

DUTY STATEMENT

DUTY STATEMENT

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| Employee Name: Vacant | Current Date: 4/10/2024 |
| Classification: Staff Air Pollution Specialist | Position #: 673-310-3875-001 |
| Division/Office: Research Division | CBID: R09 |
| Section: Climate Change Mitigation and Emissions Research Section | |
| Supervisor Name: Seungju Yoon | Supervisor Classification: Air Resources Supervisor I |

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| I certify that this duty statement represents an accurate description of the essential functions of this position. | |
| Supervisor: | Date: |

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| I have read this duty statement and agree that it represents the duties I am assigned. | |
| Employee: | Date: |

SPECIAL REQUIREMENTS OF POSITION (IF ANY):

- Designated under Conflict of Interest Code.
- Duties performed may require pre-employment physical.
- Duties performed may require drug testing.
- Duties require participation in the DMV Pull Notice Program.
- Requires the utilization of a 32-pound self-contained breathing apparatus.
- Operates heavy motorized vehicles.
- Requires repetitive movement of heavy objects.
- Works at elevated heights or near fast moving machinery or traffic.
- Performs other duties requiring high physical demand. (Explain below):
- Duties require use of hearing protection and annual hearing examinations.

SUPERVISION EXERCISED

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| <input checked="" type="checkbox"/> None | <input type="checkbox"/> Lead Person |
| <input type="checkbox"/> Supervisor | <input type="checkbox"/> Team Leader |

FOR SUPERVISORY POSITIONS ONLY: Indicate the number of positions by classification that this position DIRECTLY supervises: N/A

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Total number of positions in Section/Branch/Office for which this position is responsible: N/A

FOR LEAD PERSONS OR TEAM LEADERS ONLY:

Indicate the number of positions by classification that this position LEADS: N/A

MISSION OF SECTION: The Climate Change Mitigation and Emissions Research Section (CCMER) in the Research Division develops and conducts policy-relevant extramural and in-house research to advance science and to support mobile source programs and policies. Section research efforts are to understand in-use fleet emissions and energy use characteristics to achieve further NOx reductions from heavy-duty trucks and off-road equipment, investigate the effect of various regulatory options using laboratory, portable emissions measurement system (PEMS), remote-sensing, and engine and activity data-logging technologies, investigate potentials of low-carbon transportation technologies in implementing and developing emissions and greenhouse gas reduction programs and policies, characterize emission and socioeconomic benefits of low-carbon fuel and transportation technologies, and understand non-exhaust emissions such as brake-, tire-, and wheel-wear emissions. The Section is also responsible for programs to reduce emissions of high global warming potential greenhouse gases from motor vehicle air conditioners (MVAC) and transportation refrigeration units. The Section conducts large dataset and database-driven technical analyses, provides expert opinions to decision-makers, networks with internal, national, and international stakeholders, and publishes research findings.

CONCEPT OF POSITION: The incumbent is required to carry section research programs with extreme sensitivity and complexity, usually dealing with emerging or undefined issues and typically involving intense conflict among issues such as public concerns, local, State, and Federal Government concerns, costs, and business interests. The incumbent must have expertise significantly greater than standard full journey-level analytical assignments, and the expertise is critical to the Board's mission. The incumbent is required to have extensive knowledge of scientific principles and methods to ensure the integrity, quality, and validity of collected data and to have problem-solving techniques to facilitate the identification and resolution of issues related to the completion of work assignments, scientific and technical disciplines to understand, evaluate, promote, and build air quality and climate change related research programs.

Working independently under direction of Air Resources supervisor I (ARS I) in the Climate Change Mitigation and Emissions Research Section, the incumbent is responsible for leading large data- and innovative scientific principal-driven research programs and writing clear and concise summaries and technical papers (e.g., memos, letters, white papers, research idea synopsis, data analysis plans, journal articles, conference and meeting presentations, and others) in order to provide information of mobile source emissions and climate impact for audiences with varying levels of expertise. The incumbent is expected to contribute significantly to the Section's scientific and technical foundation and to the division's management.

| <u>% OF TIME</u> | <u>RESPONSIBILITIES OF POSITION</u> |
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| 30% E | Initiate and conduct novel and independent research programs that consider the emission implications of transportation holistically to provide answers beneficial to air quality and climate change programs and policies; |

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| | <p>Explore the potential implications to air quality and climate change of emission reduction strategies using large datasets, databases, and available meta-data; Review the advancement in vehicle technologies such as sensors, automated control, telecommunication, energy-efficient components, and vehicle-to-infrastructure connected technologies; Integrate the advanced technology development with the large datasets from existing technology vehicles and forecast impact of the advanced technologies on the efficiency of the transportation system as a whole; Read, evaluate, and interpret complex written documents to learn, understand, and/or clarify information needed for assignments; Analyze and interpret data to extract or identify key issues, draw conclusions, and make recommendations; Identify and reconcile discrepancies in data and information to ensure valid conclusions and implications of the data analysis; Maintain abreast of emerging issues in mobile source emissions research and interconnection to climate impact; Prepare review-ready documents in proper content, format, grammar, punctuation, and sentence structure to ensure accurate and effective communications internally and externally.</p> |
| 30% E | <p>Design and manage extramural research projects related to mobile sources emissions testing at laboratory conditions, activity characterization with datalogger instrumentation, in-use emission measurement with PEMS, PEAQS, remote-sensing and mobile laboratories; Design and manage research contracts to interpret vehicle emissions, activity characteristics, and travel and driving behaviors along with the integration of large databases such as DOORS, DMV, TRUCRS, Clean Truck Check, and others; Manage research projects by strictly following the research contract management guide; Review the interim and draft presentation and reports from the research projects and provide comments and recommendations proactively to ensure the research findings relevant and informative to California Air Resources Board (CARB) air quality and climate change programs and policies.</p> |
| 20% E | <p>Collect multi-transportation mode large datasets either through in-house or extramural research projects; Investigate cutting-edge methods of manipulating and interpreting the datasets and provide information and service to multiple mobile source programs and regulatory efforts; Gather data broadly from internal, academic research, state government, federal government, and private stakeholder groups, and construct a comprehensive database integrating emissions, energy use, and activity from mobile sources; Look for new ways to mine the data that span the interest of multiple divisions and programs and develop tools that simplify data manipulation, expedite data analysis and aid data-driven decision making; Analyze and interpret data to extract or identify key issues, draw conclusions, and make recommendations to the CARB mobile source programs and policies; Prepare review-ready documents in proper content, format, grammar, punctuation, and sentence structure to ensure accurate and effective communications internally and externally.</p> |

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| 10% E | Participate in research planning and workgroup meetings, coordinate with internal stakeholders to identify mobile source research needs, and initiate mobile source research projects that support mobile source programs; Build and manage public-facing mobile source research website, SharePoint sites for internal emissions research collaboration, and Integrated Vehicular Emissions Activity (IDEA) database; Interact and communicate with internal and external stakeholders to effectively translate scientific and research findings into recommendations for air quality and climate change programs. |
| 10% M | As a CARB liaison, participate in workgroups and committees of state/national/international governmental organizations and professional organizations such as Coordinating Research Council (CRC), Engine Manufacturers Association (EMA), Transportation Research Board (TRB), Society of Automotive Engineers (SAE), and Manufacturers of Emission Controls Association (MECA) to convey Board's perspectives on mobile source emissions and greenhouse gases, fuel research, test method development, and industry-standard development; Coordinate with professional organizations to develop research projects that are relevant to CARB programs and policies and maintain positive and productive relationships. |