



# WORK PLAN REPORT

## **Air/Water/Rail SUBCOMMITTEE**





# Project #1

**Project- Develop a list of cost effective projects that can be used as examples of projects that can be implemented when talking to facilities or groups. Will include cost and emission reductions.**

- **A. Task Implementation Schedule**
  - Obtain TERP information from TCEQ and forklift replacement data from RRC. Information received 4/06-5-06. Clarification of some data has been requested.
  - Develop “model” projects for each sector. Draft projects completed. Waiting for additional information to finalize.
- **B. Measures of success/environmental results**
  - The model projects will include environmental measures that will allow easier calculation of emissions reductions from similar types of projects.
- **C. Estimated cost/funding mechanism**
  - None.
- **D. Responsibility**
  - Barry Feldman, EPA; Brian Christian, TCEQ; Heather Ball, RRC.





# Project #2

## **Project- Voluntary Airport Low Emission (VALE) Program, Hybrid Vehicle Acquisition for George Bush Intercontinental (IAH) and Hobby (HOU) Airports, Houston, Texas**

- **A. Task Implementation Schedule**
  - The Houston Airport System has applied to the FAA for funding to acquire seven 2005 Toyota Prius hybrid electric vehicles. Four of these vehicles are for use at IAH while three will be located at HOU.
- **B. Measures of Success/Environmental Results:**
  - Three of the new vehicles will replace a 1991, as well as model years 1997 and 1998 from the airport fleets. The other four vehicles will be added to the existing fleet in place of traditionally fueled vehicles.
  - Use of these vehicles versus traditional-fueled vehicles will reduce emissions by approximately 0.139 tons of NOx and 0.038 tons of HC over the life of the vehicles (10 years).
- **C. Estimated Cost/Funding Mechanism:**
  - The total cost of the project is \$145,471.00. The airport will fund \$101,138.00 locally and has requested \$46,333.00 in VALE funds.
- **D. Responsibility:**
  - Houston Contact: Jerry L. Crenshaw, Airport Superintendent  
FAA Contact: Ben Guttery, Senior Program Manager





# Project #3

**Project- DOW/RailServe will convert two older diesel locomotives into 2000 horsepower “Green Goats” switch engines in 2007. This is a pending project for BSC until we get the official ok from DOW or RailServe**

## **A. Task Implementation Schedule**

**RailServe to obtain a letter of support from DOW. Completed**  
**Obtain funding from TERP. Completed**  
**Rebuild old locomotives and place into service -March 2007.**

## **B. Measures of success/environmental results**

- **Fuel consumption will be reduced by 30 to 50% along with emissions.**
- **Projected reduction of 200+ tons per year of NOx plus PM and hydrocarbon reductions.**

## **C. Estimated cost/ funding mechanism**

- **The cost is estimated at \$2.3 million. Funding will be through TERP.**

## **d. Responsibility**

**RailServe and DOW Chemical Company.**  
**DOW Chemical Co.**  
**Steve Kilpatrick 979.238.2957**





# Project #4

## **Project: Port of Houston Authority's Entry/Exit Precheck and Inspection Facility at Barbours Cut Container Terminal.**

- **The POH has developed an Entry/Exit Precheck and Inspection Facility to take the 30-year old terminal from a paper documentation process method into a computerized system and process the trucks in two phases: data collection and inspection/documentation.**
  - **Task Implementation Schedule:**
- **The construction phase of this project will start in July 2006 and be complete in August 2007. The new entry/exit gates will become operational prior to the end of construction, as the terminal will remain open and fully operational during construction.**
  - **Measures of success/environmental results:**
- **The current gate process for a truck is approximately 22 minutes through the system, while the new process will take approximately 6 minutes.**
- **Less idling time will result in a reduction of NOx, VOC and Particulate Matter. Based on throughput and emission estimates for 2006 at BCT, this project at full build out will provide an approximate reduction of 70% of all emissions evaluated, NOx, VOC and PM.**
  - **Estimated cost/funding mechanism**
- **The total cost of this project is estimated at \$21.3 million. The Port of Houston Authority will solely fund this complete project.**
  - **Responsibility:**
- **Dana Blume, Environmental Program Coordinator**





# Goal #1

**Goal-Identify opportunities to work with facilities that can apply emission reduction strategies to their air/water/rail operations.**

- ExxonMobil Marine Repower Project. Exxon has agreed to spend \$250,000 on diesel reduction SEP's. Exxon has agreed to look at repowering their push/tugboats with less polluting engines.

**Will submit a SEP plan to EPA for approval 12/06.**

- Responsibility James Murry, ExxonMobil 281.834.2088





# Goal #1 con't

- **Chevron Phillips would like to consolidate their three rail yards into one to reduce moving and storage costs. The consolidation will also reduce idling emissions from switch locomotives, as they will be able to more efficiently move tanker cars.**
- **BSC will work with Chevron to use hybrid switch engines that could reduce diesel emissions by 100 tons per year of NOx per engine. The project is still in the in engineering phase.**
- **Estimated time frame 2007.**
- **Responsibility -Barry Feldman Region 6**





# Goal #2

## Goal-Identify ways to reduce emissions at Intermodal Railway Facilities

- Extended truck and rail idling is related to facilities handling intermodal containers, which include:
  - Marine containers
  - Rail containers
  - Truck-rail operations (loading a truck trailer directly onto a railcar)
- Extended queues can develop
- The air/rail/water sub committee members would pick 2-3 facilities and visit them to learn about their operation. Recommendations would then be made based on the results of the visit and presented to the intermodal facility.
- One environmental diesel reduction project in 2007 and two in 2008.
- Responsibility- Air/Rail/Marine subcommittee

Railway	Terminal	Area	Trucks/day
UP	Miller	Dallas	900
UP	Mesquite	Dallas	1000
KCS	Arlington	Dallas	900
BNSF	Alliance	Dallas	800





## Goal # 3

**Goal- Work with the Port to identify at least one project that the port could implement in 2007 either through independent funding or border funding.**

- It is difficult to determine what kind of emission reduction projects may have been implemented or planned at The Port of Brownsville .
- The Ports location on the border would allow them to apply for border money EPA competes each year if a suitable project were developed.
- Responsibility- Barry Feldman/Dana Blume





## Goal # 4

### **Goal-Develop a maritime inventory of vessels that call on the major ports in the BSC region (start with Houston/Galveston).**

- **The inventory would serve to identify shipping patterns along the Gulf Coast so the collaborative would know who accounts for the largest share of marine traffic and therefore who we should work with to reduce emissions.**
- **It will also identify other areas of the country and collaboratives the BSC should join forces with to more effectively implement emission reduction strategies and lobby headquarters for funds.**
- **Obtain funding for a marine inventory and/or encourage owner/operators to implement emission reductions on marine vessels that routinely call on U.S. ports.**
- **Responsibility-Rebecca Rentz /Barry Feldman**

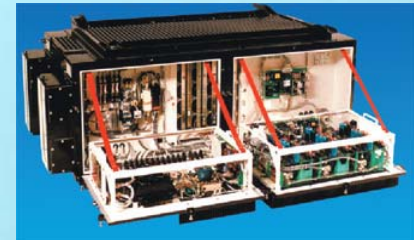




## Goal # 5

**Develop an inventory of rail hubs where idle reduction technology could be applied.**

- The inventory would be used as an outreach tool for those not using idle reduction measures.
- The use of Auxiliary Power Units (a smaller power unit) can reduce “main engine” usage and reduce idling/operating emissions.



- Promote the use of Smart Idle technology to turn off railroad engines when not in use. Both of these technologies are very cost effective and can often justify the cost of the equipment through reduced fuel usage and maintained costs.

- Responsibility- Mike Clift, Gregg Cooke, Barry Feldman





# Great Rail Project Payback

<b>System</b>	<b>Energy Savings Gal/day</b>	<b>Annual Savings \$1000s</b>	<b>Cost \$1000s</b>	<b>Payback (months)</b>
<b>Start/Stop</b>	<b>36</b>	<b>15</b>	<b>7.5-15</b>	<b>6-12</b>
<b>APU</b>	<b>60</b>	<b>25</b>	<b>25-35</b>	<b>12-17</b>
<b>Plug-in</b>	<b>50</b>	<b>19</b>	<b>4-12</b>	<b>3-11</b>
<b>Green Goat</b>	<b>291</b>	<b>122</b>	<b>200</b>	<b>36</b>





# What Can You Do?

- **Need people to talk about Air/Water/Rail issues at focus meetings**
- **Need contacts at smaller airports rail yards and ports.**
- **Let us know of any projects that could be included in BSC**

