQD) handles the more complex, comprehensive, demanding, and controversial work/projects related to human and environmental health impacts from toxic chemicals and other pollutants emitted to the atmosphere. The Senior Toxicologist performs reviews, develops and defends health-based screening levels, and performs risk assessments for the Department's air pollution control and assessment programs.

15. Please describe the assigned duties, percent of time spent performing each duty, and what is done to complete each duty.

List the duties from most important to least important. The total percentage of all duties performed must equal 100 percent.

#### Duty 1

# General Summary of Duty 1 % of Time 60

Performs toxicology reviews and develops complex health-based inhalation screening levels and acceptable screening levels for contaminants with complex datasets where exposure scenarios and toxicological effects require use of advanced risk assessment methods, guidelines and regulations do not clearly apply, and there is a large amount of uncertainty to consider.

Peer reviews and approves technical reports and justification documents for other toxicologists in the Unit.

Develops and defends proposed rule revisions and leads appropriate rule changes through the rulemaking process.

## Individual tasks related to the duty.

- Determine acceptable limits (screening levels) for compounds with complex chemical exposure scenarios and toxicological effects using advanced risk assessment methods including sophisticated risk assessment methods and programs (such as cheminformatics software, new alternative methodologies, Benchmark dose methods, etc.)
- Perform and review risk assessments/evaluations for more complex, controversial and difficult environmental problems, and make appropriate and defensible recommendations for action as appropriate.
- Take scientific lead on special projects involving complex and highly technical toxic substance programmatic issues, such as multi-pollutant risk assessments and cumulative risks/impacts.
- Analyze and report on the chemical, physical, and toxicological characteristics of chemicals, including those with complex
  databases and issues, to determine the hazard potential and risks to the environment and human health, which may result from
  emissions of these compounds.
- As needed, perform, and evaluate multi-pathway and cumulative risk assessments for air pollutants.

# Duty 2

## General Summary of Duty 2 % of Time 15

Perform and review risk assessments/evaluations for more complex, controversial and difficult environmental problems.

Make appropriate and defensible recommendations for action.

#### Individual tasks related to the duty.

- Provide critical toxicological review and synopsis of the more complex federal regulations, technical reports, and guidance documents.
- Provide advanced toxicological support for the development of state air toxics regulatory and assessment programs.
- Provide advanced awareness of new alternative methodologies in risk assessment and expertise in cheminformatics.
- Conduct multi-pollutant risk and cumulative risks/impact assessments.

## Duty 3

## General Summary of Duty 3 % of Time 10

Serves as a panel member at public meetings representing the Division and Department. Present and defend findings relative to health-based inhalation screening levels and risk assessments to regulated community and public audiences.

Lead stakeholder workgroups, present to environmental groups or AQD advisory groups, and prepare supporting documentation for legislative and industry groups.

## Individual tasks related to the duty.

- Attend public meetings and hearings on controversial and/or complex air permits to explain and defend toxicological
  evaluations and risk assessments.
- Prepare subject briefs for legislative and industry groups.
- Facilitate efficient communication between AQD staff, management, other government officials, academia, and the public regarding data and interpretations of the data.
- Serve as an expert witness in legal hearings and court cases on toxicological impacts of chemical substances on human and environmental health.

#### Duty 4

# General Summary of Duty 4 % of Time 10

Provide toxicological expertise for air toxics monitoring and modeling efforts, including evaluation of data, review of air monitoring reports, assessment of atmospheric modeling estimates and measurements, interpretation of the environmental and public health significance of the data, and presentation of these findings to AQD staff and management and the public.

# Individual tasks related to the duty.

- Receive and evaluate air pollutant analytical reports and reports of air pollutant emissions, modeling, exposure, and risk.
- Evaluate site specific air monitoring data from the Air Monitoring Section regarding Air Toxics Screening Levels and appropriate comparisons to other national and local data, as well as report and defend findings.
- Remain proficient in data manipulation, and presentation programs and other software packages for the proper interpretation of data (GIS, Excel, AirToxScreen, Benchmark Dose Modeling, EJSCREEN, OECD Toolbox, VEGA, ToxTree, HEM 4, etc.)

## Duty 5

# General Summary of Duty 4 % of Time 5%

Complete other assignments as assigned by the Section Manager, Assistant Division Director, or Division Director

16.	Describe the types of decisions made independently in this position and tell who or what is affected by those decisions.				
	Evaluation of specific environmental problems frequently requires independent judgment and application of innovative, scientifically defensible methods in novel, complex, or difficult situations. Decisions made by the Senior Toxicologist may directly or indirectly affect all members of the public through their influence on environmental/public health and economic development. Consequences of these decisions include prevention of potentially irreparable harm to human health or the environment, as well as potentially significant regulatory burdens for industrial sources, with resultant economic implications.				
17.	Describe the types of decision	ns that require the supervisor's re	view.		
	Controversial issues require Supervisor review, including when guidelines, regulations, or policies on a specific situation are not clear or may set a precedent within the Department. Also, the Supervisor reviews and approves the finalization of the draft screening levels.				
18.	. What kind of physical effort is used to perform this job? What environmental conditions is this position physically exposed to on the job? Indicate the amount of time and intensity of each activity and condition. Refer to instructions.				
	The duties of this position require normal physical activities encountered in an office environment, such as sitting at a computer, walking, bending, reaching, stooping, and standing on a daily basis. Carrying, kneeling, and balancing are required on an occasional basis.				
19.	2. List the names and position code descriptions of each classified employee whom this position immediately supervises or oversees on a full-time, on-going basis. (If more than 10, list only classification titles and the number of employees in each classification.)				
	<u>NAME</u>	CLASS TITLE	<u>NAME</u>	CLASS TITLE	
N/A					
20.	This position's responsibilities	es for the above-listed employees i	includes the following (check as mar	ıy as apply):	
	Complete and sign ser	rvice ratings.	Assign work.		
	Provide formal writte	en counseling.	Approve work.		
	Approve leave reques		Review work.		
	Approve time and attendance.		Provide guidance on work methods.		
	Orally reprimand.		Train employees in the wor	k.	
22. D	22. Do you agree with the responses for Items 1 through 20? If not, which items do you disagree with and why?				
Agree.					

#### 23. What are the essential functions of this position?

To provide technical expertise in the area of toxicology related to toxic air pollutants for the Air Quality Division's permitting, air quality evaluation, and compliance and enforcement programs.

The Senior Toxicologist in the AQD handles the more complex, comprehensive, demanding, and controversial work/projects related to human and environmental health impacts from toxic chemicals and other pollutants emitted to the atmosphere. The Senior Toxicologist has advanced academic training and experience in applying toxicological and risk assessment principals and methods in regulatory programs, independently performing work assignments with a minimum amount of supervisory guidance.

The position requires the ability to clearly communicate both verbally and in writing; operate a computer and telephone; attend meetings or legal proceedings which may be lengthy; and maintain a calm, professional demeanor during confrontational situations. To be successful in this position, the following competencies are essential: communication, contributing to team success, planning and organizing work, and technical/professional knowledge.

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed. New position.

## 25. What is the function of the work area and how does this position fit into that function?

The function of the Toxics Unit is to evaluate the human health and environmental impacts of toxic air pollutants; to provide toxicological expertise for the development and implementation of the AQD's air toxics programs; and to develop, coordinate and implement air toxics programs for the protection of the Great Lakes ecosystem and Michigan's environment. This position is responsible for providing toxicological expertise for the air toxics permitting program and other air toxics related issues.

26. What are the minimum education and experience qualifications needed to perform the essential functions of this position?

#### **EDUCATION:**

This job requires a master's degree in toxicology or in a physical, biological or environmental science with a minimum of 10 semester (15 term) hours of coursework or equivalent in toxicology and 14 semester (20 term) hours or equivalent in chemistry to include inorganic, organic and biochemistry. An additional 24 semester (35 term) hours of coursework must be demonstrated in any combination of physiology, pharmacology, epidemiology, vertebrate biology/zoology, histology, pathology, statistics, environmental science, microbiology, anatomy, industrial hygiene, chemistry or toxicology (in addition to the above chemistry and toxicology hours). Other combinations of experience and education which would provide the knowledge, skills and abilities listed will be evaluated on an individual basis.

#### **EXPERIENCE:**

Three years of professional experience in assessing and controlling the impact of toxic substances on human health and the environment equivalent to a Toxicologist, including one year equivalent to a Toxicologist P11.

## KNOWLEDGE, SKILLS, AND ABILITIES:

Expertise in toxicology and risk assessment. Ability to communicate effectively on technical and non-technical levels, verbally and in writing. Working knowledge of computers and office software.

#### **CERTIFICATES, LICENSES, REGISTRATIONS:**

None.

NOTE: Civil Service approval of this position does not constitute agreement with or acceptance of the desirable qualifications for this position.

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Supervisor's Signature	Date

TO BE FILLED OUT BY APPOINTING AUTHORITY		
Indicate any exceptions or additions to statements of the employee(s) or supervisors.		
I certify that the entries on these pages are accurate and complete.		
- <u></u>		
Appointing Authority Signature	Date	
TO BE FILLED OUT BY EM	PLOYEE	
I certify that the information presented in this position description provides a complete and accurate depiction of		
the duties and responsibilities assigned to this position.		
Employee's Signature	Date	

NOTE: Make a copy of this form for your records.