THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Administration
DIVISION OF PERSONNEL AND LABOR RELATIONS
10th Fl. State Office Building
PO Box 110201
Juneau, AK 99811-0201
Main: 907.465.4430
Fax: 907.465.3415
www.doa.alaska.gov/dop

Memorandum

To: Nicki Neal
Director

Thru: Keith Murry
Class Studies Supervisor

From: Pat Morrissey
Human Resource Specialist

Date: November 30, 2012

Subject: **Chemist Study**

Introduction:

The Division of Personnel and Labor Relations (DOPLR) initiated and conducted a study of all State positions currently performing work as professional Chemists for the Department of Environmental Conservation (DEC) and the Department of Health and Social Services (DHSS).

Study Scope and Objectives:

This study was conducted as an offshoot of the review for potential consolidation of the professional Microbiologist I-IV and Chemist III positions in the DEC's Environmental Health Laboratory (EHL) into a single class series prospectively titled Environmental Laboratory Scientist. The Chemist study was initiated when the discovery and job analysis phases of the EHL Review[1] indicated that the Chemist I-V concepts were archaic, the job class specifications were not consistent with current Classification standards and additional study was required in order to determine the feasibility of consolidating the work into the Environmental Laboratory Scientist series. The formal goals of the Chemist study were to review the work, update and restructure all relevant class concepts and specifications, as necessary, and conduct a salary review and alignment.

Study Contacts:

Formal study contacts were not established.

[1] It should be noted that the EHL Review indicated that the work remained distinctive enough that it should not be consolidated into a single class series at this time. Please refer to the EHL Preliminary Report for additional information.

Pertinent Class Histories:

Chemist I-V

The Chemist job classes were originally established in 1968 as Chemist I-IV (P8325/SR15, P8326/SR17, P 8327/SR19). They were reestablished January 1, 1979, as Chemist I-V (P8331/SR14, P8332/SR16, P8333/SR18, P8334/SR20 and P8335/SR22). Their class codes were established July 1, 2006, as PK0121, PK01222, PK0123, PK0124 and PK0125. Other than corrections of minor typos, there have been no substantial changes to these job classes since.

When examining the class history of the Chemists I-V, it should be noted that:

- The last Chemist I position, PCN 187413, was inactivated August 20, 2001; and,
- The last Chemist II position, PCN 187417, was reclassified to Chemist III June 30, 2005.

Study Process and Methodology:

As this study was initiated as an offshoot of the EHL Review and multiple agencies were impacted, a formal study planning meeting with requesting agencies was not conducted at initiation. A request for updated PDs for all Chemist positions was distributed to all affected Administrative Services Directors on September 12, 2011, and updated PDs were due by October 19, 2011.

Discovery for this study was conducted in multiple stages:

- As part of the EHL Review, this analyst met with laboratory management staff and toured the EHL June 13th through 15th, 2011, and conducted in-person interviews with the incumbents of one Chemist III and one Chemist IV during that same timeframe. A telephone interview was later conducted with the incumbent of the Drinking Water Certification Officer Chemist position (Chemist III) on June 22, 2011.
- Telephone interviews were conducted with the two filled Chemist IV and the Chemist V positions at the Division of Public Health's Public Health Lab (PHL) October 31st through November 4th, 2011. One Chemist IV position, PCN 061966, has been vacant since September 1, 2011.
- In person interviews were conducted with DEC's two quality assurance/quality control (QA/QC) Chemists (Chemists IV) on November 3rd and November 9th, 2011.
- A follow-up telephone interview was conducted with the PHL Chemist V on December 14, 2011.

All discovery, analysis and development of job class concepts and specifications for this study are based on the work as performed through December 31, 2011. It is derived from interviews and on-the-job observations; the prospective EHL Environmental Laboratory Scientist concepts; findings from the EHL Review; updated PDs; and historical recruitment, position, study and class specification files. This information was also compared with current State of Alaska job class specifications as well as the specifications and/or job postings from commercial laboratories and other states.

Formal class specifications were drafted and presented to DHSS and DEC, departmental HR staff and Class Studies and Individual Allocations staff on June 25, 2012, for a thirteen business-day formal review and comment. This timeframe was extended to ensure appropriate opportunity to

comment and seek clarifications. The class specifications were revised based on the comments and position allocations were determined and presented to appropriate staff August 15, 2012.

In response to continued concerns regarding the status of the legacy Chemist I job class, a teleconference was held on September 18, 2012, between this analyst; the Classification manager; Director of Air Quality; Deputy Director of Water; Chief, Environmental Health Labs; as well as an Environmental Program Manager II and Chemist IV from the Division of Air Quality. Chief among the concerns discussed were pending workforce changes and the agency's ability to plan for these transitions and adequately recruit and internally develop future chemists should the legacy Chemist I job class be abolished. This discussion resulted in agreement that DEC would provide workforce planning documents in support of the maintenance of this job class, which identified specific positions and pending responsibilities appropriate to trainee Chemist work. This information was provided as scheduled on October 31, 2012.

Class Analysis:

The Chemist I-V job classes have not been studied since 1979, which has made the class concepts rather questionable in terms of their relevancy to contemporary work. Statewide, there are nine positions, all of which are currently allocated among the upper levels (i.e., Chemist III-V) of the legacy series, with no positions currently allocated to the legacy Chemist I or II job classes.

In DHSS, three Chemists IV report to a Chemist V to comprise the PHL's Analytical Chemistry Program, which provides chemical testing and clinical support for DPH and hospitals, including epidemiological surveillance and post-mortem toxicology, as well as in-state chemical testing and analysis on behalf of the Centers for Disease Control Lab Response Network and the Federal Bureau of Investigation.

In DEC, a Chemist IV supervises a Chemist III and manages the EHL's Analytical Chemistry Section, which performs quantitative and qualitative determinations for targeted and unknown toxins and contaminants in environmental, biological and food samples in support of the EHL's diverse food safety and environmental programs. An additional Chemist III employed at the EHL reports to the Laboratory Quality Systems Manager and serves as the State's Drinking Water Chemistry Certification Officer responsible for reviewing and approving private laboratory applications to run specified analytical methods, certifying the ongoing proficiency of and providing technical guidance to these laboratories and recommending corrective actions or decertification to the Chief, Environmental Health Laboratories, should a laboratory fail to meet standards.

Since last reviewed, the specific chemical analyses related to criminology have been consolidated into the Forensic Scientist - Chemistry class series.

With minimal exceptions, the studied position no longer perform a substantial amount of classic "wet" or "bench" chemistry (i.e., physical experimentation, testing and observation to obtain measurements, such as pH, salinity, conductivity and presence of certain elements). The majority of their testing and analysis has been increasingly performed through the use of complex instruments, such as combinations of various gas chromatographs and/or mass spectrometers, inductively coupled plasma-mass spectrometers or high performance liquid chromatographs, all of which detect and/or quantify basic elements, chemical compounds or sub-components of compounds.

Despite the substantial use of analytical instrumentation, the work does not consist of straightforward, technical sample preparation and "push-button" operations and reporting of instrument-generated results. The instruments are complex and sensitive, require ongoing tuning and calibration and, at the heart of their operation, lies methodologies that require the application of specialized theoretical knowledge of chemical compounds and their structures, transformations and quantifiable effects of transformations in order to conduct analyses and interpret their results. Incumbents must have an intimate understanding of the mechanical and theoretical processes upon which a given instrument functions. Tests for which there are no established methodologies require significant research of the characteristics of the target chemical, determination of appropriate analytical instrumentation and approaches and a rigorous testing and validation process before results may be considered. Overall, this is specialized work that requires an incumbent to function in near-equal parts as a traditional chemist, physicist, plumber and electrical technician.

The studied work is not exclusively limited to the laboratory setting. The divisions of Air Quality and Water Quality each employs a Chemist IV who serve as technical specialists responsible for independently administering their respective division's quality assurance/quality control (QA/QC) programs that establish, audit and ensure that environmental monitoring and methodologies are conducted to standard, accurate and legally-defensible. In addition, these positions are tasked with developing or adapting Environmental Protection Agency-approved field methods and instrumentation that will function in Alaska's unique climatological and geographical characteristics. Although the QA/QC positions are not directly performing any significant chemical testing, analysis and research in a traditional laboratory setting, analysis indicates that the subject matter and competencies necessary to perform this body of work remains appropriate to the Chemist class series.

The primary goal of this study was to review the work and update and restructure all relevant class concepts and specifications as necessary. It became immediately apparent that there had not been demonstrable work to support maintaining a purely entry/trainee class[2] that performs the most basic responsibilities designed to develop the competencies necessary to perform work at higher levels. The most elementary of tasks typical to this level of work may be or, have been, performed by employees of other job classes (e.g., Laboratory Technicians, Microbiologists, Environmental Program Specialists) for more than fifteen years. Additionally, there had also been no demonstrable work appropriate to an intermediate working or developmental level class since 2005[3].

As previously discussed, there was significant and legitimate concern that abolishing trainee and/or intermediate classes would compromise the ability of agencies to adequately plan for and accommodate workforce changes. Although there has been no demonstrable work appropriate to either level for an extended period of time, prudence and ongoing agency planning continue to strongly support maintenance of such classes in the prospective series in order to continue to

---

[2] The last identifiable position allocated to the Chemist I job class had remained vacant since May 1, 1995, and was eventually inactivated August 20, 2001. There were no recruitments for Chemist I positions identifiable in Workplace Alaska Archives from 1997 through 2011.

[3] The last identifiable position allocated to the Chemist II job class was reclassified to Chemist III effective June 30, 2005. Prior to that there were two Chemist II positions, which were inactivated July 1, 2003. The last identifiable recruitments for Chemist II positions were in September and December of 1997.

facilitate adequate recruitment, competency development, knowledge transfer and viable career progression for qualified employees.

The State's classification plan provides for the grouping of positions into job classes when they are sufficiently similar with respect to duties and responsibilities, degree of supervision exercised and received and entrance requirements so that: 1) the same title can be used to clearly identify each position; 2) the same minimum qualifications for initial appointment can be established for all positions; 3) the same rate of basic pay can be fairly applied to all positions; and 4) employees in a particular class are considered an appropriate group for purposes of layoff and recall. Job classes should be constructed as broadly as is feasible as long as the tests of similarity are met.

Analysis of the regular and recurring responsibilities of the studied positions reveals a revised framework of four classes consisting of:

- A trainee level chemist where incumbents participate in an on-the-job training program designed to develop the knowledge, skills, methodologies and competency required to perform higher level chemical research, study and analysis.
- A first working level chemist that performs a variety of routine chemical tests and analyses where assignments are typically standard, routine and repetitive and/or are conducted under general supervision and in accordance with established procedures and methods.
- A full performance level chemist that performs a broad variety of analytical methods, tests and procedures and routinely exercises prudent judgment in providing analysis and interpretation of results as authoritative findings. Incumbents apply developed knowledge and skills in chemical analysis to assess the advantages, limitations and applications of a laboratory's existing methodologies, instrumentation and procedures. This is the first level of the series where incumbents regularly validate standard tests, practices and procedures and identify the need for and develop, test and validate appropriate adaptations.
- A fourth level chemist that serves as a recognized technical expert responsible for either QA/QC and certification programs or performing difficult analyses that regularly require the development and assessment of new methodologies, procedures and standards.
- A supervisory level chemist that is responsible for planning, organizing, implementing and administering analytical activities and directing the work of professional, technical and/or supportive laboratory personnel as a member of a State laboratory's senior management team.

The regular and recurring duties and responsibilities are consistent with Category B (Professional/Managerial) job classes. Category B job classes perform work involving the exercise of creative, analytical, evaluative and interpretive ability with discretion, judgment and personal responsibility for the application of an organized body of knowledge that requires a range and depth of specialized and theoretical knowledge of principles, concepts and practices that is constantly studied to improve data, materials and methods or involving the primary responsibility for planning, organizing, directing and controlling resources and program delivery.

Class Title

A class title should be the best descriptive title for the work. It is intended to concisely and accurately convey the kind and level of work performed and should be brief, easily recognized, gender neutral and understood by potential applicants.

The studied positions evaluate, develop, modify and conduct analytical methods, procedures and instrumentation techniques to detect, identify, quantify, study and present authoritative findings regarding the molecular structure, properties, transformations and effects of transformations of chemical compounds and substances. Their responsibility to utilize instrumental analysis and develop methods for determining the structure, composition and nature of substances through examination and identification of their various elements or compounds is consistent with the predominant, industry-wide title of Chemist and the job classes will remain titled as follows:

- The title of the trainee level chemist is Chemist I.
- The title of the first working level chemist is Chemist II.
- The title of the full performance level chemist is Chemist III.
- The title of the advanced, technical expert, level chemist is Chemist IV.
- The title of the supervisory level chemist is Chemist V.

Minimum Qualifications

The minimum qualifications established for a job class must relate to the knowledge, skills and abilities (KSAs) needed to perform the work and must not create an artificial barrier to employment of individuals in protected classes. Required training should be limited to the basic formal training that customarily prepares individuals for work in the field. Experience requirements are intended to ensure new employees can successfully perform the work after a period of orientation or familiarization. Required experience should be directly related to the actual duties of positions in the class and should not be equivalent to the work to be performed.

Performance of this work requires a fundamental understanding of the molecular structure, properties, composition, transformations and related effects of transformations of chemical compounds and substances. This is a body of knowledge characteristically acquired through an advanced course of study that is equivalent to a bachelor's degree or higher in chemistry, chemical or biomolecular engineering, forensic chemistry, biochemistry, biophysical chemistry, molecular biology, microbiology or a closely related field, which includes or is supplemented by at least 20 semester (30 quarter) hours of any combination of classroom and laboratory coursework in chemistry, organic chemistry, inorganic chemistry, physical chemistry, biochemistry and/or instrumental methods, of which 9 semester (12 quarter) hours must be upper division (e.g., 300 level or higher) courses.

The work additionally requires familiarity and ability to perform a variety of methods and procedures and utilization of complex instruments that is typically acquired through progressively independent and comprehensive experience performing a variety of standard analytical methods, tests and procedures that includes at least one form of instrumental analysis (e.g., mass spectrometry, gas chromatography). Individual positions within the Chemist III-V classes may require specialization or expertise in a particular branch (e.g., inorganic chemistry), methodology and/or instrumentation.

Class Outline

A Class Code is assigned based on the placement of the job class in the classification schematic of Occupational Groups and Job Families. Occupational Groups are made up of related Job Families and encompass relatively broad occupations, professions, or activities. Job Families are groups of

job classes and class series that are related as to the nature of the work performed and typically have similar initial preparation for employment and career progression.

Chemists I-V evaluate, develop, modify and conduct analytical methods, procedures and instrumentation techniques to detect, identify, quantify, study and present authoritative findings regarding the molecular structure, properties, transformations and effects of transformations of chemical compounds and substances.

All five job classes remain appropriately assigned to the Physical Sciences and Engineering Group (PK). Within the PK group, the Chemists I-V job classes are specifically assigned to the Physical Science Specialist job family (PK01). This family includes classes of positions that advise on, administer, supervise or perform professional or paraprofessional work related to geology, chemistry, physics, oceanography, or other physical science. Initial preparation for employment is typically through advanced education in a physical science with subsequent career progression based on progressively responsible experience.

Fair Labor Standards Act

The positions in this study are covered by the minimum wage and maximum hour provisions of the Fair Labor Standards Act of 1938, as Amended (FLSA). While exemption from the provisions of the Act are determined based on the specific circumstances of an individual employee on a work-week basis, there are general aspects of the classes and their influence on the exemptions for employees in bona fide executive, professional or administrative positions that can be addressed in general.

To meet the criteria for exemption as executive employees, the primary duty must be the management of a customarily recognized subdivision of the enterprise in which the employee is employed, must include the customary and regular direction of the work of two or more other employees and must include the authority to hire or fire other employees or make suggestions and recommendations that are given particular weight in the hiring, firing, advancement, promotion or any other change of status of other employees. Employees of the Chemist I-IV job classes do not supervise other employees or manage recognized subdivisions of the enterprise and are precluded from the executive criteria for exemption.

Employees of the Chemist V job class meet the criteria for exemption as executive employees. The primary responsibility of these employees is to manage the chemical analysis sections of major State of Alaska laboratories. Chemists V are compensated on a salary basis at a rate exceeding $455 per week; manage recognized subdivisions of State laboratories; directly supervise multiple, full-time employees; and exercise significant authority to take or effectively recommend action in the hiring, firing, advancement, promotion or any other change of status of these employees.

To meet the criteria for exemption as administrative employees, the primary duty must be the performance of office or non-manual work directly related to the management or general business operations of the employer or the employer's customers and must include the exercise of discretion and independent judgment with respect to matters of significance. Employees of the Chemist I-IV job classes evaluate, develop, modify and conduct analytical methods, procedures and instrumentation techniques to detect, identify, quantify, study and present authoritative findings regarding the molecular structure, properties, transformations and effects of transformations of

chemical compounds and substances. These responsibilities are direct line functions of the State laboratories for which they work and these employees do not meet the administrative criteria for exemption.

Employees of the Chemist V job class meet the criteria for exemption as administrative employees. The primary responsibility of these employees is to manage the chemical analysis sections of major State of Alaska laboratories, which involves developing and administering section goals and budgets, assessing and justifying equipment needs and contributing to the development of laboratory policies as members of senior management teams. Chemists V are compensated on a salary basis at a rate exceeding $455 per week, perform predominantly non-manual work directly related to the management or general business operations of the employer and exercise discretion and independent judgment with respect to matters of significance.

To meet the criteria for exemption as professional employees, the primary duty must be the performance of work that requires knowledge of an advanced type in a field of science or learning that is customarily acquired by a prolonged course of specialized intellectual instruction or that requires invention, imagination, originality or talent in a recognized field of artistic or creative endeavor. Employees of the Chemist I job class are purely trainees and are precluded from exemption as professional employees.

Employees of the Chemist II-V job classes meet the criteria for exemption as professional employees. The primary responsibility of these employees is to evaluate, develop, modify and conduct analytical methods, procedures and instrumentation techniques to detect, identify, quantify, study and present authoritative findings regarding the molecular structure, properties, transformations and effects of transformations of chemical compounds and substances. Chemists II-V are compensated on a salary basis at a rate exceeding $455 per week and perform work that requires a prolonged course of specialized instruction in chemistry, chemical or biomolecular engineering, forensic chemistry, biochemistry, biophysical chemistry, molecular biology or a closely related field.

Although final determinations are made on an individual basis, there are sufficient characteristics to indicate that employees of the:

- Chemist I job class is eligible for overtime.
- Chemist II-V job classes are not eligible for overtime.

Internal Alignment:

Alignment Methodology

Under internal alignment, the salary range of a job class is determined based on internal consistency within the State's pay plans with the goal of providing fair and reasonable compensation for services rendered and maintaining the principle of like pay for like work. In evaluating internal consistency, the difficulty, responsibility, knowledge, skills and other characteristics of a job are compared with job classes of a similar nature, kind and level first in the same job family; then within other job families within the same occupational group. Comparisons with classes in job families outside the occupational group are made when similarities are sufficient to provide valid relationships, the comparisons within the occupational group are few and/or when the class has particular

characteristics that justify comparisons with another job family. The greater the similarity with the study class the more weight should be given. Comparisons within the job family are typically given greater weight than those outside of the job family.

As previously determined, the Chemists I-V job classes are assigned to the PK (Physical Sciences and Engineering) group and, more specifically, to the PK01 (Physical Sciences Specialist) family.

As the Hydrologist I-III job classes were also under study at the time of this analysis and could not be compared for alignment purposes, the number of comparable professional classes within the PK01 family was limited, with a distinction in alignment between the Geologist and Engineering Geologist classes. The analysis was expanded to include comparison with other professional classes in the PK group that specialized in physical and/or environmental sciences. Classes that predominantly focused on vessel construction, architecture and general engineering responsibilities provided fewer (if any) similarities for valid comparison and were not reviewed further.

Range	Job Class	Description	Range Characteristics
Range 14	Environmental Program Specialist I (PK0211)	Performs entry/trainee professional level duties to develop knowledge and skills in an environmental program to protect and improve environmental quality, control pollution, remedy environmental damage and ensure compliance with environmental laws and regulations.	Professional classes aligned to this range exclusively perform entry/trainee work in general environmental compliance and administration. The work is characterized by close supervision and assignments of basic or elementary tasks and duties designed to typically provide experience and preparation for work at journey level.
Range 15	Geologist I (PK0131)	Performs entry professional level geology work, assisting with geologic mapping and field studies; the entry, analysis and interpretation of geologic data; and inspection, technical reviews and permitting of mining and reclamation plans.	Professional classes aligned to this range exclusively perform entry/trainee work in geological study and assessment of project environmental impact. The work is characterized by close supervision and assignments of basic or elementary tasks and duties designed to typically provide experience and preparation for work at journey level.
	Environmental Impact Analyst I (PK0241)	Performs trainee professional level duties to develop knowledge and skills in conducting environmental research and analysis, project and construction planning, methods of data collection, information analysis and writing technical reports and environmental documents depicting environmental considerations and the potential impact of proposed construction projects.	
Range 16	Hydrologist I (PK0111)	**Under Study**	Professional classes aligned to this range perform either entry or first working-level work ranging from more generalized environmental compliance and administration to more specialized geological engineering. The work is characterized by continued availability of close supervision and ongoing progressively complex assignments defined by standard, accepted practices, precedents and well-established procedures. Preparation
	Engineering Geologist I (PK0141)	Under close supervision, the entry professional level engineering geologist, progressively learning to apply scientific knowledge, principles and methods of engineering geology to engineering design and construction of roads, bridges, facilities and airports.	
	Environmental Program Specialist II	The first working level in the professional series where incumbents plan and perform a variety of routine analytical and evaluative	

	(PK0212)	project or program duties to ensure compliance with environmental laws and regulations or improve the administration of environmental programs and make recommendations to resolve recurring problems and situations covered by established precedents and procedures.	for these job classes is typically through a combination of advanced education and/or entry level experience.
Range 17	Geologist II (PK0132)	Performs journey professional level geology work, typically as a project team member or an assistant to a higher level Geologist, requiring the application of a working knowledge of all aspects of geologic work.	Professional classes aligned to this range perform journey level work related to general geology and routine assessment of the environmental impacts related to various project proposals. The work is characterized by a variety of assignments typical to the profession that are performed with significant latitude of independence, initiative and judgment. Preparation for these job classes is typically through a combination of advanced education and entry level experience.
	Environmental Impact Analyst II (PK0242)	Performs journey professional level duties in preparing environmental documents and permit acquisition for state construction projects. Incumbents conduct routine environmental research and documentation and, as a member of a team, conduct specific studies and prepare portions of Environmental Impact Statements.	
Range 18	Hydrologist II (PK0112)	**Under Study**	Professional classes aligned to this range perform a spectrum of journey to advanced level work related to specialized geological and general environmental improvement and mitigation projects. The work is characterized by specialized subject matter and a variety of assignments typical to the profession that are performed with significant latitude of independence, initiative and judgment. Preparation for these job classes is typically through a combination of advanced education and entry level experience.
	Engineering Geologist II (PK0142)	Independently prepare for and perform a range of journey level geotechnical fieldwork; compile, analyze and interpret geotechnical data and related information; and develop site recommendations and mitigation measures addressing geologic hazards and other geo-materials-related features for the design of engineering work.	
	Environmental Program Specialist III (PK0213)	The full-working professional level in the series where incumbents plan and perform a variety of project or program activities involving establishing criteria; formulating projects; assessing program effectiveness; investigating or analyzing a variety of unusual conditions or questions; or providing advisory services to state and local government officials, industry representatives and others on specific functions or programs.	
Range 19	Geologist III (PK0133)	Performs advanced professional level geology work, as field geologists assigned specific project management tasks, regulatory functions and/or in geologic specialties, focused on geologic subdisciplines such as structural geology, tectonics, petrography, igneous petrology, ore deposits, neotectonics, sedimentology, volcanology or others.	Professional classes aligned to this range perform specialized, advanced level professional work in geology and environmental assessment. The work is characterized by assignments that are unusual or exceptional to those typically found in the main body of work; require additional specialization as a technical expert; complex, multi-staged projects; and intense public scrutiny. Preparation for these job classes is typically through a combination of advanced education and journey level experience.
	Environmental Impact Analyst III (PK0243)	Performs advanced professional level duties in preparing Environmental Assessments and Environmental Impact Statements characterized by large, multi-stage construction projects with Environmental Assessments or Environmental Impact	

		Statements that require coordinating the work of multiple analysts or managing the work of consultants. At this level projects typically include potential environmental impacts which are controversial and frequently have high media visibility and concern.	
Range 20	Hydrologist III (PK0113)	**Under Study**	Professional classes aligned to this range perform advanced level geological engineering work in a recognized specialty area. The work is characterized by recognition as a technical expert and the expectation of addressing and resolving the most complex problems pertaining to these problems.
	Engineering Geologist III (PK0143)	Performs nonsupervisory, advanced level engineering geology work in a recognized geotechnical specialty impacting statewide application (e.g. rockfall hazard mitigation, rock slope design, rock mechanics, slope stability, or soils and foundation engineering). Recognized as experts in their specialty and are expected to address and resolve the most complex problems pertaining to their specialties as part of engineering geology projects.	
Range 21	Geologist IV (PK0134)	Functions as project managers of multiple projects, overseeing and coordinating the work of professional geological teams, or as senior geology researcher, or a combination of both, in the exploration, development, production and regulation of surface and subsurface resources, or identification and evaluation of geologically related hazards.	Professional classes aligned to this range perform a spectrum of advanced/lead to full supervisory level of work and are primarily responsible for the direction or formal supervision of other staff and management of offices, regions and/or complex projects. This work is characterized by significant emphasis on formal supervisory authority and planning, organizing, directing and controlling the resources necessary for project or program delivery.
	Environmental Program Manager I (PK0221)	Manages an office or unit with responsibility for the ongoing work of an environmental program or function in a defined geographic area and supervise multiple professional program staff (for example Environmental Program Specialists or Environmental Health Officers).	
	Environmental Impact Analysis Manager I (PK0251)	Under general direction, a supervisory class responsible for either: 1) regional managers of the Environmental Impact Analysis function; or 2) the principal program policy and procedure assistant to the Environmental Impact Analysis Manager II; or 3) responsible for exercising the State's assumed authority under SAFETEA-LU Section 6004 and Section 6005.	
Range 22	Geologist V (PK0135)	Function as program managers, responsible for supervising, coordinating, managing and providing long-term planning, scientific leadership and oversight for major program areas, such as Energy Resource Evaluation, Mineral Resource Evaluation, Engineering Geology/Geohazards, Large Mine Management, Mineral Property Management, or major geologic program areas of similar scope, complexity, impact and controversy.	Professional classes aligned to this range perform a spectrum of work from advanced scientific (i.e., heavy research for which little prior information is available) to significant programmatic management. The work is characterized by substantial scientific research, requiring graduate-level advanced education and significant prior experience, or significant emphasis on formal supervisory authority and planning, organizing, directing and controlling the
	Geological	Performs scientific research directed toward	

	Scientist I (PK0137)	discovering, disseminating and applying new or expanded knowledge and expertise in a specific geological subdivision/sub-discipline to a wide variety of natural resource professionals across all division lines in the Department of Natural Resources.	resources necessary for project or program delivery.
	Regional Engineering Geologist (PK0145)	Coordinates and provides regional engineering geology and drilling services including, supervision of geology staff in field exploration, data analysis and delivery and incorporation of geotechnical data into project designs for highway, airport and public facilities.	
	Environmental Program Manager II (PK0222)	Manages multiple offices in different geographic locations with regional responsibility for all of a program's services or statewide responsibility for a specific program and supervises professional staff, typically in both program and scientific fields (for example Environmental Program Specialists and Engineers or Chemists).	
	Environmental Impact Analysis Manager II (PK0252)	Single-position job class responsible for ensuring pre-construction, construction and maintenance activities within the state are in compliance with state and federal environmental laws and regulations; ensuring new laws and regulations are incorporated into project development and maintenance operations; providing technical advice to Environmental Impact Analysis Managers I; and managing environmental research projects covering all regions in the state.	
Range 23	Environmental Program Manager III (PK0223)	Manage all line functions in a division or the statewide delivery of one or more major programs. (A major program typically includes a variety of segments and requires a large staff with multiple supervisory levels.) At this level the scope of program management typically requires supervising subordinate Environmental Program Managers.	Professional classes aligned to this range manage either line functions of a division or statewide programmatic delivery. Incumbents supervise either other professionally-registered classes or lower level programmatic managers. This work is often characterized by multiple supervisory levels within a large staff. The focus continues to be on planning, organizing, directing and controlling the resources necessary for project or program delivery.

Chemist I

The Chemist I is the trainee level professional chemist that participates in an on-the-job training program designed to develop the knowledge, skills, methodologies and competency required to perform higher level chemical research, study and analysis. The lack of prerequisite experience, close supervision, and narrow scope of responsibility to perform less complex and often repetitive analyses and basic research in order to provide practical training and experience aligns well with range 14 entry/trainee job classes.

Chemist II

The Chemist II is the first working level professional chemist that performs a variety of chemical tests and analyses where assignments are typically standard, routine and repetitive and/or are conducted under general supervision and in accordance with established procedures and methods.

Whereas classes aligned to ranges 14 and 15 are predominantly entry/trainee and perform work in more generalized environmental or physical sciences that is characterized by close supervision and basic or elementary tasks designed to provide developmental experience, the Chemist II is the first working level class responsible for more specialized and productive tasks, under a reduced level of supervision, than that typical to the comparable classes aligned to these ranges.

The complexity and specialized scientific nature of work, latitude and scope of responsibility and requisite education and prior experience attributable to the Chemist II job class align more closely to range 16 job classes.

Chemist III

As the third level of the series, the Chemist III is the full performance chemist that independently performs a broad variety of analytical methods, tests and procedures and routinely exercises prudent judgment in providing analysis and interpretation of results as authoritative findings. Incumbents assess the advantages, limitations and applications of a laboratory's existing methodologies, instrumentation and procedures and regularly validate standard tests, practices and procedures and identify the need for and develop, test and validate appropriate adaptations.

Within the PK group, the majority of comparable journey or full performance classes are aligned to either range 17 or range 18, with the range 17 classes performing more routine research and analysis assignments. Classes aligned to range 18 exercise greater scope and latitude of responsibility for assessing the efficacy of programs and practices, investigating a variety of unusual circumstances or problems and developing and recommending alternatives.

As the first level of the series to exercise significant scope and latitude of responsibility to perform, assess, validate and investigate and recommend alternatives to a variety of tests, methodologies and procedures the Chemist III aligns well to range 18 job classes. This alignment also corresponds well with the predominant alignment of two-range increments between levels of the different class series throughout the PK group.

Chemist IV

The Chemist IV is the advanced level chemist that serves as a recognized technical expert responsible for either QA/QC and certification programs or performing difficult analyses that regularly require the development and assessment of new methodologies, procedures and standards.

The comparable job class aligned to range 20 performs non-supervisory, advanced work as a recognized statewide expert in a technical specialty that performs and addresses difficult and problematic analyses. The aggregation of complexity and scope of responsibility, technical specialization and requisite qualifications typical of this range align with the Chemist IV.

Chemist V

The Chemist V is the supervisory level chemist responsible for planning, organizing, implementing and administering chemical analysis activities as a member of the senior management team of a major laboratory with statewide responsibility. The Chemist V is typically the agency's authority responsible for performing the most complex most difficult tests and analyses and conducting extensive research into and facilitating development of new methods, procedures and applications of analytical instruments. The Chemist V also represents the agency regarding the coordination and sharing of research efforts and information

Comparable supervisory classes within the PK group predominantly align to either range 21 or range 22. These classes exercise varying degrees of responsibility for providing scientific oversight and planning, organizing and directing resources; however, whereas the range 21 classes focus on management and supervision of given offices, regions or specific complex projects, range 22 classes manage programs of statewide scope.

The single non-supervisory, comparable class aligned to range 22 (Geological Scientist I) performs complex scientific heavy research, for which little prior information and methodology is available and requires graduate-level advanced education and significant relevant experience.

The level of technical expertise and complexity of research, scope of scientific oversight and programmatic responsibility, scope of external contact and coordination and requisite education and experience align the Chemist V with both the supervisory and non-supervisory characteristics of the classes aligned to range 22.

Conclusions:

The formal goals of the study were to review the work, update and restructure all relevant class concepts and specifications, as necessary, and conduct a salary review and alignment.

All class specifications have been revised or established to accurately reflect the work performed at each level:

- There were four identifiable levels of chemical analysis and testing work based on distinctive differences in the latitude, scope and complexity of regular and recurring duties.
- The following changes to the class concepts are being implemented:
    - The trainee level job class (P8331/PK0121) will remain titled Chemist I and is aligned to salary range 14.
    - The first working level job class (P8332/PK0122) will remain titled Chemist II and is aligned to salary range 16.
    - The full performance level job class (P8333/PK0123) will remain titled Chemist III and is aligned to salary range 18.
    - The advanced, technical expert, level job class (P8334/PK0124) will remain titled Chemist IV and is aligned to salary range 20.
    - The supervisory job class (P8335/PK0125) will remain titled Chemist V and is aligned to salary range 22.

The preceding job analysis and review for exemption under the FLSA indicates that:

- As trainees, employees of the Chemist I job class do not meet the criteria for exemption and are eligible for overtime.
- Employees of the Chemist II-III job classes meet the professional criteria for exemption and are not eligible for overtime.
- Employees of the Chemist V job class meet the executive, administrative and professional criteria for exemption and are not eligible for overtime.

The job class and all related study actions are effective December 1, 2012.

Correspondence on the allocation of study positions is being distributed through the OPD system.

Attachments
Final class specifications
Allocation Spreadsheet

cc: Thomas Cherian
Director
Division of Administrative Services
Department of Environmental Conservation

Alice Edwards
Director
Division of Air Quality
Department of Environmental Conservation

Elaine Busse Floyd
Acting Director
Division of Environmental Health
Department of Environmental Conservation

Michelle Bonnet
Director
Division of Water
Department of Environmental Conservation

Sarah E. B. Woods
Deputy Director
Finance and Management Services
Department of Health and Social Services

Kerre Fisher
Acting Director
Division of Public Health
Department of Health and Social Services

Dallas Hargrave
Finance and Management Services
Human Resource Manager
Department of Health and Social Services

Pam Day
Human Resource Manager