Toxicology Program

A. Provide the following information at the beginning of each program description.

Name of Program or Function: Toxicology

Location/Division: Austin Headquarters ***/ Toxicology, Research, and Risk Assessment Division***

Contact Name: Michael Honeycutt, Ph.D., Chief Toxicologist

Statutory Citation for Program: N/A

B. What is the objective of this program or function? Describe the major activities performed under this program.

The objective of the Toxicology, Risk Assessment, and Research Division (TD) is to support all TCEQ offices and programs with respect to toxicology, risk assessment, and potential health effects of chemical exposures. TD helps TCEQ make scientifically sound decisions and helps focus agency resources by applying toxicological principles when evaluating environmental data, issuing authorizations, developing environmental regulations, and making policy decisions. An important role of TD is to promote consistency between programs by coordinating agency activities that assess risks to human health. TD toxicologists identify chemical hazards, assess chemical dose-response, evaluate potential exposures, assess human health risks, and communicate risk to other TCEQ programs and offices, the public, and stakeholders.

A critical role of TD is to support human health protection and toxicology outside the agency by answering questions and responding to inquiries from the public, the media, regulated entities, stakeholders, legislators, and other government agencies regarding the activities and functions of TCEQ. As TD is part of the Executive Office, it can offer fast and efficient technical support to all other programs in the agency.

Significant activities of TD include:

- Reviewing and updating the TCEQ Guidelines to Develop Effects Screening Levels, Reference Values, and Unit Risk Factors (2015).
- Developing effects screening levels (ESLs), reference values (ReVs), and unit risk factors (URFs) used in health effects reviews of air permitting, evaluation of ambient air monitoring data, and in the Texas Risk Reduction Program (TRRP) rule.
- Developing instantaneous comparison values (ICVs) and acute action levels (AALs) for use during in-motion monitoring and emergency events. ICVs and AALs will assist TCEQ staff in the field (non-first responders) and perhaps others in taking or developing exposure avoidance strategies deemed necessary to mitigate the potential for adverse human health effects in an emergency response situation.
- Maintaining TD-developed toxicity factors in the Toxicity Factor Database, hosted within the Texas Air Monitoring Information System (TAMIS) database. This serves as a user-friendly access point for internal and external stakeholders to query the most up-to-date ESLs, air monitoring comparison values (AMCVs), and associated documentation.
- Improving air quality by conducting health effects reviews of air permit applications, amendments, and other authorizations. TD gives timely support to the Air Permits Division and to the public regarding air permit applications.

- Improving air quality by continually evaluating the health protectiveness of air monitoring data. TD evaluates data collected by the TCEQ regional offices, the ambient air monitoring network, during mobile monitoring trips, and from industry-sponsored air monitors to determine whether there is any potential for adverse effects on health and welfare from exposure to the measured air pollutants.
- Improving air quality by maintaining the Air Pollutant Watch List (APWL) (Texas Health and Safety Code [THSC] Section 382.0161). TD has a process and procedure for identifying pollutants and areas of interest for the APWL. The procedure for adding pollutants and areas, directing agency resources toward resolving problem pollutants and areas, and for removing pollutants and areas from the APWL has been formalized. In addition, the process has been made more transparent with opportunities for public comment and notifications sent to local elected officials and state legislators when an APWL change is contemplated. Information on the APWL and specific areas is available on the TCEQ webpage.
- Reviewing modeled emissions and providing impacts statements to TCEQ regional investigators which ultimately are reviewed by the Excessive Emissions Events Review Team, whose role is to determine whether an emissions event is excessive (after evaluating 6 criteria for each incident). This team of six is comprised of staff representing four TCEQ Offices/Divisions, including staff representing TD.
- Ensuring the health protectiveness of remediation activities by reviewing portions of remediation risk assessments relating to health effects and assisting the Remediation Division in developing protective concentration levels for multiple environmental media.
- Assisting the TCEQ regional offices with evaluations relating to health effects of chemicals measured in air, soil, groundwater, surface water, and sediment.
- Assisting in emergency situations, responding to natural disasters (e.g., hurricanes) and industrial accidents (e.g., fires, storage tank leaks), reviewing air data during and after these events on a daily basis to identify potential health concerns associated with emissions from shutdowns and the aftermath of the incidents themselves, and later reviewing air data as facilities startup.
- Representing the agency at public meetings and hearings, and testifying at legislative hearings. TD also attends community advisory council meetings across the State of Texas, presenting the status of ambient air quality in a given area of interest.
- Attending toxicology conferences to stay abreast of the latest science, and making presentations at conferences and publishing peer-reviewed articles to further the scientific reputation of Texas and to increase understanding of the robustness of the science serving as a basis of Texas actions and regulations.
- Serving on federal peer review committees and scientifically reviewing federal assessments and rulemakings to help ensure federal regulations, assessments, and actions affecting Texas and TCEQ-permitted facilities are founded in sound science.
- Conducting research activities on environmental topics of importance to the State of Texas; including, for example, unregulated contaminants in sewage sludge and health-protective levels of cyanotoxins from harmful algal blooms.
- Preparing technical reports and informational webpages on environmental topics of concern such as air emissions from aggregate production operations and health effects from wildfire smoke.

C. What evidence can you provide that shows the effectiveness and efficiency of this program or function? In Exhibit 12, provide a list of statistics and performance measures that best convey the effectiveness and efficiency of this program or function. Also, please provide the calculation or methodology behind each statistic or performance measure. Please refer to, but do not repeat measures listed in Exhibit 2.

No specific performance measures or key measures are associated with TD; however, TD supports multiple TCEQ programs by applying toxicological principles when evaluating environmental data, issuing authorizations, developing environmental regulations, and making policy decisions. An important role of TD is to promote consistency between programs by coordinating agency activities that assess risks to human health. Inquiries from the public, legislators, the media, other agencies, and staff are responded to promptly, usually in less than 24 hours. In a typical year, TD personnel attend anywhere from five to 20 public meetings on air permits, remediation projects, or other meetings at the request of legislators, management, local agencies, or citizen organizations. TD accomplishments in specific areas are discussed further below.

Air Permit Reviews. TD completed 69 air permit reviews for the Air Permits Division and responded to approximately 195 requests for interim ESLs for chemicals not on the current ESL list during FY 2020. In FY 2020, TD responded to over 60 technical inquiries regarding preliminary ESL reviews.

Air Monitoring Reviews. TD completed nine reviews of air monitoring data collected by TCEQ regional offices in FY 2020. The number of reviews of air monitoring data was lower than the 37 and 21 reviews completed in FY 2018 and FY 2019, respectively, due to a lower number of samples collected. In addition, in FY 2020 TD reviewed more than 12 million ambient monitoring data points in the 13 regions of the state with air toxics monitors. The regional reviews are focused on site-specific issues and chemicals and the annual reviews summarize all the ambient data available for an entire TCEQ region. When requested, TD will also review mobile monitoring trip data (none were requested in FY 2020); the mobile monitoring reviews focus on specific areas of concern with multiple potential sources of air pollutants.

APWL Areas and Chemicals. Although no new areas or chemicals were added to the APWL and none were removed in FY 2020, significant progress has occurred over the past several years in addressing air quality issues in APWL areas. As a result of a significant focus of agency resources, TD has been able to remove four areas/chemicals from the APWL since 2016. As of July 2021, there are only four remaining active APWL areas in the entire state. Combined, the four APWL areas cover 137 square miles or 0.01% of the total surface area of Texas (nearly 270,000 square miles).

Benzene Fenceline Monitoring. Since reporting began in 2019, TD has been reviewing the quarterly data submitted by refineries in Texas under EPA's Refinery MACT (maximum achievable control technology) Rule. Twenty-eight refineries and storage terminals across the state began collecting two-week passive benzene samples at the fenceline in 2018 and were required to submit quarterly reports beginning in spring 2019. TD downloads the reports from the Compliance and Emission Data Reporting Interface (CEDRI) website, reviews the raw data and calculated EPA compliance values, conducts a health assessment based on the individual sampling sites, and publishes a report of the findings. TD works with both internal and external stakeholders to ensure data is reported accurately and to improve the air quality around these facilities.

Final ESLs. TD finalized two development support documents (DSDs) with information supporting five final ESLs and four ReVs in FY 2020 for high-priority chemicals and their isomers. Each DSD was proposed, went

through a public comment period, and was finalized. The ethylene oxide carcinogenic dose-response assessment DSD went through an external expert peer review prior to finalization.

Remediation Documents. TD reviewed approximately 40 documents and several data sets for the Remediation Division in FY 2020. TD participated in four public meetings and served as an expert witness for the Office of the Attorney General in five cases in FY 2020.

TRRP Toxicity Factors. On an as-needed basis, TD developed oral toxicity factors for three chemicals in FY 2020. TD also developed an inhalation toxicity factor for one chemical in FY 2020. These toxicity factors were incorporated into the TRRP tables.

Groundwater Contamination (Texas Water Code Section 26.408). TD addressed 39 cases of groundwater contamination in FY 2020 with approximately 450 notices sent to adjacent well owners and/or well users. The notices included information on the levels of contamination measured in groundwater, accredited laboratories for water analysis, and TD contact information. TD is a member of TCEQ's Impact Evaluation Team (IET), is a point of contact for the public, and provides follow-up human health support via phone calls and emails. Notices are also sent to the appropriate groundwater conservation district, if there is one, and the Texas Department of Licensing and Regulation to inform water well drillers of locations of groundwater contamination.

D. Describe any important history regarding this program not included in the general agency history section, including how the services or functions have changed from the original intent. If the response to Section III of this report is sufficient, please leave this section blank.

In general, TD has added functions and gained in importance at the agency since its inception as part of the Texas Air Control Board.

2009

- The Toxicology Section (TS) became the Toxicology Division. The move from a section to a division reflects the increased responsibilities and importance placed on the functions of TD, both internally and externally to the agency.

2019

- The name of the Division changed to the Toxicology, Risk Assessment, and Research Division (TD) to reflect the risk assessment functions of the division, additional research responsibilities, and the addition of the Environmental Research Library.

E. List any qualifications or eligibility requirements for persons or entities affected by this program, such as licensees, consumers, landowners, for example. Provide a statistical breakdown of persons or entities affected.

Air. Indirectly, the ESLs developed by TD affect regulated air permit holders and impact compliance and enforcement decisions related to air monitoring. Health-based toxicity values are used to evaluate air quality affecting the general public and industries in APWL areas.

APWL. The addition and removal of areas and chemicals from the APWL directly affect industries and local communities by drawing agency attention to these areas. Additional attention may lead to cooperative

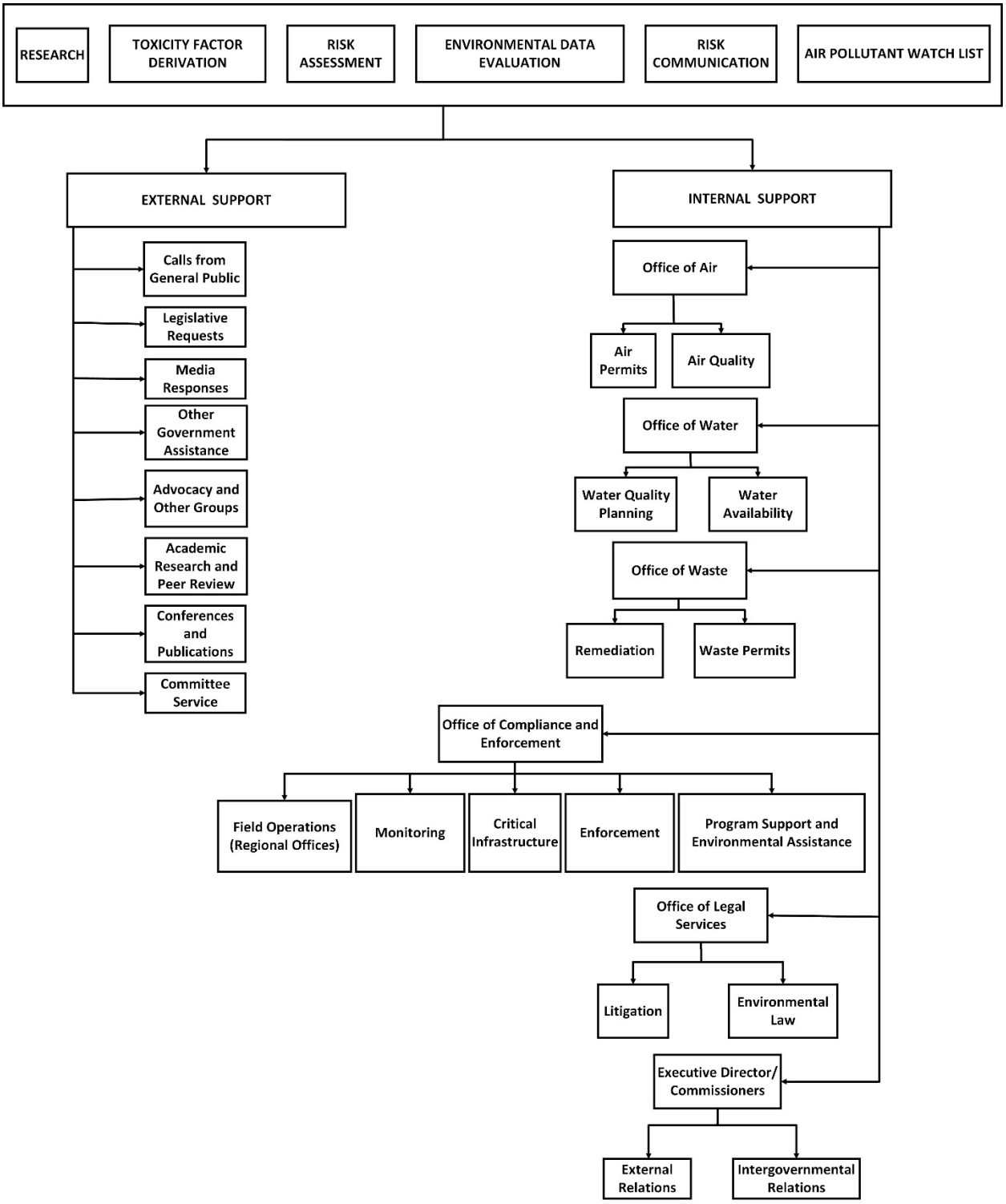
agreements with industry to make changes to facility operations, additional monitoring, more stringent air permit requirements, and compliance and enforcement investigations. Based on figures from the 2020 census, approximately 21,000 people (~0.07% of the Texas population) are estimated to live within the boundaries of the four APWL areas.

Soil and Water. The toxicity factors provided to the Remediation Division affect the calculation of health-based protective concentration levels (PCLs) in soil and water for the TRRP rule and affect remedial decisions. These toxicity factors and PCLs are also used by TCEQ regional offices to prioritize contamination issues and make decisions about local issues and other central office programs. Toxicity factors are also used in the Texas Surface Water Quality Standards which are used to maintain the quality of surface waters in Texas and are used in wastewater permits.

F. Describe how your program or function is administered, including a description of the processes involved in the program or function. Include flowcharts, timelines, or other illustrations as necessary to describe agency policies and procedures. Indicate how field/regional services are used, if applicable.

Toxicology conducts research activities and responds to internal and TCEQ-related external requests for toxicology and human health risk assessment assistance. Each support function of TD is administered a little differently, depending on the internal program involved, or the external stakeholder supported. The following flowchart illustrates Toxicology Division Functions**.**

Toxicology, Risk Assessment, and Research Division Functions Flowchart



Research Activities

TD contracts with consulting firms and universities to conduct research activities on environmental topics of importance to the State of Texas. Descriptions of the projects and final work products are provided on the agency's website at https://www.tceq.texas.gov/toxicology/research-projects.

External Support

Calls from the General Public. Questions, calls, and e-mails about human health risk and toxicology are answered daily by toxicology personnel. If an answer is not immediately available to address a question or concern, every attempt is made to find the answer within 24 hours. TD has a dedicated email address, tox@tceq.texas.gov, and phone number (512-239-1795) that are provided in letters, emails, and at public meetings to make it easier to contact TD. The APWL also has its own dedicated email address, apwl@tceq.texas.gov, which is provided to the public.

Legislative Requests. TD serves a critical role in reviewing legislative issues during the session each biennium, in addition to special legislative requests at any time. TD assigns a bill coordinator and bill analysts to review bills during legislative sessions. A goal of TD is to provide prompt, accurate, scientifically sound responses on human health risk and toxicology issues.

Media Responses. TD is often called upon to answer media inquiries on human health risk and toxicology issues. The division works with the External Relations Division as appropriate to ensure prompt, accurate, and state-of-the-science responses to the media.

Advocacy and Other Groups. TD works with advocacy and industry groups to explain the scientific basis of TCEQ positions on human health risk and toxicology issues. In addition, and as appropriate, TD collaborates with citizen advocacy groups, industry groups, and semi-government organizations, like regional planning councils.

Academic Research and Peer Review. TD collaborates with experts on human health risk, toxicology, and epidemiology at universities in Texas and elsewhere to supply and obtain the latest relevant information. TD participates in some agency-sponsored research, and serves as technical adviser on non-agency sponsored research. In FY 2020 TD was involved in several research projects and used outside peer review for its DSD activities.

Conferences & Peer Review. TD staff attend toxicology conferences to stay abreast of the latest science to help ensure agency decisions are based on the best available science. TD staff also make presentations at scientific conferences to bolster TCEQ's robust reputation for utilizing sound science for regulatory decision-making and to receive external input to help staff make agency scientific assessments even stronger.

Similarly, TD staff publish articles in the peer-reviewed literature to further the scientific reputation of Texas. External peer review increases the scientific robustness of the agency's scientific work, the publication of which increases awareness of the scientific soundness of Texas actions and regulations.

Lastly, TD subjects DSDs that differ significantly from other agencies to independent external expert peer review. External scientific critical review ensures that important chemical assessments by the agency represent the best available science.

Committee Service. TD staff serve on multiple federal peer review committees for the scientific review of federal assessments and rulemakings. These review activities help ensure federal regulations, assessments, and actions affecting Texas and TCEQ-permitted facilities are founded in sound science.

Internal Support

Air Permits. TD reviews air permit applications, amendments, and renewals to determine whether the predicted air concentrations resulting from emissions are protective of human health and welfare, odor, and vegetative effects.

Air Monitoring. TD reviews air monitoring data collected by various ambient monitoring networks in the state, in addition to data collected by mobile monitoring trips and TCEQ regional offices. Annual interoffice memoranda evaluating the available monitoring data in each region are prepared for each Regional Director. Mobile monitoring data and data collected by TCEQ regional offices are evaluated by TD via interoffice memoranda and/or email reviews. Benzene data collected in response to the EPA Refinery MACT rule is reviewed on a quarterly basis by TD, and support is provided to the regional offices.

Toxicity Factor Derivation. TD develops ESLs, AMCVs, ReVs, and URFs, which are used to evaluate air permits and air monitoring data. These values are also incorporated into the TRRP rule for the remediation division. TD also develops ICVs and AALs, which are used during in-motion monitoring and emergency events. These values assist TCEQ staff in the field (non-first responders) and perhaps others in taking or developing exposure avoidance strategies deemed necessary to mitigate the potential for adverse human health effects in an emergency response situation.

Air Pollutant Watch List–Texas Health and Safety Code (THSC) Section 382.0161. TD uses air monitoring data, emissions estimates, health and odor complaints, and compliance investigations to make recommendations on areas of the state needing additional TCEQ resources to address particular air contaminants. This information forms the basis for the administration of the APWL.

Groundwater Contamination–Texas Water Code (TWC) Section 26.408. When groundwater contamination is discovered by TCEQ or other agencies (e.g., the Railroad Commission of Texas (RRC)), TD notifies adjacent well owners and/or users about the detected contaminant(s), the levels measured, and whether there are potential health concerns from using the water. There are legislatively-mandated timelines and actions required of TCEQ to provide notice to landowners.

Water Contamination. TD supports TCEQ with answers to human-health risk and toxicology questions about contaminants in public drinking water, private drinking water, and surface water.

Waste. TD supports the Waste Permits Division by helping to evaluate human health concerns with exposure to contaminated waste and reuse of materials for applications other than for which they were originally intended.

Remediation Risk Assessments. TD supports the Remediation Division by technically reviewing assessments of human health risk and evaluating data on chemicals in soil, sediment, groundwater, air, and other environmental media (e.g., fish tissue) for remediation sites.

Texas Risk Reduction Program (TRRP) Rule. TD helped write the TRRP rule and continues to provide technical support and guidance on toxicology and human health risk issues related to the rule. Each year

the division updates the toxicity factors used to calculate risk- and hazard-based protective concentration levels (PCLs) for ingestion, inhalation, and dermal contact with soil, sediment, groundwater, air, and other media (e.g., fish tissue risk-based exposure levels).

TCEQ Regional Office Support. TD routinely answers human health risk and toxicology questions from the TCEQ regional offices regarding soil, sediment, groundwater, surface water, and air exposures. TD staff support may include conference calls with regulated entities, members of the public, and other personnel, and participation in public meetings.

TD plays an important role in emergency situations, responding to extreme weather events (e.g., hurricanes) and industrial accidents (e.g., fires, storage tank leaks), reviewing air data on an hourly to daily basis to identify potential health concerns associated with facility shutdowns and startups in the aftermath of these incidents. This often requires TD to be on call for an extended period. Similar dedication is required for public drinking water system crises (such as recent events in San Angelo and Lake Jackson). TD staff expedite the development of scientifically sound toxicity factors and drinking water screening values for released substances; collaborate with EPA as they develop analytical capabilities; and urgently evaluate data to assess allowable use (e.g., drinking, showering, clothes/dish/hand washing versus no use at all). The role of TD after emergency situations has expanded as the agency has acquired new vans capable of reporting real-time air concentrations requiring continuous evaluation and in-motion screening values (e.g., ICVs and AALs) to inform investigative efforts and to mitigate health risks.

Enforcement Support. TD supports enforcement efforts of TCEQ by providing technical information on human health risk and toxicology issues.

Office of Legal Services. TD supports the Office of Legal Services by providing expert testimony or technical information on human health risk and toxicology issues, including participation in public meetings and administrative hearings.

Executive and Commissioner Requests. TD is routinely called upon by the Office of the Executive Director, and individually by the commissioners, to answer questions, brief them on topics, attend public meetings, or assist them in responding to human health risks and toxicology issues as they arise.

G. Identify all funding sources and amounts for the program or function, including federal grants and pass-through monies. Describe any funding formulas or funding conventions. For state funding sources, please specify (e.g., general revenue, appropriations rider, budget strategy, fees/dues).

Toxicology Program Funding Sources

Account	Account Title	CFDA	CFDA Title	FY 2020 Expended
0151	Clean Air Account	N/A	N/A	$1,866,923
0153	Water Resource Management Account	N/A	N/A	$8,460
0549	Waste Management Account	N/A	N/A	$8,019
0550	Hazardous & Solid Waste Account	N/A	N/A	$2,095
0555	Federal Funds	66.605	Performance Partnership Grants	$138,452
5071	Texas Emissions Reduction Plan Account	N/A	N/A	$200,000
5094	Operating Permit Feed Account	N/A	N/A	$86,615
TOTAL				**$2,310,564**

The program includes the following strategies:

- Air Quality Assessment and Planning;
- Water Assessment and Planning;
- Waste Assessment and Planning; and
- Waste Management and Permitting.

The program includes a portion of Rider 19 - Texas Emission Reduction Plan (TERP): Grants and Administration.

H. Identify any programs, internal or external to your agency, that provide identical or similar services or functions to the target population. Describe the similarities and differences.

No other internal TCEQ programs duplicate the efforts of TD, although several complement it. Water programs that must consider human health risks include the Public Drinking Water Program and the Water Quality Planning Program. The Radioactive Materials Division assesses human health risks from radioactive materials, while TD assesses human health risks from chemical contaminants. In addition, the ecological risk assessment program in the Remediation Division has some similar functions to TD; however, its focus is ecological health rather than human health.

The Texas Department of State Health Services (DSHS) has some similar functions. DSHS has an Environmental Surveillance and Toxicology Branch that uses principles of epidemiology, toxicology, and surveillance to identify populations at risk, to develop evidence-based actions, and to protect and promote the health of the people of Texas. This branch has specific legislatively-mandated functions that are different than those of TD.

To the best of our knowledge there are toxicologists at other state agencies including RRC who deal specifically with remediation issues under RRC's regulatory authority; and at the Texas Department of Agriculture (TDA) who deal exclusively with pesticide registration, application, and releases. The Texas Department of Public Safety (DPS) has emergency response capability for hazardous waste spills and

releases but does not hire its own environmental toxicologists. In addition, the Texas Department of Transportation works on mobile source issues and environmental impact statements but does not specifically hire environmental toxicologists.

I. Discuss how the program or function is coordinating its activities to avoid duplication or conflict with the other programs listed in Question H and with the agency's customers. If applicable, briefly discuss any memorandums of understanding (MOUs), interagency agreements, or interagency contracts.

TD has regular communication with DSHS on cross-jurisdictional issues, for public meetings, and for coordinated responses to questions from the public on health effects and toxicology. For example, groundwater contamination may be discovered in a private well as a result of remediation activities. The well owner may call with specific questions about health concerns related to drinking the water, or using it for showering or gardening. TD would respond. The well owner may then ask about a particular form of cancer that seems to be occurring at higher rates than normal in his or her family or neighborhood. Those questions would be answered by DSHS in coordination with the family's physician. In addition to site-by-site responses to citizens, the two agencies have participated in several joint public health efforts.

Toxic Substances Coordinating Committee

The Toxic Substances Coordinating Committee (TSCC) was created in 1987 by SB 537 (70R). The TSCC's purpose is to coordinate communication among member agencies concerning each agency's efforts to regulate toxic substances and harmful physical agents. Participating agencies, in addition to TCEQ and DSHS, include the Texas Parks and Wildlife Department, TDA, DPS, the Texas General Land Office, and RRC. The mission of the TSCC is to protect and promote the health and environment of Texas through the prevention and control of adverse health and environmental effects related to toxic substances and harmful agents. This mission is accomplished through interagency coordination of regulation development, risk assessments, cooperative studies, information dissemination, and public education efforts. TD is the TCEQ program that serves on the TSCC, meeting quarterly. TD also serves on subcommittees formed as part of the TSCC (e.g., subcommittees on harmful algal blooms, human health risk, or chemical levels in fish tissues).

J. If the program or function works with local, regional, or federal units of government, include a brief description of these entities and their relationship to the agency.

United States Environmental Protection Agency (EPA) Region 6 and Agency for Toxic Substances and Disease Registry (ATSDR)

EPA Region 6 has toxicologists and risk assessors who work with TD on federal Superfund remediation sites, during the response to emergency events, and with benzene fenceline monitoring data. TD gets information from many EPA programs and offices and the ATSDR to make decisions on human health risk and toxicology issues. In addition, TD provides technical advice and guidance to federal agencies on such issues.

Other State Agencies and City and County Environmental and Health Departments

TD communicates and coordinates with other state (e.g., DSHS and RRC) and local government agencies (e.g., City of Houston and Harris County) dealing with human health risk and toxicology. TD gives support in interpreting data, evaluating human health risks and hazards, and responding to environmental issues.

In addition, TD has participated in research projects with various governmental organizations, either as an active participant or an adviser.

K. If contracted expenditures are made through this program please provide

- **a short summary of the general purpose of those contracts overall;**

These contracts allow the program to do more in a shorter time and to offer specialized toxicological services outside of the agency not normally performed by the program.

- **the amount of those expenditures in fiscal year 2020;**

Expenditures total $471,460.

- **the number of contracts accounting for those expenditures;**

Five contracts.

- **the method used to procure contracts;**

The program had one Request for Proposal (RFP) resulting in one new contract. One other contract was procured with an RFP and two contracts were state contracts with universities.

- **top five contracts by dollar amount, including contractor and purpose;**

Toxicology Program Contracts

Contract No.	Vendor Name	Purpose	FY 2020 Expended
582-20-10030	NERA Economic Research Associates	Study spatial variation in a simulation study to evaluate decomposed PM2.5 trends	$325,000
582-19-91305	University of Cincinnati	Letter peer review of the Ethylene Oxide Carcinogenic Dose Response Assessment Development Support Document	$105,000
582-20-10533	ToxStrategies	Records of decision risk, levels for remediation sites	$8,460
582-20-13790	WorkQuest	Intern to assist with program needs	$10,200
582-20-12697	Websedge	Video, Thought Leadership broadcast on closed circuit TV as part of the Society of Toxicology 59th Annual Meeting and ToxExpo	$22,500

- **the methods used to ensure accountability for funding and performance; and**

Contracts are monitored to ensure expenditures meet contract requirements and do not exceed the contract. Separate division personnel audit contractor performance to verify costs and troubleshoot potential problems that would impede the contractor's ability to fulfill the required deliverables.

- **a short description of any current contracting problems.**

The program did not experience contracting problems.

L. Provide information on any grants awarded by the program.

The Texas A&M Engineering Experiment Station (OSRS) provides technical expertise to the program in area of mathematics and statistics related to air pollutant toxicology and epidemiology.

M. Are there any barriers or challenges that impede the program's performance, including any outdated or ineffective state laws? Explain.

None

N. Provide any additional information needed to gain a preliminary understanding of the program or function.

None

O. Regulatory programs relate to the licensing, registration, certification, or permitting of a person, business, or other entity. For each regulatory program, if applicable, describe

- **why the regulation is needed;**
- **the scope of, and procedures for, inspections or audits of regulated entities;**
- **follow-up activities conducted when non-compliance is identified;**
- **sanctions available to the agency to ensure compliance; and**
- **procedures for handling consumer/public complaints against regulated entities.**

N/A

P. For each regulatory program, if applicable, provide detailed information on complaint investigation and resolution. Please adjust the chart headings as needed to better reflect your agency's particular programs. Please briefly explain or define terms as used by your agency, such as complaint, grievance, investigation, enforcement action, jurisdictional, etc. If necessary to understand the data, please include a brief description of the methodology supporting each measure. See Exhibit 13 Example.

N/A