ATTACHMENT B

2013 AIR EMISSIONS INVENTORY REPORT

PORT CORPUS CHRISTI

2013 Air Emissions Inventory

Bruce Anderson, Principal
Air Quality Director

Air Quality Committee Meeting
Corpus Christi, Texas
October 2015

STARCREST CONSULTING GROUP, LLC
ENVIRONMENTAL MANAGEMENT
AIR QUALITY • CLIMATE • SUSTAINABILITY

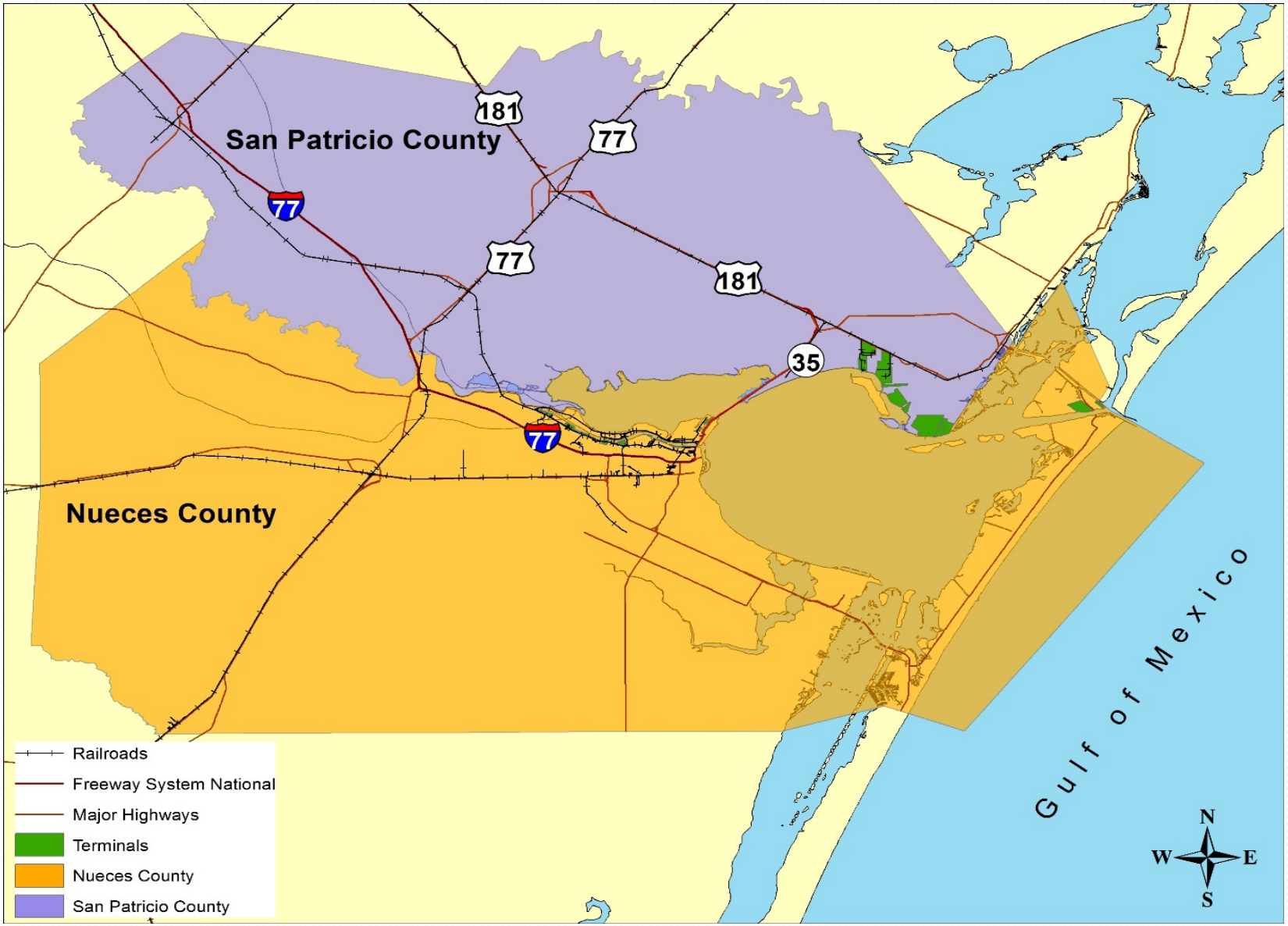
Emissions Inventory - Context

- TCEQ
  - Develops regional inventories
  - Typically conservative & based on more generalized data
- Ports/industry
  - Develop typically more detailed inventories
  - Typically conservative & more representative of what's actually happening
- PCCA first inventory for 2006-2009
  - Ships only
  - Non-AIS

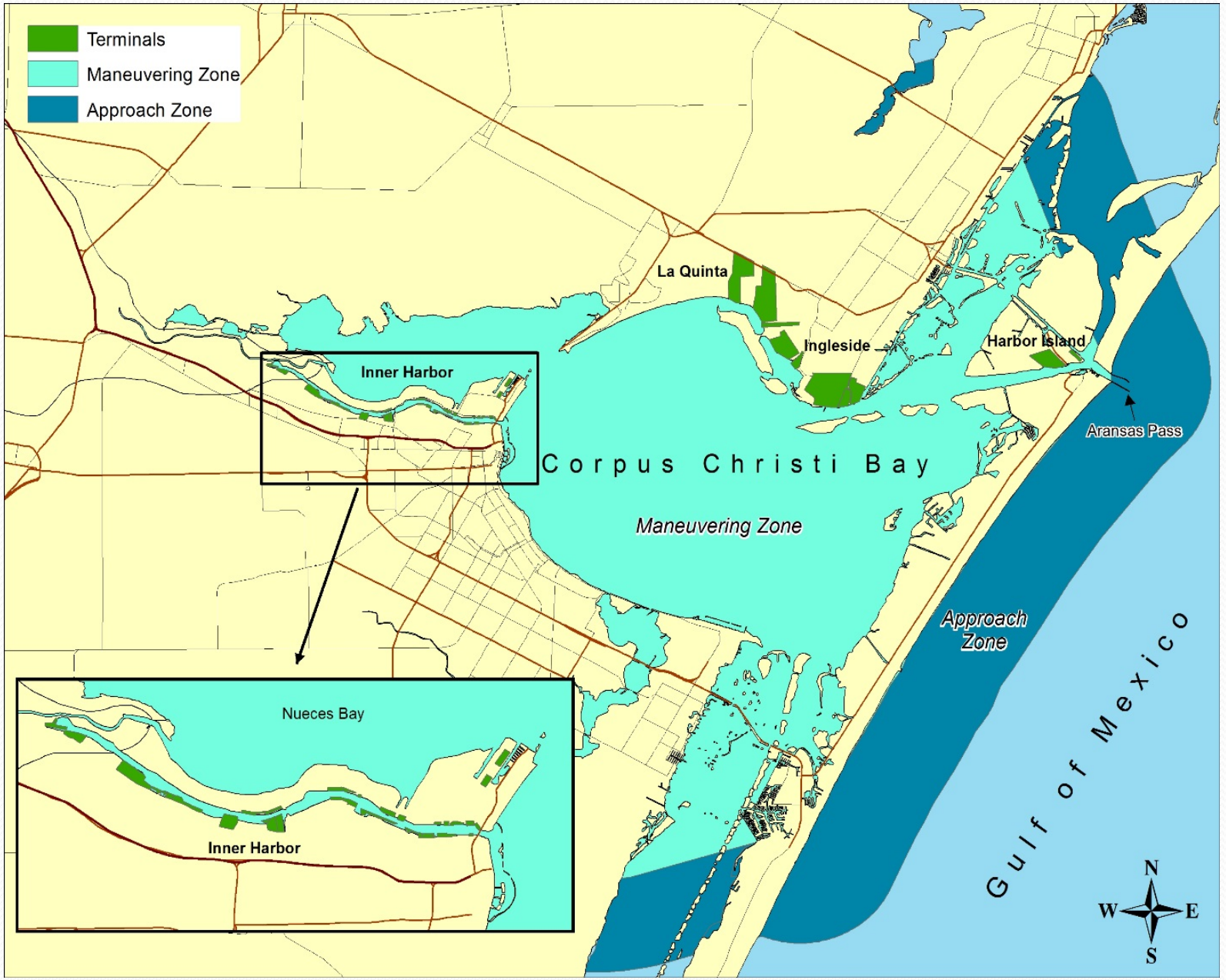
2013 Emissions Inventory

- Source categories
  - Ocean-going vessels
  - Harbor craft
  - Cargo handling equipment
  - Rail locomotives
  - Heavy-duty vehicles
- Emissions estimated
  - Pollutants: NOx, SO_2, $PM_{10}/PM_{2.5}$/DPM, VOCs, CO
  - GHGs: CO_2, CH_4, N_2O, CO_2e
- Methodology
  - Activity-based
  - Local data collection
  - Latest methods

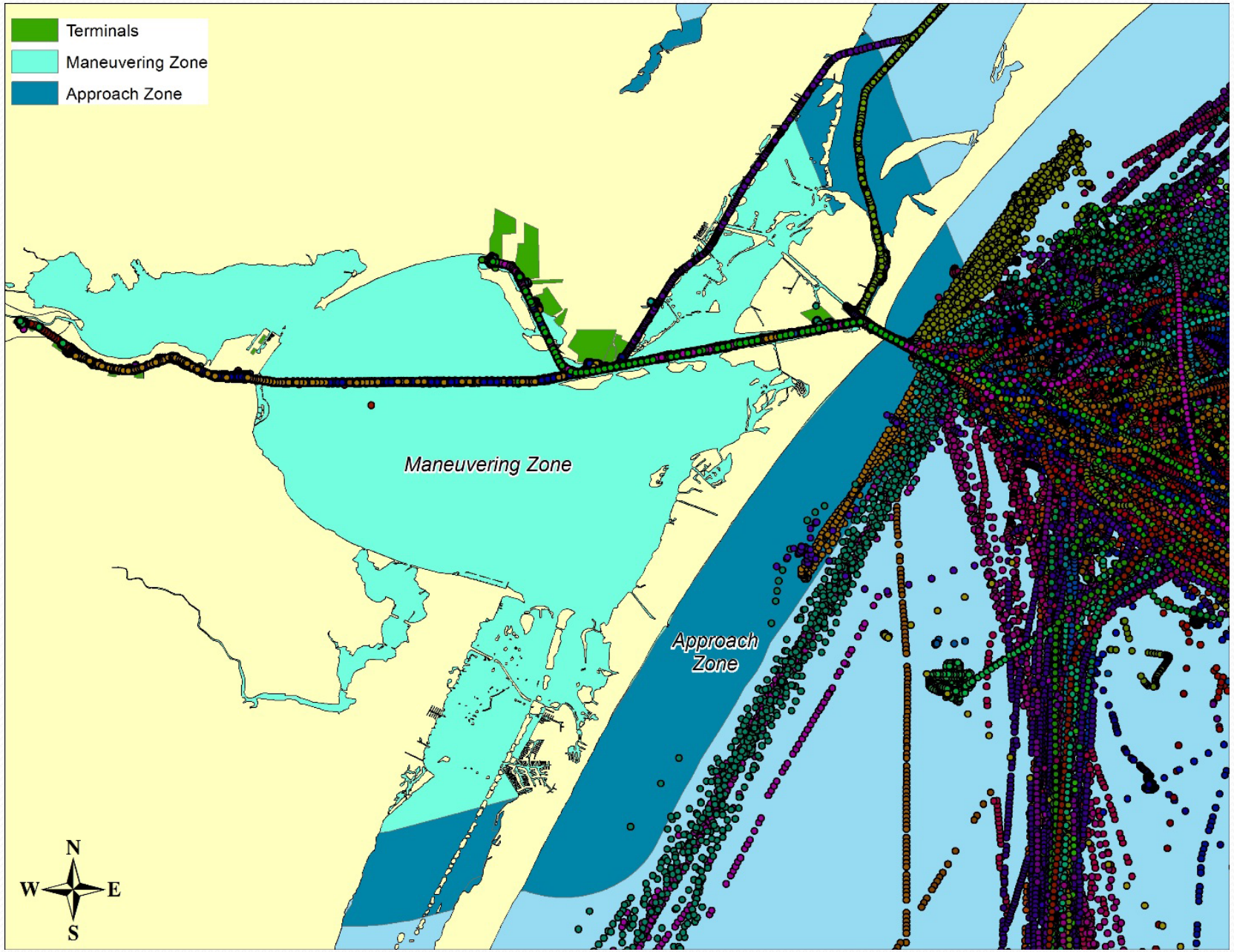
Geographical Domain



Geographical Domain



Overwater Activity Data



2013 PCCA Results

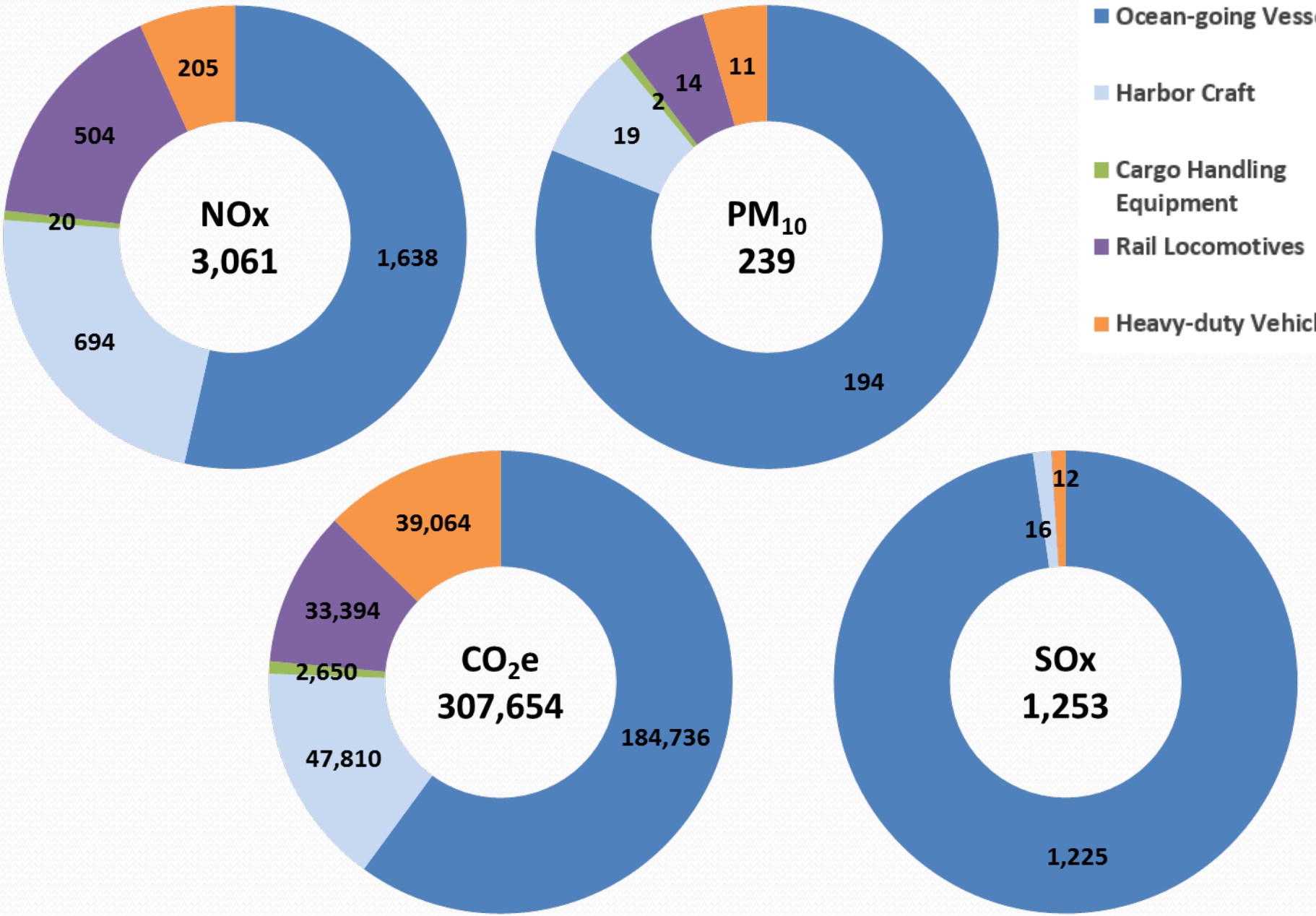
Table 2.2: Nueces and San Patricio County Regional Emissions

Sources	Inventory Year	Source	NO_x tpy	PM_{10} tpy	$PM_{2.5}$ tpy	DPM tpy	VOC tpy	CO tpy	SO_x tpy	CO_2e tonnes
Point sources	2013	TCEQ	9,379	2,326	1,703	NR	4,256	4,175	749	NR
Onroad	2011	TCEQ	6,649	299	218	187	2,451	31,734	33	NR
Nonroad	2011	TCEQ	2,148	239	229	173	2,858	15,973	3	NR
Commercial Marine Vessels	2013	Starcrest	2,332	213	173	120	102	504	1,241	232,546
Locomotives	2013	Starcrest	504	14	13	14	26	96	0	33,394
Drill rigs	2011	TCEQ	57	3.0	2.9	3.0	5.0	19.7	0.1	NR
Area sources	2011	TCEQ	1,335	30,599	4,621	0.04	15,383	2,230	170	NR
Total			**22,404**	**33,693**	**6,960**	**497**	**25,080**	**54,732**	**2,196**	**265,940**

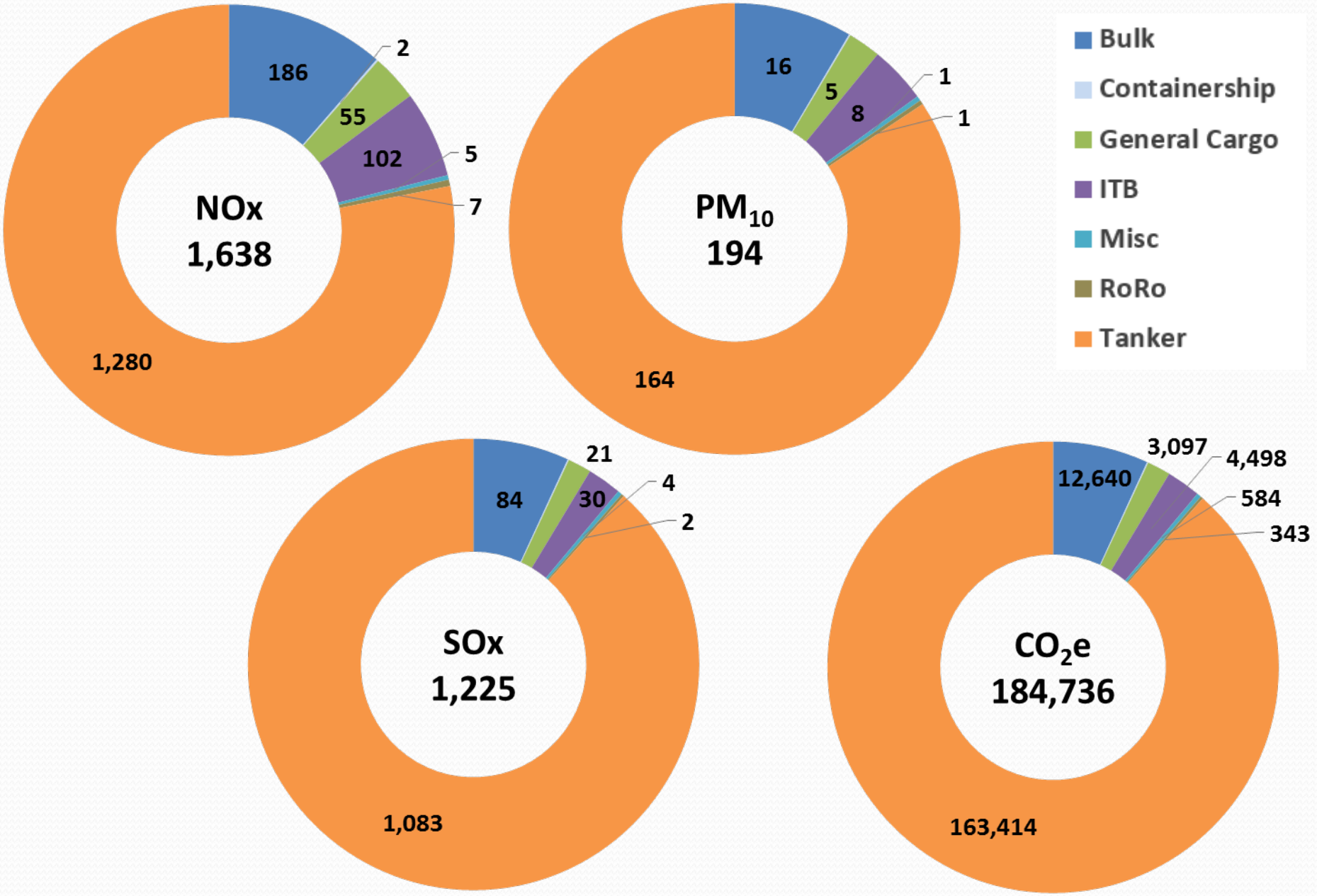
Table 2.3: Nueces and San Patricio County Construction Emissions from TCEQ

Sources	Inventory Year	NO_x tpy	PM_{10} tpy	$PM_{2.5}$ tpy	DPM tpy	VOC tpy	CO tpy	SO_x tpy	CO_2 tpy
Construction Equipment	2011	556	61.0	59.1	58.2	96.7	840.4	0.5	NR
Commercial Marine Vessels	2011	3,025	113	106	NR	94	451	457	174,280
Locomotives	2011	292	9.2	8.9	9.2	17.0	56.8	3.9	21,093

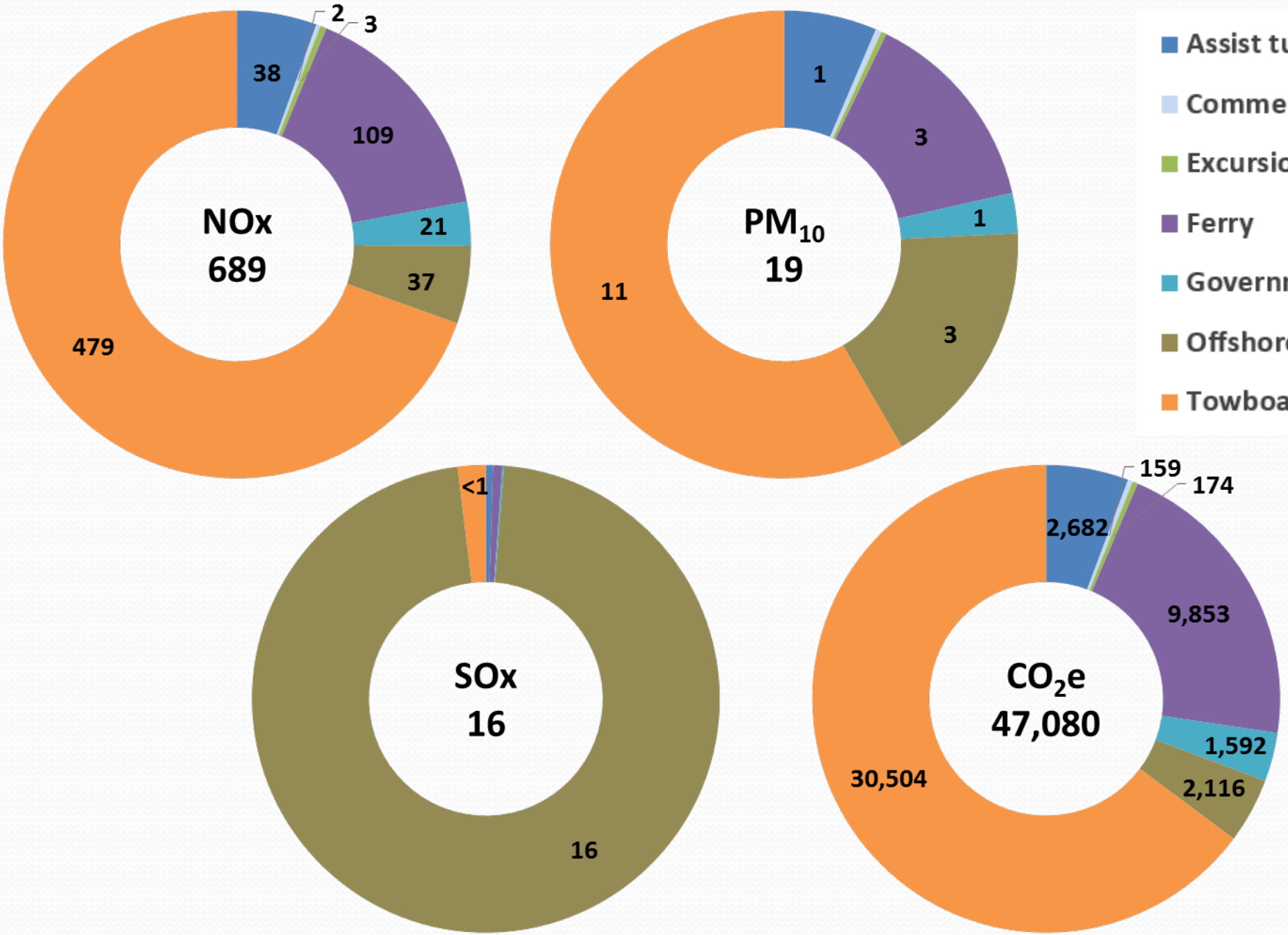
2013 PCCA Results



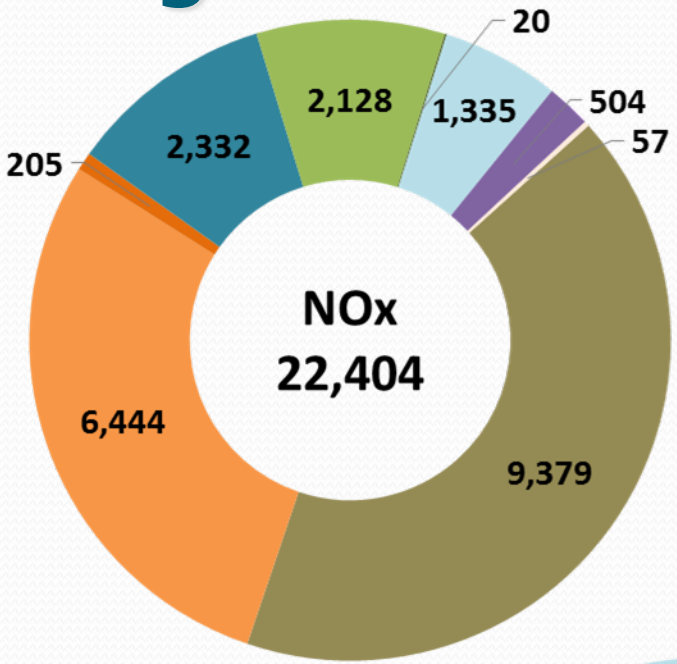
2013 Results - OGV

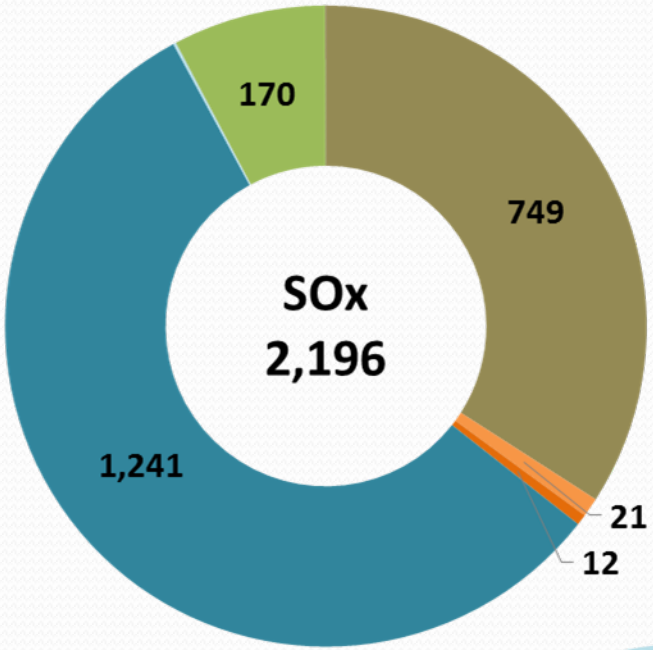


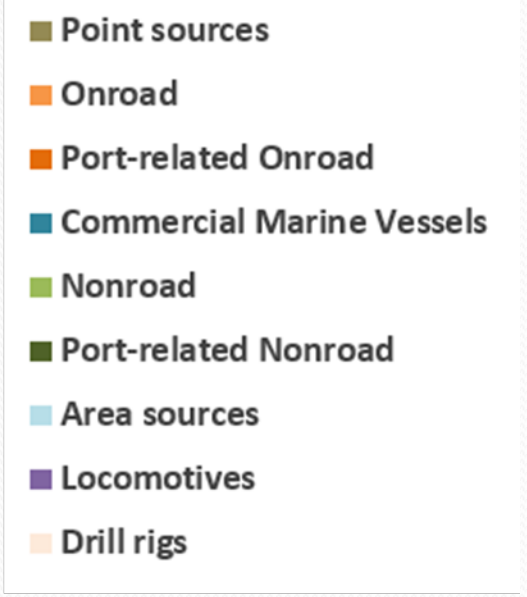
2013 Results – Harbor Craft

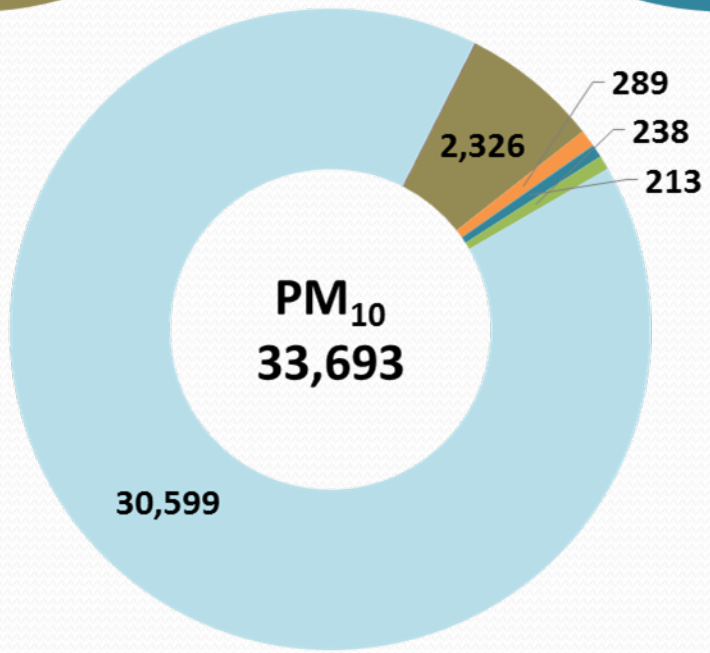


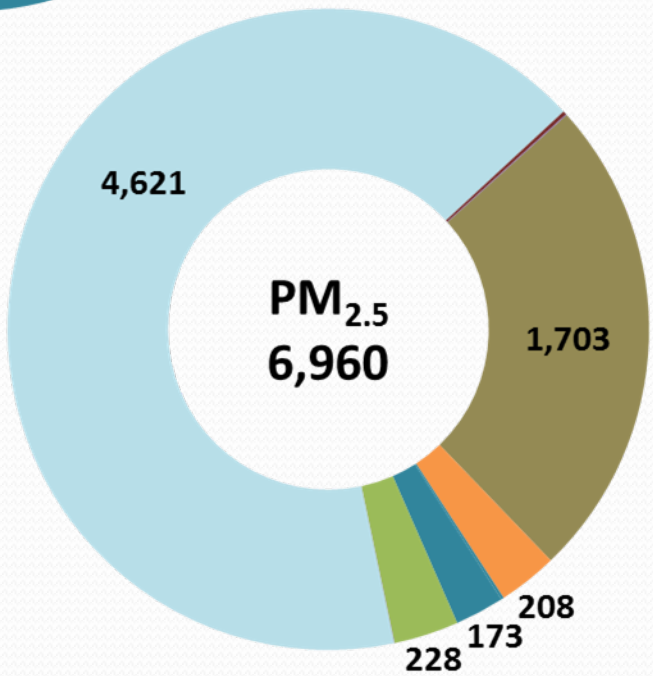
Regional Emissions











Thank You!

STARCREST CONSULTING GROUP, LLC
ENVIRONMENTAL MANAGEMENT
AIR QUALITY • CLIMATE • SUSTAINABILITY

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When viewing our website please consider: The site had been "under construction" for 16 years prior to the version we currently have. We do not focus our efforts on our website, as we're too focused on our clients' work.

ATTACHMENT D

TCEQ FUNDED WORK PLAN FOR YEARS 3 AND 4

Texas Commission on Environmental Quality

PROPOSAL FOR GRANT ACTIVITIES (INCLUDING WORK PLAN AND NOTICE TO COMMENCE) UNDER THE GRANT UMBRELLA FROM TCEQ TO: **CITY OF CORPUS CHRISTI** (Performing Party/Grantee)

Contract (Grant) Number: 582-16-60182

Proposal for Grant Activities (Including Work Plan and Notice to Commence) No. 582-16-62027-01

Rider 7 – Near Non-Attainment Area Work Plan

This document may be referred to as the Proposal for Grant Activities (PGA).

Proposal for Grant Activities Amount: $405,243.32

Time Line
The activities shall begin upon issuance of this executed Proposal for Grant Activities (PGA) and must be completed no later than December 31, 2017.

Total Amount of this Proposal for Grant Activities
The total amount to be reimbursed by TCEQ for activities performed under this Proposal for Grant Activities and shall not exceed the amount shown on the face of this PGA unless the amount is changed by an amendment to the PGA.

GRANT ACTIVITIES The Performing Party will implement all grant activities in order to reduce ozone, as required in Rider 7, Commission on Environmental Quality, Article VI of the General Appropriations Act of the 84th Legislature.

Task 1 – Ambient Air Quality Monitoring Activities:
The Performing Party (PP) will continue ambient monitoring of the urban airshed as listed in Table 1: Ambient Air Monitoring Sites to be operated by the Grant Recipient. The geographical location of the monitoring sites is shown in Figure 1.

The data will be transferred regularly to the TCEQ's Leading Environmental Analysis and Display System (LEADS) data system as specified in Table 1.

Table 1. Ambient air monitoring sites to be operated.

LOCATION (ADDRESS)	EQUIPMENT (INSTRUMENTS)	START DATE	END DATE
Holly Road site (CAMS 660) - Water pumping station operated by the City of Corpus Christi located in the growing suburbs of the south side of the City.	Teledyne API 400E ozone analyzer, F460 wind sensors, Coastal environmental Atmospheric Temperature/Relative Humidity (AT/RH) sensor, Zeno 3200 datalogger, and Enfora wireless modem. NOx Analyzer	April 1, 2016 April 1, 2017	November 1, 2016 November 1, 2017
Violet site (CAMS 664) - Pumping station located west of Corpus Christi. Rural location surrounded by open field for several miles.	Teledyne API 400E ozone analyzer, RM young wind sensors, Coastal environmental Atmospheric Temperature/Relative Humidity (AT/RH) sensor, Zeno 3200 datalogger, and Enfora wireless modem.	April 1, 2016 April 1, 2017	November 1, 2016 November 1, 2017
Ingleside site (CAMS 685) - Rural location NW of Corpus Christi.	Teledyne API 400E ozone analyzer, F460 wind sensors, Coastal environmental Atmospheric Temperature/Relative Humidity (AT/RH) sensor, Zeno 3200 datalogger, and Enfora wireless modem.	April 1, 2016 April 1, 2017	November 1, 2016 November 1, 2017

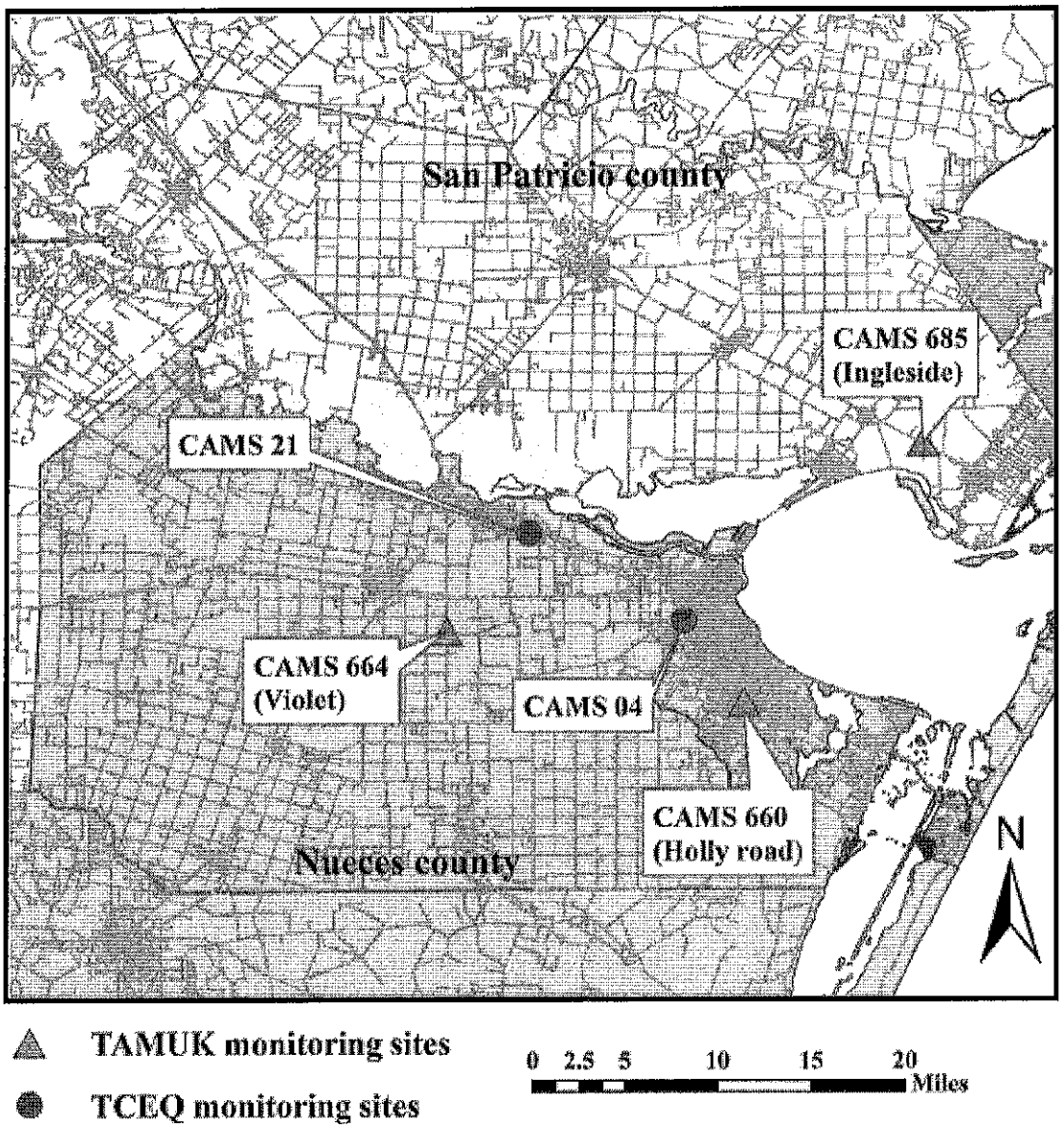

Figure 1. Air monitoring sites in the Corpus Christi urban airshed.

The contractor-owned transfer standards will be calibrated according to the Quality Assurance Project Plan (QAPP) to be prepared as deliverable 1.1.1. TCEQ specifications, policies and procedures in the TCEQ's NAMS/SLAMS Network and U.S. Mexico Border Support Activities Quality Assurance Project Plan for Air Monitoring in Texas. These requirements are based on requirements found in the Code of Federal Regulations (CFR) Title 40, Parts 50, 53, and 58.

Deliverable 1.1.1: A Category III QAPP for the Ambient Air Quality Monitoring Activities delivered to the TCEQ in Microsoft Office Word.

Deliverable Date 1.1.1: Draft QAPP by January 15, 2016. The QAPP must be accepted by the TCEQ prior to the start of technical activities.

Deliverable 1.1.2: Ambient monitoring data collected at monitoring sites delivered to TCEQ's LEADS.

Deliverable Date 1.1.2: Continuously between April 1, 2016 through November 1, 2016; and April 1, 2017 through November 1, 2017.

Deliverable 1.1.3: Ambient Monitoring Data Report. The PP will deliver a report with detailed analysis of Ambient Monitoring data. The report will be delivered to the TCEQ in a Microsoft Office Word format. Accompanying data and other supporting material will be provided in a mutually agreeable electronic format.

Deliverable Date 1.1.3: Draft Report November 15, 2017 and Final Report December 15, 2017.

Cost: $182,935.83

Task 1.2: Equipment upgrade

Calibrate and repair existing wind sensors, purchase atmospheric temperature and relative humidity sensors at three sites, and monitoring supplies. A detailed summary of the equipment upgrade with approximate cost estimation is provided in the below Table 2.

Table 2. Equipment Upgrade Costs

Item	Cost
Calibrate and repair existing wind sensors	$3,500
Purchase atmospheric temperature and relative humidity sensors at three sites	$3,250
Purchase monitoring supplies	$2,000
Total	**$8,750**

Deliverable 1.2.1: Report Documenting Equipment Upgrades.
Deliverable Date 1.2.1: Draft Report December 15, 2016 and Final Report January 16, 2017.

Cost: $8,750.00

Task 2: Planning and Outreach:

Task 2.1 Auto Check/Clean Fleet Program
The PP will develop and implement an Auto Check/Clean Fleet program for the Corpus Christi air shed. A minimum of one Auto Check/Clean Fleet event will be held each month beginning in January 2016 to test an average of 20 vehicles per month for the

period of January 2016 through December 2017. Pollution Prevention Partnership (P3) will make every effort to ensure that at least half of all vehicles tested are private, non-fleet vehicles. In the event that a scheduled event is cancelled, it will be rescheduled. If it is rescheduled to a different month, both it and the event scheduled for that month will be performed.
The Auto Check/Clean Fleet program will measure vehicle emissions from area public and private fleets for hydrocarbons and NOx; coordinate emission reducing repairs for identified polluting fleet vehicles; issue a repair voucher for each vehicle owned by a private citizen that falls within the "dirty" category for HC and NOx; re-test the emissions of each repaired vehicle; calculate and quantify emissions reductions as a result of repairs; and enter all information for all tested vehicles ("clean" and "dirty" as defined below) into an excel spreadsheet to be sent to the TCEQ with quarterly reports. Retests are not counted in the total number of vehicles tested.

Below is the current criteria for the tailpipe test. Vouchers are issued if hydrocarbons (HC) >200 ppm, or if oxides of nitrogen (NOx) > 300 ppm, or if there is a failed gas cap pressure:

~Normal:	**>13.5%**	**<.5%**	**<150 ppm**	**<.5%**	**<200 ppm**	**14.7**
Extreme:	**<13%**	**>1.5%**	**>200 ppm**	**>1%**	**>300 ppm**	**+/- 2**
Year/Make/Model	**CO2**	**CO**	**HC**	**O2**	**NOx**	**AFR**

Auto Check/Clean Fleet Program Report:

1. A quarterly report summarizing the information from the Auto Check/Clean Fleet events will be prepared. This report will include the following:

    - a list of the events with date, time, and location of each event;
    - the number of vehicles screened at each event, including breakdown of number of private and fleet;
    - the number of "clean" and "dirty" vehicles at each event;
    - pre-repair emissions information for each "dirty" vehicle that are issued a repair voucher;
    - details of the repairs made and the cost of each "dirty" vehicle repair;
    - post-repair emissions information for each repaired vehicle;
    - total cost of all repairs and estimated cumulative emissions reductions provided by the Auto Check/Clean Fleet program; and
    - a spreadsheet with detailed information about each vehicle tested. The vehicle test information will include:

- fleet owner (for fleet vehicles), the make, model, year and a unique identifier, such as fleet number (for fleet vehicles) or VIN;
- odometer reading;
- emissions information for CO_2, CO, HC, O_2, NO_x, and AFR;
- gas cap condition; and
- if a voucher was issued for the vehicle, and the amount of the voucher. For voucher recipients, a VIN will be required.

Deliverable 2.1: Quarterly Auto Check/Clean Fleet Program Report.
Deliverable Date 2.1: Per the schedule for Quarterly Progress Reports indicated in the Grant.

Task 2.2: Meetings and Presentations
The PP will attend or facilitate meetings for/with local governments, businesses, citizens groups, industry groups, and environmental groups to promote air pollution reduction strategies. A presentation about local air quality including emissions reduction strategies and community outreach programs (such as the Auto Check/Clean Fleet events) will be created to be given at these meetings where appropriate.

1. A quarterly meeting report will be prepared and attached to the quarterly progress report. The meeting report will include the date, time, number of attendees, and group information for each meeting attended. Any presentations made will be attached to the meeting report. The report will also include a list of attendees (sign in sheet) and a meeting agenda.
2. The PP will compile Corpus Christi air shed air quality information, emissions data, emissions reduction strategies, and information about air quality outreach programs into one PowerPoint style presentation that will be given at meetings and made available via the P3 website for general use.

Deliverable 2.2: Quarterly meeting report and meeting materials.
Deliverable Date 2.2: Per the schedule for Quarterly Progress Reports indicated in the Grant.

Task 2.3: Website
The PP shall maintain a public website/Web page to facilitate public access to air quality information and outreach programs and will report on the analytics of website/Web page traffic.

1. The PP will create and maintain a public website that includes the following information:
   - current air quality information for the Corpus Christi area;
   - copies of technical reports;

- copies of presentations;
- emissions reduction strategies; and
- outreach event information.

2. A spreadsheet or Google Analytics report detailing website/Web page traffic (including the number of unique users on the site each month) and presentation/report downloads will be included in the quarterly report.

Deliverable 2.3: Documentation of website activity in the quarterly report.
Deliverable Date: Per the schedule for Quarterly Progress Reports indicated in the Grant.

Cost: $191,685.83

Task 3: Administrative Activities:
The PP shall perform all support necessary to ensure that all grant requirements are met and that the Work is completed in a timely manner with sufficient quality. This may include, but is not limited to, providing general supervision for grant activities, administering sub-contracts, submitting reports and invoices, facilitating and/or attending meetings for stakeholder groups or other planning entities. The PP shall summarize its activities in a quarterly progress report described below.

Deliverable 3: The progress report and quarterly invoices shall document, in sufficient technical detail and by task, the accomplishments, expenditures, and milestones achieved during the prior quarter. Specifically, the quarterly progress report shall:

1. Summarize all activities performed by the Performing Party with respect to each task and subtask of this work plan for the previous quarter;
2. Establish performance goals for each task and subtask for the quarter in which the report is delivered;
3. Compare accomplishments on every task and subtask to performance goals established the previous quarter;
4. Summarize reasons why performance goals were not met, if that is the case; and
5. Provide a preliminary estimate of costs by task and subtask for the reporting period.

Deliverable Date 4: The Performing Party shall submit, via electronic mail, progress reports of its activities per the schedule indicated in the Grant. Invoices shall be submitted to TCEQ in accordance with the requirements in the Grant.

Cost: $20,671.66

TASK 4: DEVELOPMENT OF FY2018-2019 WORK PLAN:
The PP shall draft a FY2018-2019 work plan to cover the FY 2018-2019 biennium, based on the assumption that funds will continue to be appropriated for air quality planning in a manner consistent with the terms and amount of TCEQ Rider 7 as adopted by the 84th Texas Legislature and signed into law by the Governor of Texas. The monetary

resources allocated to various types of activity by the PP should adhere to the following priorities set by the TCEQ:

Level One Priorities:

- Collection of ambient air quality monitoring data and accompanying analysis
- Emissions inventory improvements

Level Two Priorities:

- Development of locally based control strategies for ozone reduction
- Photochemical modeling
- Program Planning
- Public awareness, outreach, and education

Deliverable 4: The PP shall deliver a draft work plan for TCEQ review and approval describing activities that the PP proposes to undertake during the Fiscal Years of 2018 and 2019. The TCEQ will work with the PP to approve the draft Work Plan not later than July 15, 2017.

Deliverable Date 4: May 15, 2017, for the draft FY2018-2019 Work Plan and July 15, 2017, for the approved FY2018-2019 Work Plan.

Cost: $1,200

Summary Schedule of Deliverables
(In the event of a conflict between the deliverables or due dates shown in this table and the deliverables or due dates described above, the deliverables and due dates in the table prevail, except that if a deliverable is described above but is not shown on this table, it shall nevertheless be due as described above.)

Deliverable	Deliverable Date	Cost

Ambient Air Quality Monitoring Activities (Task 1.1) **Deliverable 1.1.1:** A Category III QAPP for the Ambient Air Quality Monitoring Activities delivered to the TCEQ in Microsoft Office Word. **Deliverable 1.1.2:** Ambient monitoring data collected at monitoring sites delivered to TCEQ's LEADS. **Deliverable 1.1.3**: Ambient Monitoring Data Report. The PP will deliver a report with detailed analysis of Ambient Monitoring data. The report will be delivered to the TCEQ in a Microsoft Office Word format. Accompanying data and other supporting material will be provided in a mutually agreeable electronic format.	**1.1.1:** Draft QAPP by January 15, 2016. The QAPP must be accepted by the TCEQ prior to the start of technical activities. **1.1.2:** Continuously between April 1, 2016 through November 1, 2016; and April 1, 2017 through November 1, 2017. **1.1.3:** Draft Report November 15, 2017 and Final Report December 15, 2017.	**1.0:** $$182,935.83
Equipment Upgrade (Task 1.2) **Deliverable 1.2.1:** Report Documenting Equipment Upgrades.	**1.2.1:** Draft Report December 15, 2016 and Final Report January 16, 2017	**1.2: $8,750**

Planning and Outreach (Task 2) **Auto Check/Clean Fleet Program** (Task 2.1) **Deliverable 2.1:** Quarterly Auto Check/Clean Fleet Program Report. **Meetings and Presentations** (Task 2.2) **Deliverable 2.2:** Quarterly meeting report and meeting materials. **Website** (Task 2.3) **Deliverable 2.3:** Documentation of website activity in the quarterly report.	**2.1:** Per the schedule for Quarterly Progress Reports indicated in the Grant. **2.2:** Per the schedule for Quarterly Progress Reports indicated in the Grant. **2.3:** Per the schedule for Quarterly Progress Reports indicated in the Grant.	**3:** $191,685.83
Administrative Activities (Task 3) **Deliverable 3:** The progress report and quarterly invoices shall document, in sufficient technical detail and by task, the accomplishments, expenditures, and milestones achieved during the prior quarter.	**3:** The Performing Party shall submit, via electronic mail, progress reports of its activities per the schedule indicated in the Grant. Invoices shall be submitted to TCEQ in accordance with the requirements in the Grant.	**3:** $20,671.66

Development of FY2018-2019 Work Plan (Task 4) **Deliverable 4**: The PP shall deliver a draft Work Plan for TCEQ review and approval describing activities that the PP proposes to undertake during the Fiscal Years of 2018 and 2019. The TCEQ will work with the PP to approve the draft Work Plan not later than July 15, 2017.	**4:** May 15, 2017, for the draft FY2018-2019 Work Plan and July 15, 2017, for the approved FY2018-2019 Work Plan.	**4:** $1,200.00
	Total:	**$405,243.32**

Special Requirements / Provisions

Copies

All electronic deliverables must meet State of Texas Accessibility requirements in 1 Texas Administrative Code (TAC) Part 10, Chapters 206 and 213. Electronic copies of all text, graphics, spreadsheet files, or models used in the preparation of any documents related to the project reports, used to document results and conclusions (e.g., sampling data, work files, etc.), or developed under this Grant shall be supplied at the conclusion of the project (or earlier, as requested by the TCEQ Project Manager). The software standards at the TCEQ in word processing and spreadsheet software are Microsoft Word, PDF formats and Microsoft Excel, or a software and version to be negotiated by TCEQ and the Performing Party. Unless a specific format is indicated elsewhere, the Performing Party must ensure that all electronic copies of documentation are supplied in the applicable format or are saved in a format that can be imported in such a way that the document or spreadsheet quality and accessibility do not suffer. Where conversions from one spreadsheet or one word processing format to another result in changes in the formatting that detract from the presentation quality at a minimum or result in significant work in trying to restore the documents or spreadsheets to presentation quality, the items produced will not be deemed acceptable to TCEQ under this Grant.

Availability for Questions

The Performing Party's Project Manager, or a knowledgeable designee, must be available for questions from the TCEQ Project Manager at all reasonable times during the performance of this PGA and for at least 45 days after it has been completed in its entirety.

Models and Software to be Used by Performing Party

The following models and software must be used by the Performing Party. (In the event models and software are identified in the Tasks above but not here, this PGA shall be construed as if such models or software were also spelled out in this space. In the event of a conflict between the models and software identified in the Tasks above and those identified here, it shall be resolved by taking the most likely meaning given the totality

of the PGA, but if that is not possible, then the model or software described in this section shall prevail.)

Models and software: Microsoft Office Suite; Adobe Acrobat Reader; others as needed (subject to approval by TCEQ Project Manager)

Models, Reports, or Other Data to be Supplied to the Performing Party by TCEQ

TCEQ is not required to supply any models, reports, or other data except for specific items, if any, listed here: N/A

Quality Assurance/Quality Control (QA/QC) Procedures

The PGA must include a formal QA/QC program that will ensure products are of known and acceptable quality. These QA/QC requirements have been developed to be consistent with the applicable elements of ANSI/ASQ E4-2004: *Quality Systems for Environmental Data and Technology Programs: Requirements with Guidance for Use* and the TCEQ Quality Management Plan. If Performing Party is aware of any additional requirements which will be applicable to the activities being performed, Performing Party shall include them in the PGA. If Performing Party becomes aware of any additional applicable requirements after TCEQ has approved the PGA, Performing Party shall notify the TCEQ and submit a revised PGA.

For tasks that require a Quality Assurance Project Plan (QAPP), the Performing Party must provide a QAPP and key QA checks to be utilized during the project. The required QAPP elements and associated audit types, frequencies, and quality reports are further described in this section. The Performing Party may not commence technical activities for a task requiring a QAPP until the QAPP is approved by TCEQ, unless the TCEQ Project Manager and the Air Quality Division (AQD) Quality Assurance Officer both provide specific, prior, written approval. After approval of the QAPP, it is the Performing Party's responsibility to update the QAPP and key QA checks as necessary and submit them to TCEQ for approval.

The QAPP shall establish appropriate quality control requirements for various types of TCEQ AQD research activities according to the categories and project types shown below. The intended use of the data dictates the required level of control quality. For example, the quality controls of a developmental research program are different from that of a regulatory compliance program because the purpose or intended use of the data is different. The four QA categories are:

- **Category I** – establishes QAPP requirements for projects involving areas such as enforcement activities, or litigation;
- **Category II** – establishes QAPP requirements for important, highly visible Agency projects involving areas such as supporting the development of environmental regulations or standards;
- **Category III** – establishes QAPP requirements for projects involving applied research or technology evaluations; and

- **Category IV** – establishes QAPP requirements for projects involving basic research or preliminary data gathering activities.

For QA Categories I and II, QAPPs shall meet the EPA requirements specified in EPA Requirements for QA Project Plans (QA/R-5) (PDF) (40 pp, 121 KB) and follow the guidance listed below. For QA Categories III and IV, QAPPs shall meet a subset of the above requirements (depending on the type of project), which must be consistent with the EPA National Risk Management Research Laboratory QAPPs provided for the various project types listed below:

QAPP Category	**Type of Project**[a]	**Required QAPP**
I, II	Monitoring for NAAQS Compliance	EPA Requirements for QA Project Plans, EPA QA/R-5 (PDF) and Guidance for Quality Assurance Project Plans, EPA QA/G-5 (PDF)
I, II	Modeling for NAAQS Compliance	Guidance for Quality Assurance Project Plans for Modeling, EPA QA/G-5M (PDF)
I, II	Geospatial	Guidance for Geospatial Data Quality Assurance Project Plans, EPA QA/G-5G (PDF)
III, IV	Measurement	NRMRL QAPP Requirements for Measurement Projects (PDF)
III, IV	Data Evaluation or Use for Secondary Purpose	NRMRL QAPP Requirements for Secondary Data Projects (PDF)
III, IV	Software Evaluation, Software Related Research, Software Maintenance, or Software Development	NRMRL QAPP Requirements for Software Development Projects (PDF)
III, IV	Method Development	NRMRL QAPP Requirements for Method Development Projects (PDF)
III, IV	Design, Construction, and Operation of Technology Projects	NRMRL QAPP Requirements for the Design, Construction, and Operation of Environmental Technology Projects (PDF)
III, IV	Research Model Development or Application	NRMRL QAPP Requirements for Research Model Development and Application Projects (PDF)
III, IV	Technology Assessment Projects	NRMRL QAPP Requirements for Technology Assessment Projects (PDF)
Footnotes	[a] Performing Party may request the required QAPP for the specified project type from the TCEQ Project Manager or AQD Quality Assurance Officer.	

In addition, the QAPP must address technical systems audits, audits of data quality, and reports of QA findings in accordance with the requirements shown in the following table:

QA Requirement	Category I*	Category II*	Category III*	Category IV*
Technical Systems Audits	Required for each project	Required for each project	Not Required for the Project	Not Required for the Project
Audits of Data Quality**	Required (50% of the data sets)	Required (25% of the data sets)	Required (10% of the data sets)	Not Required
Report of QA Findings	Required in draft and final report	Required in draft and final report	Required in final report	Required in final report
*TCEQ may apply additional sets of requirements depending on the nature of the project.				
**If problems are found, all data sets will be audited. This includes independent verification of every spreadsheet or automated calculation once and the percentage shown of manual calculations.				

The minimum QA Category Levels required for PGA tasks are specified below. If Performing Party believes that a higher Category Level is required, Performing Party shall notify the TCEQ Grant and Project Managers:

Task, Category Level, and Type of Project:

Task 1- Category Level III, and Type of Project Measurement

In addition, the Performing Party must meet the QA/QC requirements specified below: None.

Project Managers

TCEQ – Project Manager

Name: Jocelyn Mellberg
Organization: TCEQ
Department: Air Quality Division, MC-164
Physical Address: Bldg. E, Room 374S
Mail Address: P.O. Box 13087
City, State, Zip: Austin, TX 78711-3087
Phone: 512.239.0164
Fax: 512.239.1500
E-mail: jocelyn.mellberg@tceq.texas.gov

Performing Party - Project Manager

Name: Sharon Bailey Lewis
Organization: City of Corpus Christi
Department: Environmental and Strategic Initiatives

Address: 1201 Leopard Street
City State Zip: Corpus Christi TX 78401
Phone: 361-826-4066
Fax: 361-826-4681
E-mail: SharonL@cctexas.com

Cost Budget

In the event of a conflict of terms, a completed Cost Budget Form included in a PGA signed by TCEQ and the Performing Party controls over the blank form included in the Grant Documents List, as to that specific PGA.

Cooperative Reimbursement Grant
for State Agencies and Local Governments

1. **Budget.** Authorized budgeted expenditures for Grant Activities performed are as follows:

Budget Category	Cost for Grant Activities to be Performed
Salary / Wages	$17,350.03
Fringe Benefits	$4,021.63
Travel	$500.00
Supplies	$
Equipment	$
Contractual	$383,371.66
Construction	$
Other	$
Indirect Costs	$
Total	$405,243.32

2. **Budget Categories**. The Budget Categories above have the definitions, requirements and limitations stated in the Uniform Grant Management Standards (UGMS). Construction costs are not reimbursable without prior, specific written authorization from TCEQ.

   2.1. **Other.** If Budget Category "Other" is greater than $25,000 or more than 10% of budget total, identify the main constituents:

   2.2. **Transfers to Zero Dollar Budget Categories**. Performing Party must obtain written TCEQ approval prior to transferring amounts to budget categories containing zero dollars.

3. [Reserved]

4. **Reimbursement for Indirect Costs**

4.1. **Indirect Cost Rates- General.** Performing Party's indirect costs associated with performing Grant Activities shall be calculated in accordance with UGMS.

4.2. **Calculation of Indirect Costs.** Performing Party's indirect costs are calculated as:

____% of (select one base):

☐ **Direct salary and fringe benefits;**

☐ **Modified total direct costs (MTDC);** or

☐ **Other direct costs base.**

4.3. Performing Party's indirect cost rate is equal to or less than:

☐ **Federally- approved predetermined rate;**

☐ **State-approved predetermined rate;**

☐ **Default rate of 10% of MTDC;**

☐ **Federally-approved fixed rate;**

☐ **Provisional rate;** or

☐ **Other.**

******End of Cost Budget******

PERSONNEL ELIGIBILITY LIST (PEL)

To be submitted with PGA and if there are any changes.

Performing Party:
City of Corpus Christi
Grant Number:
582-16-60182

Staff Name or Vacant	Position or Title & Role in Performing the Grant Activities	Qualifications	Date Added to PEL	Date Removed from PEL
Sharon Bailey Lewis	Project Manager	Bachelor of Science, Biology, NNA Grant Project Manager for 7 years, 20 years of experience as an environmental professional.	date of last signature on PGA #1	
Melissa Sanchez	Accountant responsible for FSR	MBA 9 years Grant Accounting 6 months with City of Corpus Christi	date of last signature on PGA #1	

PGA No. **582-16-62027-01** is agreed to by TCEQ and the Performing Party as of the latest signature date below. The amount shown as "Proposal for Grant Activities Amount" in the heading of this PGA is the maximum amount to be paid to the Performing Party in accordance with the Cost Budget included in this PGA, unless the amount is amended in accordance with the Grant. This document, which has been signed by both parties, is the Performing Party's Proposal for Grant Activities, which includes the approved description of the Grant Activities (Work Plan) and is the Notice to Commence with the activities as of the latest date of signature of this document.

TCEQ:
Texas Commission on Environmental Quality

By: _____
(Authorized Signature)

Steve Hagle, P.E.
(Printed Name)

Deputy Director
(Title)

Date: 1/3/2016

Performing Party/Grantee:
City of Corpus Christi

By: _____
(Authorized Signature)

Ronald Olson
(Printed Name)

City Manager
(Title)

Date: 01-25-2016

ATTACHMENT E

CLEAN FLEET EMISSIONS REDUCTIONS DATA

CLEAN FLEET
EMISSIONS REDUCTIONS ESTIMATES SUMMARY FOR MAY 2015 TO PRESENT

	NOX	CO	HC
June-Aug.			
Reductions Calculated (Lbs./yr)	9.90	2285.00	858.15
Reductions Calculated (Tons/yr)	0.00	1.14	0.43
Sept.- Oct.			
Reductions Calculated (Lbs./yr)	6.04	6338.06	1065.34
Reductions Calculated (Tons/yr)	0.00	3.17	0.53
Dec.			
Reductions Calculated (Lbs./yr)	0.00	145.20	493.86
Reductions Calculated (Tons/yr)	0.00	0.07	0.25
Jan.			
Reductions Calculated (Lbs./yr)	0.00	9108.96	1081.92
Reductions Calculated (Tons/yr)	0.00	4.55	0.54
Feb.			
Reductions Calculated (Lbs./yr.)	14.71	214.21	2.30
Reductions Calculated (Tons/yr.)	0.01	0.11	0.00

Totals	NOX	CO	HC
Reductions Calculated (Lbs./yr)	30.65	18091.44	3501.56
Reductions Calculated (Tons/yr)	0.02	9.05	1.75

CLEAN FLEET EMISSIONS REDUCTIONS ESTIMATES FOR JUNE, JULY AND AUGUST 2015

Record					Invoicing Data				Vehicle					Pre-Repair				Post-Repair				Pre-Repair (g/mi)				Post-Repair (g/mi)				Difference				Reductions Calculated (Lbs./yr)				Reductions Calculated (Tons./yr)			
Voucher #	Date	Counter	Repairs	GasCap	Shop	Invoice#	Cost	Gas Cap	Year	Make	Model	Pre-MPG	EPA MPG	NO_X	CO%	HC	CO_2%	NO_X	CO%	HC	CO_2%	NO_X	CO	HC	CO_2	NO_X	CO	HC	CO_2	NO_X	CO	HC	CO_2	NOX	CO	HC	CO2	NOX	CO	HC	CO2
0440	8/31/2015	1	1	0	Pro Drive	21217	$1,295.94	$0.00	1997	Chevy	Silverado C1500	18	20	175	3.6	4366	8.28	40	0.12	220	15.33	0.40	76.16	29.03	292.29	0.08	2.13	1.23	414.03	0.32	74.03	27.80	-121.74	9.90	2285.00	858.15	-3757.30	0.005	1.143	0.429	-1.879
																														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																														0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
SUM		1	1	0			$1,295.94	$0.00						175.00	3.60	4366.00	8.28	40.00	0.12	220.00	15.33	0.40	76.16	29.03	292.29	0.08	2.13	1.23	414.03	0.32	74.03	27.80	-121.74	9.90	2285.00	858.15	-3757.30	0.005	1.143	0.429	-1.879

gm/mi Difference: 0.32 | 74.03 | 27.80 | -121.74

Evap HC- Gas Cap @ 150 Pound: 0.00

	NO_X	CO	HC	CO_2
Reductions Calculated (Lbs./yr)	9.90	2285.00	858.15	-3757.30
Reductions Calculated (Tons/yr)	0.00	1.14	0.43	1.88

CLEAN FLEET EMISSIONS REDUCTIONS ESTIMATES FOR SEPTEMBER, OCTOBER AND NOVEMBER 2015

Record					Invoicing Data				Vehicle				
Voucher #	Date	Counter	Repairs	GasCap	Shop	Invoice#	Cost	Gas Cap	Year	Make	Model	Pre-MPG	EPA MPG
0377	9/28/2015	1	1		ProDrive	21445	$586.26		1999	Toyota	Camry	21	23
379	10/26/2015	1	no	1	ProDrive	21636		$16.93	2001	Mitsubishi	Montero		
387	11/9/2015	1	no	1	ProDrive	21729		$20.98	2005	Dodge	Neon		
517	10/27/2015	1	no	1	ProDrive	21342		$16.93	1997	Honda	Accord		
0518	10/26/2015	1	1		ProDrive		$600.00		2000	Chevy	Suburban	12	14
SUM		5	2	3			$1,186.26	$54.84					

	Pre-Repair				Post-Repair				Pre-Repair (g/mi)				Post-Repair (g/mi)			
Voucher #	NO_x	CO%	HC	CO_2%	NO_x	CO%	HC	CO_2%	NO_x	CO	HC	CO_2	NO_x	CO	HC	CO_2
0377	33	12.71	422	6.30	0.06	0.53	100	13.30	0.05	173.48	1.81	131.39	0.00	9.16	0.54	349.67
379																
387																
517																
0518	124	2.32	3265	9.14	94	1.26	1719	10.61	0.46	79.55	35.18	513.17	0.31	38.52	16.52	512.82
SUM	157.00	15.03	3687.00	15.44	94.06	1.79	1819.00	23.91	0.50	253.03	37.00	644.55	0.31	47.68	17.06	862.49
												gm/mi Difference:	0.20	205.35	19.94	-217.93

	Difference				Reductions Calculated (Lbs./yr)				Reductions Calculated (Tons./yr)			
Voucher #	NO_x	CO	HC	CO_2	NOX	CO	HC	CO2	NOX	CO	HC	CO2
0377	0.05	164.32	1.27	-218.28	1.49	5071.63	39.11	-6737.13	0.001	2.536	0.020	-3.369
379	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
387	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
517	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
0518	0.15	41.03	18.67	0.35	4.56	1266.43	576.23	10.76	0.002	0.633	0.288	0.005
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
SUM	0.20	205.35	19.94	-217.93	6.04	6338.06	615.34	-6726.36	0.003	3.169	0.308	-3.363

Evap HC- Gas Cap @ 150 Pounds/year: 450

	NO_x	CO	HC	CO_2
Reductions Calculated (Lbs./yr)	6.04	6338.06	1065.34	-6726.36
Reductions Calculated (Tons/yr)	0.00	3.17	0.53	3.36

CLEAN FLEET EMISSIONS REDUCTIONS ESTIMATES FOR DECEMBER 2015

Record					Invoicing Data				Vehicle				
Voucher #	Date	Counter	Repairs	GasCap	Shop	Invoice#	Cost	Gas Cap	Year	Make	Model	Pre-MPG	EPA MPG
452	12/22/2015	1	1	0	Prodrive	21956	$502.78		1996	Honda	Accord	21	23
548	12/23/2015	1	0	1	Prodrive	21962		$18.72	2008	Ford	F150		
547	12/24/2015	1	0	1	Prodrive	21961		$14.20	1981	Lincoln	Mark VI		
553	12/25/2015	1	0	1	Prodrive	21963		$19.08	1997	Ford	F150		
SUM		4	1	3			$502.78	$52.00					

	Pre-Repair				Post-Repair				Pre-Repair (g/mi)				Post-Repair (g/mi)				Difference				Reductions Calculated (Lbs./yr)				Reductions Calculated (Tons./yr)			
Voucher #	NO_x	CO%	HC	CO_2%	NO_x	CO%	HC	CO_2%	NO_x	CO	HC	CO_2	NO_x	CO	HC	CO_2	NO_x	CO	HC	CO_2	NOX	CO	HC	CO2	NOX	CO	HC	CO2
452	0	0.38	300	16.62	0	0.08	5	17.20	0.00	5.82	1.44	388.12	0.00	1.11	0.02	362.67	0.00	4.70	1.42	25.45	0.00	145.20	43.86	785.40	0.000	0.073	0.022	0.393
548																	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
547																	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
553																	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
SUM	0.00	0.38	300.00	16.62	0.00	0.08	5.00	17.20	0.00	5.82	1.44	388.12	0.00	1.11	0.02	362.67	0.00	4.70	1.42	25.45	0.00	145.20	43.86	785.40	0.000	0.073	0.022	0.393
gm/mi Difference:													0.00	4.70	1.42	25.45												

Evap HC- Gas Cap @ 150 Pounds/year 450

	NO_x	CO	HC	CO_2
Reductions Calculated (Lbs./yr)	0.00	145.20	493.86	785.40
Reductions Calculated (Tons/yr)	0.00	0.07	0.25	0.39

CLEAN FLEET EMISSIONS REDUCTIONS ESTIMATES FOR JANUARY 2016

Record				Invoicing Data							Vehicle					Pre-Repair				Post-Repair				Pre-Repair (g/mi)				Post-Repair (g/mi)				Difference				Reductions Calculated (Lbs./yr)				Reductions Calculated (Tons./yr)			
Voucher #	Counter	Repairs	GasCap	Invoice Date	Shop	Invoice#	Cost	Discount	Cost Gas Cap	VIN	Year	Make	Model	Pre-MPG	EPA MPG	NO_X	CO%	HC	CO_2%	NO_X	CO%	HC	CO_2%	NO_X	CO	HC	CO_2	NO_X	CO	HC	CO_2	NO_X	CO	HC	CO_2	NOX	CO	HC	CO2	NOX	CO	HC	CO2
0552	1	1	0	26-Jan	ProDrive	22071	$600.00	$58.13			1985	Ford	F150 PU in line6 300 ci	12	14	56	12.06	2096	6.06	51	4.30	974	11.20	0.14	286.36	15.64	225.74	0.13	105.44	7.51	424.56	0.01	180.93	8.14	-198.82	0.26	5584.23	251.11	-6136.50	0.000	2.792	0.126	-3.068
0534	1	1	0	26-Jan	ProDrive	22123	$600.00	$349.14			2003	Ford	Escape 3L V6 183ci	16	18	24	0	606	9.26	15	0.03	11	18.60	0.09	0.00	6.83	513.73	0.03	0.49	0.06	464.78	0.07	-0.49	6.77	48.95	2.03	-15.24	209.03	1510.74	0.001	-0.008	0.105	0.755
0560	1	1	0	26-Jan	ProDrive	22132	$228.60	$0.00			1987	Toyota	PU 2.4L in-Line 4 145ci	21	23	29	7.18	221	8.36	6	0.37	94	15.00	0.05	120.45	1.17	213.79	0.01	5.76	0.46	354.97	0.04	114.69	0.71	-141.18	1.30	3539.98	21.77	-4357.45	0.001	1.770	0.011	-2.179
0472	1	0	1	26-Jan	ProDrive	22066			$20.32		2008	Dodge	PU R1500																			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
0536	1	0	1	26-Jan	ProDrive	22139			$21.10		1997	Chevy	Lumina LS																			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
0409	1	0	1	26-Jan	ProDrive	22156			$20.32		2004	Chevy	Astro																			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
1577	1	0	1	26-Jan	ProDrive	22129			$23.71		2001	Ford																				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																																0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
SUM	7	3	4				$1,428.60		$85.45							109.00	19.24	2923.00	23.68	72.00	4.70	1079.00	44.80	0.29	406.82	23.64	953.26	0.17	111.69	8.02	1244.31	0.12	295.13	15.61	-291.05	3.59	9108.96	481.92	-8983.21	0.002	4.554	0.241	-4.492
																											gm/mi Difference:	0.12	295.13	15.61	-291.05												

Evap HC- Gas Cap @ 150 Pounds/year 600

	NO_X	CO	HC	CO_2
Reductions Calculated (Lbs./yr)	3.59	9108.96	1081.92	-8983.21
Reductions Calculated (Tons/yr)	0.00	4.55	0.54	-4.49

CLEAN FLEET EMISSIONS REDUCTIONS ESTIMATES FOR FEBRUARY 2016

Record					Invoicing Data				Vehicle						Pre-Repair				Post-Repair				Pre-Repair (g/mi)				Post-Repair (g/mi)				Difference				Reductions Calculated (Lbs./yr)				Reductions Calculated (Tons./yr)			
Voucher #	Voucher Date	Counter	Repairs	GasCap	Shop	Invoice#		Cost	Gas Cap	Year	Make	Model	Pre-MPG	EPA MPG	NO_X	CO%	HC	CO_2%	NO_X	CO%	HC	CO_2%	NO_X	CO	HC	CO_2	NO_X	CO	HC	CO_2	NO_X	CO	HC	CO_2	NOX	CO	HC	CO2	NOX	CO	HC	CO2
586	1/15/2016	1	1		prodrive	22249		$597.65		2002	Toyota	Corolla	25	27	350	0.57	21	15.41	29	0.07	4	15.30	0.52	7.87	0.09	323.15	0.04	0.93	0.02	308.97	0.48	6.94	0.07	14.19	14.71	214.21	2.30	437.82	0.007	0.107	0.001	0.219
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
																															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000
SUM		1	1	0				$597.65	$0.00						350.00	0.57	21.00	15.41	29.00	0.07	4.00	15.30	0.52	7.87	0.09	323.15	0.04	0.93	0.02	308.97	0.48	6.94	0.07	14.19	14.71	214.21	2.30	437.82	0.007	0.107	0.001	0.219

gm/mi Difference:	0.48	6.94	0.07	14.19
Evap HC- Gas Cap @ 150 Pounds/year			0	

	NO_X	CO	HC	CO_2
Reductions Calculated (Lbs./yr.)	14.71	214.21	2.30	437.82
Reductions Calculated (Tons/yr.)	0.01	0.11	0.00	0.22

ATTACHMENT F

STAKEHOLDER EMISSSIONS REDUCTIONS STATEMENTS

PORT CORPUS CHRISTI

Sarah Garza
Director of Environmental
Planning & Compliance

April 7, 2016

Ms. Gretchen Arnold
Chair, Corpus Christi Air Quality Group
121 Atlantic Street
Corpus Christi, Texas 78404

Subject: Ozone Advance Annual Report for May 2015 – April 2016

Dear Gretchen,

The Port of Corpus Christi Authority (PCCA) has reviewed the ozone reducing measures employed at the PCCA during the last year and is pleased to provide this update to you for inclusion in the Ozone Advance Annual Report. The voluntary measures that PCCA continues to employ or has employed since May 2015 include the following:

- Representatives of the Port Environmental Planning and Compliance Department are registered with AirNow and receive the alerts for ozone action days. This information is then forwarded to all employees within our organization and to Port customers and tenants and Port contractors for their immediate action. The information contains relevant details for each to review their operations and curtail specific activities that greatly contribute to the formation of ozone. Additionally, the PCCA General Conditions in all of our bid documents includes a section on ozone action days. This section provides an educational component on what ozone is, how it is created, and what actions can be done voluntarily to reduce ozone. It also includes provisions for the Project Engineer to cease work on a project during an ozone action day. These general conditions are included in every advertised bid document and all final construction contracts, reaching out to hundreds of contractors locally.
- Representatives of the Port Environmental Planning and Compliance Department are also registered with the TCEQ to receive the weekly ozone forecasts. This information is then forwarded as appropriate to specific departments within our organization and to Port customers and tenants and Port contractors for their action. This email also includes specific recommendations to reduce emissions from their operations during times where elevated ozone levels are forecasted.
- PCCA generates a company-wide newsletter that contains a section focused on environmental issues. Several times throughout the year, environmental representatives

will include ozone updates, information regarding emission reduction activities that can be employed both at home and at work, and general air quality updates.

- A bulletin board containing health, safety, security and environmental information is maintained in each department within the PCCA. Information relevant to ozone, the ozone season, and voluntary emission reduction opportunities is posted throughout the year in the environmental section.
- A monthly Environmental Planning and Compliance Executive Director's Report is produced monthly and provided in the Port Commissioner's Boardbook and provides current ozone levels for our area and from time to time relevant information regarding the status of air quality, new regulations, and updates on initiatives the PCCA is undertaking to reduce emissions. The Boardbook is posted on our web page and is available to the public.
- Annually, the PCCA coordinates AutoCheck events with the Texas A&M Pollution Prevention Partnership for both PCCA fleet vehicles and also public vehicles. An AutoCheck event open to the public was hosted on July 30, 2015, this was the 16th public event that the PCCA has hosted with Texas A&M Pollution Prevention Partnership. The fleet AutoCheck events for both diesel and gasoline were conducted in December 2015. Employees are also encouraged to and do participate in both the public and the fleet events.
- Representatives from the Environmental Planning and Compliance Department routinely present air quality education, specifically relating to ozone and voluntary attainment measures at port wide safety, wellness, and environmental luncheons.
- The PCCA general slide presentation includes information on air quality and maintaining attainment. This presentation is given by all Port staff at hundreds of different venues throughout the year. Additionally, the Chairman of the Port Commission speaks specifically to air quality and attainment during the annual State of the Port for the community and community leaders.
- The PCCA has adopted an anti-idling policy for its fleet vehicles of 5 minutes or less. This is also required of our contractors working within the Bulk Terminal, Maintenance Facility, and Public Cargo Docks and Laydown Areas. It is also encouraged Port wide.
- The PCCA technical specification follows the recommendations agreed to by the Port Industry companies in the past that reduce emissions related to painting operations such as use of low-VOC paints, solvents, and adhesives and proper disposal of waste items containing VOCs.
- The PCCA currently utilizes five compressed natural gas (CNG) vehicles within our Maintenance Fleet and has installed a two-position, CNG filling station at our Maintenance Facility.
- The PCCA regularly maintains fleet vehicles and equipment and turns over new vehicles and equipment when repairs warrant it. Repairs related to correcting air emissions and spills have high priority and the vehicle or equipment is not used until repairs are made. Additionally, this is given strong consideration when budgeting for replacement of vehicles and equipment annually.
- The PCCA received three Texas Emission Reduction Program (TERP) grants in the last year to replace three older forklifts ahead of when they would usually been replaced. In addition, there were three other forklifts that PCCA identified and replaced last year ahead of schedule even though the forklifts did not qualify for a TERP grant. All forklifts were replaced with forklifts with the latest Tier IV engines.

- The PCCA purchases and uses only ultra-low sulfur diesel fuel in all of its diesel powered vehicles and equipment.
- The PCCA has a rigorous tank inspection program for all above ground fuel tanks at the Maintenance Facility and Bulk Terminal. The above ground tanks were recently replaced in the last couple of years at both facilities and the dispensing equipment updated with the latest pollution controls.

Attainment of air quality in our region is an important priority for the PCCA, as can be seen by our recently updated environmental policy. The revised environmental policy was approved by the Port Commission at the February 16, 2016 Commission Meeting and has air quality as one of the key precepts that will be addressed through new and existing environmental initiatives and specifically considered for all new development and new operations in the port area. Additionally, PCCA has a ISO 14001 certified EMS program since 2007 and continues to evaluate and improve our environmental footprint through the development and implementation of initiatives aimed at environmental stewardship and sustainability.

Thank you again for the opportunity to provide to you this information about the PCCA's efforts to maintain air quality in the region. If you have any questions, please call me at (361) 885-6163 or email me at sarah@pocca.com.

Sincerely,

Sarah L. Garza

Director of Environmental

Planning & Compliance

cc: John LaRue
Sean Strawbridge
Stevenson Ashley
Danielle Converse
James Haley

Occidental Chemical Corporation **OxyChem.**
A subsidiary of Occidental Petroleum Corporation

P.O. Drawer CC, Ingleside, Texas 78362-0710
4133 Hwy, 361, Gregory, Texas 78359-6240
Phone 361-776-6050 Fax 361-776-6240

April 5, 2016

Ms. Gretchen Arnold, Chair
Corpus Christi Air Quality Group
121 Atlantic St.
Corpus Christi, TX 78404

Re: Continuing Commitments to Air Quality Improvement

Dear Ms. Arnold,

Thank you for the diligent efforts of yourself and others on the Corpus Christi Air Quality Group. Great progress has been made on the preservation of air quality in the Corpus Christi Urban Airshed as a direct result of your group's efforts. The OxyChem Ingleside facility is committed to this effort and will continue to work towards further improvements.

OxyChem Ingleside will continue to implement the following initiatives to reduce ozone precursor emissions.

- Procedures are in place that require curtailment of certain maintenance and construction activities to minimize VOC emissions on Ozone Action Days.
- Postpone discretionary activities such as fueling of vehicles/equipment and grounds maintenance on elevated ozone days.
- Require use of low VOC paints, solvents, and adhesives.
- Use of electric golf carts (versus gas-powered) for transportation within the facility.
- Perform routine inspections for leaks and fugitive emissions.
- Routinely educate employees on personal measures that can be taken to minimize ozone precursor chemicals

Additionally, a new ethylene unit is being constructed at the OxyChem Ingleside facility that incorporates the following low-emitting design/equipment.

- Ethylene cracking furnaces equipped with Selective Catalytic Reduction (SCR) to reduce NO_x emissions.
- Fuel gas fed to the ethylene cracking furnaces primarily supplied by produced methane and hydrogen, which results in lower VOC emissions than conventional furnaces that burn natural gas.
- Two thermal oxidizers will be used to control routine process vents, resulting in low VOC emissions. Historically, these routine process vents are controlled using a flare with a destruction removal efficiency (DRE) in the 98-99% range. The thermal oxidizer DRE will be 99.9% or greater.
- The thermal oxidizers will also be used to decommission ethylene unit equipment, which will result in low VOC emissions during maintenance activities.

OxyChem remains committed to improving air quality in the Corpus Christi Urban Airshed and offers our full commitment to your efforts.

Sincerely,

Rick R. Ritter
Plant Manager

Equistar Chemicals, LP
A LyondellBasell Company
P.O. Box 10940 (78460-0940)
1501 McKinzie Road
Corpus Christi, Texas 78410
Phone: 361.242.8000
Fax: 361.242.8030

EQUISTAR

March 16, 2016

Ms. Gretchen Arnold
Chair, Corpus Christi Air Quality Group
121 Atlantic St
Corpus Christi, Texas 78404

Re: **Equistar Chemicals, LP – Corpus Christi Complex**
Ozone Advance Program
Voluntary Air Emission Reduction Examples

Dear Ms. Arnold:

Equistar Chemicals, LP – Corpus Christi Complex (Equistar) continues to support the efforts of the Ozone Advance Program and the Coastal Bend Regional Air Quality Committee to maintain attainment with the 8-hour ozone standard for the Corpus Christi Urban Airshed. As part of our commitment, Equistar has implemented voluntary emission-reduction projects as described below.

Installation of low NOx burners on Olefins Furnaces
Eleven existing olefin cracking furnaces have had low nitrous oxide (NOx) burners installed, reducing the furnaces' NOx potential to emit by over 400 tons per year. Eight of the furnaces had the low NOx burners installed between May 2015 and March 2016. The furnaces are monitored by Continuous Emissions Monitoring Systems (CEMS) as well.

Fired Source Emissions Control System
Equistar operates with a system of alarms in the plant distributed control system which provides a proactive component to existing environmental compliance programs. Alarm points were established for all fired source equipment so that the alarms activate below environmental permit limits. These alarm points allow operations to take corrective actions when alerted, thereby reducing the risk of excess emission events.

Olefins Unit Cooling Tower Monitoring
The olefins unit cooling tower is continuously monitored for volatile organic compounds (VOC) to minimize emissions. By using several cooling tower monitoring systems, Equistar achieves early notification of possible process leaks into the heat exchanger system. Once alerted, Equistar operations personnel can immediately investigate, and steps may be taken to address any problems.

Flare Gas Analyzers
The utilization of gas chromatograph flare gas analyzers allows Equistar to optimize the quantity of fuel gas supplementing the flare systems, thereby reducing the quantity of combustion NOx and carbon monoxide (CO) emitted.

Energy Conservation Projects
The site Pollution Prevention Plan outlines a preventative maintenance program to test for and repair steam leaks, which results in a reduction of boiler combustion NOx and CO. Additionally, energy conservation projects implemented since 2008 have resulted in an energy reduction of 300 Billion btu and consequently a significant reduction in combustion products.

Reliability Driven Environmental Event Reviews
Reliability Driven Environmental Events reviews focuses on identifying and maintaining equipment with a high potential for causing an environmental event. By improving equipment performance, the frequencies of events as well as emissions are reduced.

Flare Minimization During Startup and Shutdown
Detailed plans have been developed to safely shutdown and startup the facility. These plans include many detailed steps taken to reduce the emissions generated during these operational phases. Equistar Chemicals will continue to implement and seek out additional opportunities to continuously improve our performance.

Floating Roof Tank Refilling
During several tank refilling events, tanks were initially filled with water until the roof was floating before hydrocarbons were introduced, reducing vapor space emissions.

Infrared Camera Surveys
Infra-red camera surveys were performed quarterly covering the entire chemical complex. These voluntary surveys are in addition to state and federal mandated Leak Detection and Repair programs for controlling volatile organic carbon emissions.

Ozone Action Days
Equistar implemented a plant-wide procedure for additional emissions reduction during ozone action days. This procedure requires Equistar and contract personnel to:

- delay painting when possible and to delay lawn mowing altogether;
- adjust operations activities to minimize any venting of hydrocarbons to the flare from routine activities;
- maintain a constant level in hydrocarbon tanks when possible;
- avoid use of diesel air compressors when possible;
- reduce the use of engine driven equipment as possible;
- not refuel plant vehicles between 6:00 AM and 2:00 PM; and
- car pool if possible and avoid refueling their vehicle in the mornings.

Once again, Equistar remains committed to reduce environmental emissions and maintain compliance with the eight-hour ozone standard.

Sincerely,

Randal E. Tatum
Site Manager

VALERO

MEMBER CLEAN INDUSTRIES 2000

February 29, 2016

Ms. Gretchen Arnold
Director, Corpus Christi Air Quality Group

Subject: **Ozone Advance Agreement 2015 Annual Report**

Dear Ms. Arnold,

Valero Bill Greehey Refineries continue to support the Corpus Christi Air Quality Group (CCAQG) and its efforts to maintain compliance with the current Ozone NAAQS for the Corpus Christi urban airshed. As part of our commitment to the environment and our community Valero has implemented and continues to implement measures to reduce emissions from our operations.

Since the last year Valero has implemented the following projects that are aimed at reducing emissions:

- Installation of a new state of the art boiler with SCR in Valero East Plant
- Voluntary installation of Flare Gas Recovery unit in the Valero East Plant
- Completed low NOx burner replacements on four (4) heaters and a boiler in the Valero West Plant
- Installation of ultra low NOx burners and SCR unit on new crude unit heater in the Valero West Plant

In addition Valero continues the following past initiatives which have already shown significant reductions in emissions:

- Operation of Flare Gas Recovery Unit in the Valero West Plant
- Operation of electric engines preferentially over internal combustion engines where practical
- Operation of a Thermal Oxidizer with Carbon Absorption back-up on select tanks, which is above and beyond what BACT requires
- Operation of a new state of the art boiler with SCR in the Valero West Plant
- Operation of Ultra Low Sulfur Diesel and a Gasoline De-sulfurization Units to produce fuel that supports new technology in vehicles that reduces NOx emissions
- Utilize IR camera to identify potential VOC leaks not routinely seen
- Present ozone awareness training to all newly hired employees
- Produce gasoline during May through September that is lower in vapor pressure than required
- Implement projects designed to further improve the reliability of both refineries

Environmental stewardship continues to be a core value at Valero, and we remain committed to doing our part to help keep the Corpus Christi urban airshed in compliance with the NAAQS. If we can provide additional information or assistance to the regional effort please let us know.

Sincerely,

Dennis Payne
Vice President & General Manager
Valero Bill Greehey Refineries

OZONE ADVANCE

VOLUNTARY AIR EMISSION REDUCTION EXAMPLES

The Corpus Christi Urban Airshed through the Corpus Christi Air Quality Group participates in an Ozone Advance program with the U S EPA. The Ozone Advance program is a program whereby a community commits to performing voluntary (not mandated or required) emission reduction activities in an effort to remain in attainment of ozone standards. Each year, the Corpus Christi Air Quality Group submits a report to the U S EPA on past year voluntary initiatives that have been performed in an effort to reduce emissions...and looking forward plans-as well.

Corpus Christi needs your help with submitting an impressive 2015/2016 report. We know we are all doing many great things voluntarily to reduce emissions. This is our time to shine instead of keeping our great efforts to ourselves! Cited efforts can be considered guidelines and do not need to be adopted policies.

Listed below are some examples of voluntary projects or initiatives that can reduce ozone precursors. These are just some examples of air emission reduction initiatives that can be cited in our annual update to the U S EPA for the Corpus Christi Ozone Advance Program. You may be doing much more!

Please help us with an impressive report on 2015/2016 voluntary initiatives that your facility performed between May of 2015 and March of 2016. You can edit the template below and add a signature line or cut and paste into letterhead. 2016/2017 progressive plans for voluntary emission reduction efforts are encouraged as an additional statement as well.

The 2015/2016 annual report will be submitted to the U S EPA in May, 2016. Please review the examples below, add your own additional projects and contact Gretchen Arnold at gretchen.arnold@stx.rr.com or 361-429-0065 by February 29, 2016 to have your efforts cited in the report.

Communications:

- Register with AirNow to receive email or text alerts for ozone action days. It is free and easy! http://www.enviroflash.info/signup.cfm
- Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link: https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new
- Communicate elevated ozone forecasts to employees, vendors and contractors and provide emission reduction recommendations in your notification.
    - Encourage employees to car pool, particularly on elevated ozone days – even if it's just for lunch.
    - Encourage employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days. Have a casual dress day for those that do.
    - Encourage employees to take advantage of the RTA van pool program
    - Encourage employees to telecommute, particularly on ozone action days
    - Encourage teleconferencing instead of driving to meetings
    - Provide preferred parking for employees that car pool
    - Provide flexible work schedules to remove vehicles from the road during congested times.
- Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- Provide ozone education in your routine personnel health and safety training.

Operations

Contractors and Vendors

- ✓ Have an anti-idle policy for all contractor and delivery vehicles
- ○ Postpone non-essential deliveries on elevated ozone days
- ✓ Require painters to use low VOC paints
- ○ Require grounds crews to postpone operations on elevated ozone days
- ✓ Require vendors and contractors to use low VOC solvents
- ✓ Require vendors and contractors to use low VOC adhesives
- ✓ Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals
- ○ Require vendors and contractors to use scrubbers on VOC chemical extraction processes
- ○ Require vendors, employees, etc. to bus or bicycle or walk throughout property (removing driving personal vehicles)

Fleet

- ○ Include alternative fueled (propane, CNG) vehicles in your fleet
- ○ Emissions test your fleet and keep fleet in well maintained state
- ✓ Replace older units in fleet
- ○ Repower or replace older engines in fleet
- ✓ Have an anti-idle policy for your fleet
- ○ Install filter traps and DOCs on your diesel fleet
- ○ Perform diesel retrofits
- ○ Use low sulfur diesel fuel for your diesel fleet

Operations

- ○ Flare reduction program
- ○ Production of low sulfur diesel
- ○ Production of low reid vapor pressure gasoline
- ✓ Utilization of IR cameras to detect and repair fugitive emissions
- ✓ Perform routine inspections for leaks and fugitive emissions

Equipment

- ○ Installation of low NOx burners on boilers
- ✓ Installation of low NOx burners on heaters
- ○ Use of low NOx water heaters
- ○ Use of flue gas recirculation
- ○ Use of vapor recovery or incineration
- ○ Installation of scrubbers
- ○ Installation of additional seals and liners on storage tanks
- ✓ Continuous and routine inspection of storage tanks for fugitive emissions

Brittany McMahon — 3/16/16

Signature Line — Date

FLINT HILLS resources®

P.O. Box 2608
Corpus Christi, Texas 78403.2608

Corpus Christi Refineries

March 1, 2016

Via Certified Mail
7015 0640 0004 5814 2843

Ms. Gretchen Arnold
Corpus Christi Air Quality Group
121 Atlantic St.
Corpus Christi, TX 78404

RE: Flint Hills Resources Corpus Christi, LLC ("FHR") – Corpus Christi East Refinery, West Refinery and Ingleside Terminal; Ozone Advance Input

Dear Ms. Arnold:

Please find the attached list of voluntary projects or initiatives that FHR has undertaken that have the potential to reduce ozone precursors.

1. Maintained flaring events at a refinery to a level far below industry norms through flare management practices.
2. A program is in place to send elevated Ozone Day notification pages to employees.
3. Compressed work schedules (9/80 or 4 day work week) were made available for some employees and contractors.
4. Infrared cameras were used to aid in leak detection.
5. Low emitting floating roofs were installed on targeted tanks.
6. Refinery process connectors were voluntarily tagged and are to be included in voluntary annual emissions monitoring above that required by LDAR regulations.
7. On-going mechanical Integrity program in place to reduce Heat Exchanger VOC leaks to Cooling Towers.
8. Installation of improved low NOx technology on a Cogeneration Unit
9. Removed from service a higher emitting floating roof tank and permanently rerouted the product stream to a lower emitting floating roof tank.

Should you have any questions regarding the included information, please do not hesitate to contact me at (361) 242-4925 or at via email at mike.hallgarth@fhr.com.

Sincerely,

Michael R. Hallgarth
Environmental Director

MH/kjg
Air 16-072; U 3 L 2

CITGO Petroleum Corporation

P.O. Box 9176
Corpus Christi, TX 78469

April 25, 2016

7000 1670 0002 9370 2185
CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Ms. Gretchen Arnold
Corpus Christi Air Quality Group
121 Atlantic St.
Corpus Christi, TX 78404

RE: CITGO Refining and Chemicals Company L. P.
Ozone Advance Report

Dear Ms. Arnold:

CITGO Corpus Christi East Plant and West Plant remains committed to maintaining compliance with all applicable environmental regulations. Furthermore, we have commissioned voluntary activities and projects to continuously improve the air quality in the Corpus Christi area. Voluntary actions to have positive impacts on potential ozone precursors include:

1. Require painters to use low VOC paints
2. Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals
3. Require vendors and contractors to use scrubbers on VOC chemical extraction processes
4. Flare reduction program
5. Production of low sulfur diesel
6. Production of low reid vapor pressure gasoline
7. Utilization of Infrared cameras to detect and repair fugitive emissions
8. Perform routine inspections for leaks and fugitive emissions
9. Installation of low NOx burners on boilers
10. Installation of low NOx burners on heaters
11. Use of vapor recovery or incineration
12. Installation of scrubbers during maintenance events
13. Continuous and routine inspection of storage tanks for fugitive emissions

To reinforce these and other activities, we conduct annual Computer Based Training (CBT) to keep the workforce aware of our commitment to actions during ozone action days. This training covers the basics of ozone, concerns with high ozone, details of what constitutes an "ozone action day", and actions CITGO will take as well as recommendations for individuals.

If you have any questions, please contact me at (361) 844-4882 or via email at kmcgee1@citgo.com.

Sincerely,

Kevin D. McGee
Manager of Environmental Affairs

Copy: mailto:gretchen.arnold@stx.rr.com
Paulette Fontento, Manager HSSE
Larry Elizondo, Manager Government and Public Affairs

OZONE ADVANCE

VOLUNTARY AIR EMISSION REDUCTION EXAMPLES

The Corpus Christi Urban Airshed through the Corpus Christi Air Quality Group participates in an Ozone Advance program with the U S EPA. The Ozone Advance program is a program whereby a community commits to performing voluntary (not mandated or required) emission reduction activities in an effort to remain in attainment of ozone standards. Each year, the Corpus Christi Air Quality Group submits a report to the U S EPA on past year voluntary initiatives that have been performed in an effort to reduce emissions...and looking forward plans-as well.

Corpus Christi needs your help with submitting an impressive 2015/2016 report. We know we are all doing many great things voluntarily to reduce emissions. This is our time to shine instead of keeping our great efforts to ourselves! Cited efforts can be considered guidelines and do not need to be adopted policies.

Listed below are some examples of voluntary projects or initiatives that can reduce ozone precursors. These are just some examples of air emission reduction initiatives that can be cited in our annual update to the U S EPA for the Corpus Christi Ozone Advance Program. You may be doing much more!

Please help us with an impressive report on 2015/2016 voluntary initiatives that your facility performed between May of 2015 and March of 2016. You can edit the template below and add a signature line or cut and paste into letterhead. 2016/2017 progressive plans for voluntary emission reduction efforts are encouraged as an additional statement as well.

The 2015/2016 annual report will be submitted to the U S EPA in May, 2016. Please review the examples below, add your own additional projects and contact Gretchen Arnold at gretchen.arnold@stx.rr.com or 361-429-0065 by February 29, 2016 to have your efforts cited in the report.

Communications:

- Register with AirNow to receive email or text alerts for ozone action days. It is free and easy! http://www.enviroflash.info/signup.cfm
- Register with TCEQ to receive weekly ozone forecasts. Forecasts are provided via email, text or social media and can be easily forwarded throughout your workplace. You can register at this link: https://service.govdelivery.com/accounts/TXTCEQ/subscriber/new
- Communicate elevated ozone forecasts to employees, vendors and contractors and provide emission reduction recommendations in your notification.
  - Encourage employees to car pool, particularly on elevated ozone days – even if it's just for lunch.
  - Encourage employees to use alternative modes of transportation (bus, bike, walk), particularly on elevated ozone days. Have a casual dress day for those that do.
  - Encourage employees to take advantage of the RTA van pool program
  - Encourage employees to telecommute, particularly on ozone action days
  - Encourage teleconferencing instead of driving to meetings
  - Provide preferred parking for employees that car pool
  - Provide flexible work schedules to remove vehicles from the road during congested times.
- Provide an opportunity for your employees to have their vehicles emission tested with AutoCheck. Call 825-3070.
- Provide ozone education in your routine personnel health and safety training.

Operations

Contractors and Vendors

- [x] Have an anti-idle policy for all contractor and delivery vehicles
- [ ] Postpone non-essential deliveries on elevated ozone days
- [x] Require painters to use low VOC paints
- [x] Require grounds crews to postpone operations on elevated ozone days
- [x] Require vendors and contractors to use low VOC solvents
- [x] Require vendors and contractors to use low VOC adhesives
- [x] Require vendors and contractors to properly dispose of rags, buckets, drums, etc. that contain VOC chemicals
- [x] Require vendors and contractors to use scrubbers on VOC chemical extraction processes
- [ ] Require vendors, employees, etc. to bus or bicycle or walk throughout property (removing driving personal vehicles)

Fleet

- [x] Include alternative fueled (propane, CNG) vehicles in your fleet
- [x] Emissions test your fleet and keep fleet in well maintained state
- [x] Replace older units in fleet
- [x] Repower or replace older engines in fleet
- [x] Have an anti-idle policy for your fleet
- [x] Install filter traps and DOCs on your diesel fleet
- [x] Perform diesel retrofits
- [x] Use low sulfur diesel fuel for your diesel fleet

Operations

- [ ] Flare reduction program
- [ ] Production of low sulfur diesel
- [ ] Production of low reid vapor pressure gasoline
- [ ] Utilization of IR cameras to detect and repair fugitive emissions
- [x] Perform routine inspections for leaks and fugitive emissions

Equipment

- [x] Installation of low NOx burners on boilers
- [x] Installation of low NOx burners on heaters
- [x] Use of low NOx water heaters
- [ ] Use of flue gas recirculation
- [ ] Use of vapor recovery or incineration
- [x] Installation of scrubbers
- [ ] Installation of additional seals and liners on storage tanks
- [ ] Continuous and routine inspection of storage tanks for fugitive emissions

[signature] 3-8-16

Signature Line Date

410 S. Padre Island Drive, Ste. 200, Corpus Christi, Texas 78405
Phone: 361/249-9402 • Fax: 210/918-5539

February 4, 2016

Ms. Gretchen Arnold
Chair, Corpus Christi Air Quality Committee
121 Atlantic Street
Corpus Christi, TX 78404

Re: **Commitment to Air Quality Improvements**
NuStar Logistics, L.P. – Central West Region

Dear Ms. Arnold:

NuStar Logistics, L.P. is committed to supporting efforts to maintain and improve air quality in the Corpus Christi Urban Airshed. Commitment to achieving environmental excellence is a top priority at NuStar and is the first of our Company's Guiding Principles.

NuStar will promote continued improvements in the air quality of the area by voluntarily committing to the following measures:

- Promote Ozone Action Day awareness by notifying South Texas employees of the Ozone Action Days and offer suggestions for minimizing mobile sources,
- Include a segment in the *Central West Information Pipeline,* and employee newsletter, on how to minimize the impacts of daily activities,
- When possible, schedule maintenance activities like mowing and painting around Ozone Action Days,
- Participate in the Corpus Christi Air Quality Committee and,
- Support local environmental awareness events such as Earth Day-Bay Day.

If you have any questions please call me at (361) 249-9402 or by e-mail at wes.gore@nustarenergy.com.

Sincerely,

Wes Gore
VP and General Manager

County of Nueces

Department of Public Works

County Roads and Bridges
Engineering Services
Facilities Management
Environmental Enforcement
9*1*1 Addressing Program

Glen R. Sullivan, P.E.

Director of Public Works
Nueces County Engineer

March 23, 2016

Gretchen Arnold
Chair, Corpus Christi Air Quality Group
121 Atlantic St.
Corpus Christi, TX. 78404

Re: Nueces County Public Works Ozone Emissions Reduction Voluntary Measures-May 1, 2015-March 18, 2016

Dear Ms. Arnold:

In response to your request for a summary of our voluntary ozone associated pollutant reductions measures, We used the "Ozone Advance Tool" that you provided.

Our ozone (NOx and VOCs) measures, are summarized below for activities and operations between May 1, 2015 through March 18, 2016.

The Department of Public Works maintains a fleet of vehicles and equipment used in routine maintenance of roads and bridges in the un-incorporated areas of Nueces County.

All of our measures are voluntary. The following is a summary.

Communications & Training:
Staff keeps track of media broadcasts associated with elevated ozone forecasts, which in turn are communicated to field supervisors and foremen. All employees, vendors and contractors are encouraged to voluntarily conduct activities that provide emission reductions, without compromising safety and work output quality.

(i). Employees are encouraged to car pool, particularly on elevated ozone days.
(ii). Employees are encouraged to use alternative modes of transportation (bus, bike, walk).
(iii). Employees are encouraged to take advantage of the RTA van pool program.
(iv). We provide preferred parking for employees that car pool.
(v). We provide ozone education during routine interaction between staff, foremen, and field personnel.

Contractors and Vendors
(i). We recommend minimal idling of vehicles for contractor and delivery vehicles.
(ii). We prioritize and schedule deliveries by reducing non-essential deliveries on elevated ozone days.
(iii). We recommend painters use low VOC paints.
(iv). We require grounds crews to minimize operations on elevated ozone days.

(v). We recommend vendors and contractors use low VOC solvents.
(v). We recommend vendors and contractors use low VOC adhesives.
(vi). We require vendors/contractors to properly dispose of rags, buckets, drums, etc. that contain VOCs.

Fleet

(i). We have some alternative fueled vehicles in our fleet.
(ii). We emissions test our fleet and keep it in well maintained state.
(iii). We have programmatic scheduled replacement of older units in fleet.
(iv). We replace or rehabilitate older engines in fleet.
(v). We recommend minimum idling of all fleet vehicles, without compromising safety.
(vi). We perform diesel engines and parts retrofits as needed.
(vi). We use low sulfur diesel fuel for our diesel fleet.

Equipment

(i). All our boilers operate on natural gas fuel with low NOx burners.
(ii). Boilers and heaters are maintained to reduce ozone associated emissions.
(iii). All of the major HVAC chilled water systems located at the Courthouse and Jails, Juvenile Detention, and Mckinzie Annex have been retrofitted with state of the art Energy Savings Performance Controls such as VFDs, Network Integration Engines, Field Controllers, gauges, sensors, transmitters, directional control valves, capacitor banks, water conservation measures, solar water heaters, solar photovoltaic electricity generators, and a wind turbine and a solar array at Central garage, all towards conservation of energy which significantly reduces ozone related emissions at the source (Power Plant).Our energy conservation measures were accomplished in 2 phases under the State of Texas - State Energy Conservation Office recommended engineered equipment controls, at a cost of about $ 18 million for both phases. Energy efficiency leads to significant energy savings and emissions reductions especially of ozone associated contaminants. We have been able to quantify on average 25 % overall reduction in energy consumption from these measures.
(iv). All of the HVAC and other equipment is maintained under a scheduled maintenance program.

If you have any questions, please contact me or Dipak V. Desai, P.E., Principal Engineer.

Sincerely,

Glen R. Sullivan, P.E.
Director of Public Works

901 Leopard Street, Suite 103 Corpus Christi, Texas 78401-3602 Telephone (361) 888-0490 FAX (361) 888-0485

ATTACHMENT G

MOBILITY CC PROJECT CHECKLIST

Mobility CC Project Checklist

This checklist is a tool that ensures the design and implementation of adopted master plans in the areas of project development are consistent. It is intended for internal and external use during project development. Any amendments to plan recommendations must be brought forward to Development Services for review and may require City Council action. **At the time of submission all referenced plans must be the most current and adopted plans.**

Project Manager:

Project Name:

Project Limits:

You may click on the links below to be directed to each plan.

Plan Checklist

Land Uses & Area Development Plans

Describe the adjacent land uses around the project:

Are the adjacent land uses consistent with the Future Land Use Plan?

Are there any projects specified in any of the Area Development Plans within the project area?

**If yes, are these projects reflected in the proposed design?*

Urban Transportation Plan (UTP)

What is the existing and proposed street classification as shown in the Urban Transportation Plan?

Is any additional ROW dedication required per UTP recommendations?

**If yes, are the recommendations reflected in the project design?*

ADA Master Plan

Are there any projects specified in the ADA Master Plan within the project area?

**If yes, are the recommendations reflected in the project design?*

Bicycle and Pedestrian Infrastructure

Are there proposed trails and bikeways identified in the Corpus Christi MPO Bicycle and Pedestrian Plan?

**If yes, are these projects reflected in the proposed design?*

Are there proposed trails and bikeways identified in the Corpus Christi Strategic Parks and Recreation Master Plan and/or Mobility CC ?

**If yes, are these projects reflected in the proposed design?*

Oso Parkway Plan

Are there any projects specified in the Oso Parkway Plan within the project area?

**If yes, are these projects reflected in the proposed design?*

Planning Considerations

Are any Capital Improvement projects projected in the area?

Are there any planned projects listed on the MPO website within the project area?

Are there any Corpus Christi Regional Transportation Authority (CCRTA) bus stops/routes within the project area?

ATTACHMENT H

COASTAL BEND GREENBUILT CHECKLIST

COASTAL BEND GREEN BUILT

GREEN BUILDING INITIATIVE GUIDELINE

CHECKLIST

(Please provide a check mark and method of compliance by your selection)

Builder Name: _____ **Home Series:** _____

Site Address _____

SITE

Select a minimum of 5 items	When Verified	Responsible Party	How verified	Value	Pts.
S1. Identify goals with your team. Establish a knowledgeable team by identifying team member roles and writing a mission statement that includes project goals and objective.	Planning stage	Builder w/Checklist	Builder maintains file including builder or assigned person for CBGB program. Builder should identify Green Verifier team member. Provide green verifier how each element of program will be complied with.	2 pts.	
S2. Select the site to minimize environmental impact. Avoid environmentally sensitive areas identified through site foot printing process.	Planning	Builder/Developer	When building in an already developed subdivision, credit will be given.	1 pt.	
S3. Use infill lot. Infill is defined as vacant or underutilized lots of land served by existing physical installations such as roads, power lines, sewer, water and other infrastructure.	Planning	Builder/Developer	When building on a lot platted in an already developed subdivision of 5 years or more, credit will be given.	3 pts.	
S4. Use reasonable efforts to protect all trees during construction, including the use of tree fencing, limiting the amount of fill dirt on the root system and limiting any trenching around trees.	Pre-drywall inspection	Verifier or Builder	When building on already developed subdivision, verifier checks for presence of tree protection measures during regularly scheduled visits.	1 pt.	

S5. Create mulch out of clearing of vegetation	Pre-drywall inspection	Verifier or Builder	When building on an already developed subdivision lot, credit will be given. When building on undeveloped lot, verifier checks for evidence of mulching during pre-drywall inspection.	2 pts.	
S6. Minimize the site disruption by designating parking, equipment and material storage and staging away from root protection zones (SWPP)	Before Pre-drywall inspection	Builder	Builder designates parking and material staging areas at the worksite to protect any existing trees and minimize further soil compaction.	1 pt.	
S7. Provide surface drainage away from foundation.	Final inspection	Verifier or Builder	Determines surface drainage complies with 2009 IRC.	1 pt.	
S8. Conform to local or state regulations or implement EPA Best Management Practices for erosion and sedimentation control during construction.	Before Pre-drywall inspections	Verifier or Builder	Can be attested by builder providing a copy of NOI to Verifier during regularly scheduled visits to the subdivision.	1 pt.	
S9. Lot is in a neighborhood with a park or common area	Final Inspection	Verifier or Builder		2 pts.	

MATERIALS/RESOURCE EFFICIENCY

Select a minimum of 14 items	When verified	Responsible Party	How verified	Value	Pts.
M1. Create an efficient floor plan that maintains a home's functionality.	Before Pre-drywall inspection	Verifier or Builder	**Builder's floor plan/design considers the following concepts/tradeoffs** in design, while maintaining functionality, architectural appeal and affordability: (1) Opportunities to minimize slab, wall, ceiling and window areas while maintaining architecturally appealing design and flow. (2) Placing AC equipment and ducts within conditioned space to maximize system efficiency. (3) Selection of materials and methods to reduce thermal bridging. (4) Minimizing roof pitch (minimizes present and future material requirements and increase wind resistance.	1 pt.	
M2. Use building layouts that maximize resources and minimize material cuts.	Before Pre-drywall inspection	Verifier or Builder	Builder demonstrates that home is designed for standard material sizes or that cut-off material will be re-utilized in another part of the house so that waste is minimized.	1 pt.	
M3. Create a detailed framing plan and material takeoffs.	Before Pre-drywall inspection	Verifier or Builder	Verifier sights builders framing plan/material takeoff sheet. Demonstrates by above methods that minimum required materials are brought to site so that waste is reduced.	3 pts.	
M4. Use materials requiring no additional finish resources to complete application onsite, i.e. pre-finished fiber cement, pre-painted fiber cement, vinyl siding and handrails.	Before Pre-drywall inspection	Verifier or Builder	Verifier sights presence of at least one product category. For each product 75% must be used throughout house. Must be finished painting.	2 pts.	
M5. Use pre-cut joist or pre-manufactured floor truss and studs.	Before Pre-drywall inspection	Verifier or Builder	Verifier sights presence of at least 75% of product category used though out house.	1 pt.	
M6. Provide covered front entry.	Pre-drywall or Final inspection	Verifier or Builder	Verifier sights presence of covered entry, minimum overhang of 4' required.	1 pt.	

M7. Use recommended-sized roof overhangs for climate (minimum 16")	Pre-drywall or Final inspection	Verifier or Builder	Verifier sights that distance from exterior wall (stud) to fascia board is at least 15.5".	1 pt.	
M8. Install drip edge at eaves	Before Pre-drywall inspection	Verifier or Builder	Verifier sights drip edge installed at final inspection at ALL eaves. Builder responsible for correct installation.	1 pt.	
M9. Maximize use of termite-resistant materials (i.e. fiber cement board, treated plates and/or termite shields)	Pre-drywall inspection	Verifier or Builder		1 pt.	
M10. Provide a weather-resistant barrier behind the exterior veneer or siding. Perm value must be greater than the 2009 IECC.	Pre-drywall inspection	Builder	Builder verifies that a suitable weather resistant barrier is installed behind the exterior veneer or siding as per manufacturer's instructions and building code. **Photo evidence is recommended.**	1 pt.	
M11. Employ and show on plans, all flashing details.	Planning	Verifier or Builder	Builder incorporates all flashing details in plan **OR** references written builder specifications on plans.	1 pt.	
M12. Conduct onsite recycling efforts.	Pre-drywall inspection	Verifier or Builder	Builder demonstrates or provides at least **three** examples of onsite recycling or re-utilization methods to prevent material waste.	2 pts.	
M13. Use materials manufactured from renewable resources, in interior construction (bamboo, cork, recycled glass, mdf, finger-jointed trim)	Pre-drywall inspection	Verifier or Builder	Verifier sights invoice and documentation of material content (provided by Builder). Builder to maintain evidence on file.	1 pt.	
M14. Reclaimed content materials or materials manufactured from renewable resources.	Pre-drywall or Final Inspection	Verifier or Builder	Verifier sights invoice and documentation of material content (provided by builder). Builder to maintain evidence on file.	2 pts.	
M15. Recycled or reclaimed content materials or materials manufactured from renewable resources are used for the exterior construction/structural framing or insulation (cellulose, OSB, fly ash).	Pre-drywall or Final Inspection	Verifier or Builder	Verifier sights invoice and documentation of material content (provided by builder). Builder to maintain evidence on file.	1 pt.	
M16. Use locally available, indigenous materials to minimize transportation and processing costs. Use materials common to local region (within a 300 mile radius).	Pre-drywall or Final inspection	Verifier or Builder	Verifier sights invoice and builder supplied documentation on manufacturing site. Builder to maintain evidence on file.	2 pts.	
M17. Use engineered lumber products to maximum extent possible to include trusses, joists, and finger-jointed dimensional lumber.	Before pre-drywall inspection	Verifier or Builder	Verifier sights presence of at least one product category. At least 75% of product category used throughout house must meet the requirement.	1 pt.	
M18. Use sustainable exterior cladding (i.e. brick, stucco, stone). Siding and shingles must have a 25 yr. warranty (i.e fiber cement vinyl).	Before Pre-drywall inspection	Verifier or Builder	Verifier sights builder supplied warranty documentation for ALL exterior cladding (roof and walls).	1 pt.	
M19. Install a minimum of #30 roofing felt or comparable advanced roof underlayment on entire roof for secondary moisture protection.	Before Pre-drywall inspection	Verifier or Builder	Builder show invoice of material used. **Photo evidence of roof covering prior to shingle recommended.**	1 pt.	
M20. Recycling Center in home.		Verifier or Builder		1 pt.	
M21. Dedicated interior recycling center.		Verifier or Builder		3 pts.	
M22. Radiant Barrier Decking.		Verifier or Builder		1 pt.	

M23. Low E windows with a U value of .40 or less and a SHGC of .26 or less.		Verifier or Builder		2 pts.	
M24. CFL Bulbs. (80% or more).		Verifier or Builder		1 pt.	
M25. LED Bulbs (20% or more).		Verifier or Builder		3pts.	
M26A. Roof Deck Foam Only (5 pts.) M26B. Whole House Foam Insulation (7 pts.)		Verifier or Builder		5 or 7 pts.	

ENERGY

Must complete at least E1	When verified	Responsible Party	How verified	Value	Pts.
E1. Make sure home exceeds latest version of International Energy Conservation Code or International Residential Code (2009 IECC/IRC) and be certified by a third party inspector with a HERS rating of 76 or less. Third party inspectors must be a member of the BACC & the CBGB.	Final Inspection	Verifier	Verifier provides a completed thermal bypass inspection checklist and a completed field test of a duct blaster & a blower door.	2 pts	
E2. Hers rating of 70 or below.		Verifier		2 pts.	
E3. Home exceeds an Energy Star rating of 3.0.	Final Inspection	Verifier		4 pts.	

ALTERNATIVE ENERGY

Optional items	When verified	Responsible Party	How verified	Value	Pts.
AE1. Gas – Must have 3 drops that include water heater, dryer & range or furnace. The only appliance not required by the builder is the dryer, all other appliances must be installed. (6pts.) AE1b. 4th drop for fireplace or pool heater. (+3 extra points). AE1c. 5th drop for gas generator (+3 extra points). AE1d. A gas dryer is installed by the builder. (+5 extra points).	Final Inspection	Verifier or Builder		6 pts. 3 pts. 3pts. 5pts.	
AE2. Solar Panels		Verifier or Builder		14 pts.	

AE3. Wind		Verifier or Builder		2 pts.	

WATER

Select a minimum of 8 items.	When verified	Responsible Party	How verified	Value	Pts.
W1A. Utilize water efficient sink fixtures: Kitchen/Utility (2.2 gpm or less) Lavatory (2.0 gpm or less) (1 pt.) W1B. Utilize water efficient sink fixtures: Kitchen/Utility (1.5 gpm) Lavatory (1.5 gpm) (3 pts.)	Before Pre-Drywall Inspection	Verifier or Builder	Verifier sights Builder supplied documentation showing **ALL** materials meet the requirement **OR** have plumbing contractor provide a written statement that all requirements are met. Flow testing by Verifier **NOT** required	1pt. 3 pts.	
W2A. Install low-flow toilets (1.6 gallons/flush or less) (1 pt.) W2B. Less than 1.6 gallons/flush. (3 pts.)	Final Inspection	Verifier or Builder	Verifier sights builder supplied documentation showing **ALL** materials meet the requirement OR have plumbing contractor provide a written statement that requirements are met. Flow testing by Verifier **NOT** required.	1 pt. 3 pts.	
W3A. Install low-flow shower heads (2.5 gpm total) (1pt.) W3B. Install low-flow shower heads (2.0 gpm total) (3pts.)	Final Inspection	Verifier or Builder	Verifier sights builder supplied documentation showing **ALL** fixtures meet the requirement **OR** plumber may provide a written statement that all requirements are met. Flow testing by Verifier **NOT** required. Confirmation of fixture performance must be sent to verifier at least twice annually.	1 pt. 3pts.	
W4. Locate water heaters **or** storage tank within 30 feet of fixture **or** install hot-water-on-demand system.	Pre-drywall inspection	Verifier or Builder	Verifier sights presence of method used for compliance **OR** have plumbing contractor provide written statement that all requirements are met.	1pt.	
W5A. Tankless gas water heater. (5 pts.) W5B. Heat pump water heater (2 pts.)		Verifier or Builder		5 pts. 2pts.	
W6. Manifold plumbing systems utilizing tubing (for single family detached homes).		Verifier or Builder		3pts.	
W7A. The dishwasher is an ENERGY STAR ® labeled product. W7B. The washing machine is an ENERGY STAR ® labeled product.	Final Inspection	Verifier or Builder	Verifier visually confirms presence of ENERGY STAR ® label on dishwasher of builder supplied documentation showing dishwasher is on the ENERGY STAR ® "approved" list if unit is not labeled.	1pt. 7pts.	

W8A. Utilize only water conserving and regionally appropriate turf (i.e. flora-tam, St. Augustine). If parts of the yard will not receive turf at time of sale, provide homeowner education on recommended turf varieties for the area. (1 pt.) W8B. Bermuda Grass, Buffalo, Zoysia (4 pts.)	Final Inspection	Verifier or Builder	Verifier sights builder supplied documentation. Recommend turf supplier provide certification statement stating **ALL** installed turf is appropriate for the area.	1 pt. 4pts.	
W9. Divert water away from foundation and into landscape areas.	Final Inspection	Verifier or Builder	Verifier or builder sights that, in their opinion, reasonable efforts were made to capture water runoff into landscape areas away from the foundation.	1pt.	
W10. Turf grass will constitute no more than 50% of the yard.	Final Inspection	Verifier or Builder	Verifier sights builder supplied documentation.	10pts.	
W11. Limit landscape to drought tolerant varieties. See attached Xeriscape list from the City of Corpus Christi Website.	Final Inspection	Verifier or Builder	Verifier sights builder supplied documentation. Recommend landscape provider provide certification statement that **ALL** supplied landscape plants meet Xeriscape requirements.	1 pt.	
W12. Install mulch (3-4" deep minimum) around plants and include bed covering (utilize City of Corpus Christi mulch program).	Final Inspection	Verifier or Builder	Verifier or builder sights presence of mulch to the required depth.	1pt.	
W13A. Irrigation system has separate zones for turf and bed and rotary heads. W13B. Rotary heads where possible. W13C. Rain Sensor. W13D. Drip Irrigation system. W13E. Yard does not exceed over 50% of lot.	Final Inspection	Verifier or Builder	Builder or landscaping professional must clearly denote separate zoning on irrigation control box. Verifier confirms separate zoning indicated on control box. Alternatively, the **LICENSED** installer may provide certification statement indicating all requirements are met.	8pts. 2pts. 2pts. 8pts. 8pts.	
W14. Install rain sensors **or** weather forecast based irrigation controller	Final Inspection	Verifier or Builder	Verifier or builder sights presence of mulch to the required depth.	3pts.	
W15A. Roof run-off, must drain onto a pervious surface (turf or landscaping). W15B. Downspouts are installed and drain onto turf or landscaping.	Final Inspection	Verifier or Builder	Verifier or builder sights compliance at final inspection.	1pt. 5pts.	
W16. Water filtration system.	Final Inspection	Verifier or Builder	Verifier or builder sights compliance at final inspection.	6 pts.	
W17. Rain barrel or rain filtration system	Final Inspection	Verifier or Builder	Verifier or builder sights compliance at final inspection.	5 pts.	
W18. Collection of A.C. condensation or dehumidifier system.	Final Inspection	Verifier or Builder	Verifier or builder sights compliance at final inspection.	4 pts.	

W19. Grey Water system.	Final Inspection	Verifier or Builder	Verifier or builder sights compliance at final inspection.	10pts.	
W20. Rain Garden.	Final Inspection	Verifier or Builders	Verifier or builder sights compliance at final inspection.	10pts.	

INDOOR AIR OUALITY/MOISTURE CONTROL/HEALTH

Select a minimum of 10 items	When verified	Responsible Party	How verified	Value	Pts.
IA1. Provide power sealed combustion or mechanical/induced venting providing fresh combustion air **for gas furnaces and water heaters** located inside conditioned spaces **or** no gas appliances installed in conditioned space.	Final Inspection	Verifier or Builder	Verifier sights presence of requirements during final inspection. Licensed AC/Plumbing contractors may provide certification statement that product meets the requirement.	1pt.	
IA2. Vent kitchen range hoods to exterior with a damper.	Pre-sheetrock	Verifier or Builder	Verifier sights range vent pipe routed to exterior at Pre-sheetrock.	1pt.	
IA3. Use 2" pleated paper filters for central air conditioners or install whole house Media filter (minimum MERV 7). **No "ozone" type filters allowed.** (1 pt.) IA3B. MERV 11 or better. (2 pts.)	Final Inspection	Verifier or Builder	Verifier sights presence of product during final inspection. Product must be clearly labeled or builder documentation is required.	1 or 2 pts.	
IA4. For homes with gas appliances **or** attached garage, install one carbon monoxide detector with American Gas Association (AGA) IAS 696 Blue Star Certification Seal every 1,000 sq. ft. (near bedrooms) at a minimum of one per floor.	Final Inspection	Verifier or Builder	Verifier sights presence of products during final inspection. Product must be clearly labeled or builder documentation required.	1pt.	
IA5. Any fireplace installed must have combustion air direct from exterior or **no** fireplace installed.	Final Inspection	Verifier or Builder	Verifier sights presence of requirements during final inspection. System installer may provide certification statement that product meets the requirement.	1pt.	
IA6. Cover ducts during construction.		Verifier or Builder	Verifier sights suitable covering over AC ducts at Pre-drywall inspection **or** builder documentation that duct system has been cleaned at Final Inspection.	1pt.	
IA7. Choose low-VOC interior paint, sealants and adhesives	Final Inspection	Verifier or Builder	Builder supplies documentation that at least 80% of products are low VOC.	1pt.	
IA8. Use Carpet and Rug Institute's Green Label certified carpet on at least 50% of the flooring in the living space. If at least 50% of living space is hard surface, standard carpeting may be used.	Final Inspection	Verifier or Builder	Builder supplies documentation that carpets/rugs are "Green Label" certified, if required. Builder provides Verifier with square footage of hard surface products and carpet **prior** to final inspection.	1pt.	

IA9. Ensure particleboard, medium density fiberboard (MDF) and hardwood plywood substrates are certified to low formaldehyde emission standards.	Final Inspection	Verifier or Builder	Builder supplies invoices and supplier documentation showing that at least 90% of product category used in the house meet the requirement.	1pt.	
IA10. Ensure proper flashing at windows and doors as well as sealing.	During Construction	Builder	Builder ensures all windows and doors are flashed as per appropriate building material specifications and building codes. **Photo evidence is recommended.**	1pt.	
IA11. Avoid attached garage or isolate garage from the living space by providing a tightly sealed, gasketed door or opening between garage and conditioned space.	Final Inspection	Verifier or Builder	Verifier sights solid exterior door, installed with gasket on final inspection, if required.	1pt.	
IA12. Install return air ducts, jump ducts or transfer grills in all bedrooms.	Pre-Drywall	Verifier, Builder or A/C Contractor	Verifier sights presence of material at rough in. AC Contractor responsible for correct sizing of ducts/grills as per ACCA documents.	1pt.	
IA13. Fresh air ventilation system.		Verifier or Builder		2 pts.	
IA14. Installation of whole house dehumidification system or heat recovery ventilation.		Verifier or Builder		1 pt.	
IA15. 15 SEER - heat pump.		Verifier or Builder		1 pt.	
IA16. 16-18 SEER - heat pump.		Verifier or Builder		2 pts.	
IA17. 19 SEER or higher - heat pump.		Verifier or Builder		3 pts.	
IA18. Installation of electronic or multimedia air filter.		Verifier or Builder		1 pt.	
IA19. Germocidal system. (UV lights)		Verifier or Builder		2 pts.	
IA20. Programmable thermostat.		Verifier or Builder		1 pt.	

HOMEOWNER EDUCATION

Must complete all 3 items.	When verified	Responsible Party	How verified	Value	Pts.
H1. Builder or builder's designated employee to oversee the builder's green building program.	Final Inspection	Builder or Verifier	Verifier sights written evidence that Builder has designated a responsible individual to oversee the Builder's green building program.	1 pt.	
H2. Provide Home Manual to owners on the use ad care of their home.	Final Inspection	Builder or Verifier	Verifier sights Builder's written homeowner orientation forms/checklist/manual, showing that homeowner has received basic education in care or use of their home.	1 pt.	
H3. Provide education to owners in the use and care of their dwellings. Instruct homeowner about the building's goals and strategies and occupants impact on costs of operating the building. Provide training to owners for all control systems in the house.	Final Inspection	Builder or Verifier	Verifier sights Builder's written homeowner orientation forms/checklist/manual showing that homeowner has received basic education in care or use of their home.	1 pt.	

GLOBAL IMPACT STATEMENT

Must complete.	When verified	Responsible Party	How verified	Value	Pts.
G1. Demonstrate that builder's operations and business practices include environmental management concepts (i.e. "green" stationary and envelopes, recycling bins, etc).	Final Inspection	Verifier or Builder	Builder demonstrates or provides at least **three** examples of business practices/concepts which minimize environmental impact.	2 pts.	

I, the builder, agree to meet the minimum required elements of each section.

Green = 45 Silver = 60 Gold = 75 Platinum = 100

Score: _____

BUILDER

_____ _____
Company Signature

_____ _____
Name of Person Completing Form Date

_____
Title

Submit completed form to:
CBGB
Fax: (361) 991-3038
E-Mail: k.jacobs@bacctexas.org

RATER

_____ _____
Company Signature

_____ _____
Name of Person Completing Form Date

_____
Title

Comments_____
_____
_____
_____
_____

Submit completed form to:
CBGB
Fax: (361) 991-3038
E-Mail: k.jacobs@bacctexas.org

Coastal Bend Green Built

Third Party Verifier Enrollment Form

Third Party Verifier Information

The undersigned Third Party Verifier is applying for approval to perform Third Party Inspections in association with the CBGB Green Building Initiative and agrees to abide by the standard terms and conditions of the Green Building Initiative. Third Party verifiers must be a member of the Builders Association Corpus Christi Area and the Coastal Bend Green Built Program.

Third Party Verifier Name	
Contact Person	
Street Address	
City/State/Zip Code	
Phone	
Fax	
Email Address	
Website	
Third Party Verifier Certification/Certifications	**RESNET Green Rater Y_____ N_____** **NAHB Green Verifier Y_____ N_____** **LEED Certified Y_____ N_____** **Please provide documentation**

Enrollment fee in the amount of $150 may be paid by Visa, MC, AMEX or check made out to the BACC.

Signature_____**Title**_____
Date_____