Attachment D
Final General Conformity Determination (Final GCD)

U.S. Coast Guard

Goethals Bridge Replacement Project

Final General Conformity Determination

December 2010

Table of Contents

Page

1.0	Introduction	2
1.1	Transportation Conformity Requirements	3
1.2	General Conformity Requirements	3
2.0	Description of the Federal Action	5
2.1	Goethals Bridge Project	5
2.2	Relationship to Other Environmental Analyses	7
3.0	Regulatory Procedures	8
3.1	Use of Latest Planning Assumptions	8
3.2	Use of Latest Emission Estimation Techniques	8
3.3	Emission Scenarios	9
4.0	Applicability Analysis	11
4.1	Attainment Status of Project Area	11
4.2	Exemptions from General Conformity Requirements	11
4.3	*De minimis* Emission Rates	12
4.4	Eight-Hour vs. One-Hour Ozone Standard	12
4.5	Applicability for Federal Action	12
4.5.1	Methodology	13
4.5.2	Estimated Emissions and Comparison to *De minimis* Thresholds	13
4.5.3	Regional Effects	14
5.0	General Conformity Evaluation	16
5.1	Conformity Requirement of Proposed Project	16
5.1.1	Compliance with Conformity Requirements for NOx Emissions	16
5.1.2	Compliance with Conformity Requirements for CO Emissions	16
6.0	Reporting	18
6.1	Draft General Conformity Determination	18
6.2	Final General Conformity Determination	18
6.3	Frequency of General Conformity	18
7.0	Findings and Conclusions	19
8.0	Statement of Conformity	20
9.0	References	21

List of Tables

Table 1 General Conformity Applicability Rates 12

Table 2 Total Annual Emissions from Construction Equipment and Activities at New Jersey and New York Construction Sites (tons per year) 14

Attachment A: The Port Authority of New York and New Jersey Commitment to Minimize and Offset NOx Emissions during Goethals Bridge Replacement Project Construction

1.0 Introduction

The federal Clean Air Act (CAA) defines nonattainment areas as geographic regions that have been designated as not meeting one or more of the National Ambient Air Quality Standards (NAAQS). The CAA requires that a State Implementation Plan (SIP) be prepared for each nonattainment area, and a maintenance plan be prepared for each former nonattainment area that subsequently demonstrated compliance with the standards. The SIP is a state's plan for how it will meet the NAAQS by the deadlines established by the CAA.

The US Environmental Protection Agency's (USEPA) Transportation Conformity Rule requires SIP conformity determinations on transportation plans, programs, and projects before they are approved or adopted. Conformity is defined as conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. The Conformity Rule also establishes the process by which federal agencies determine conformance of proposed projects that are federally funded or require federal approval, such as the proposed Goethals Bridge Replacement (GBR) Project. This determination must demonstrate that the Proposed Action would not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions towards attainment.

The GBR Project, proposed and sponsored by the Port Authority of New York and New Jersey (Port Authority), is replacement and demolition of the existing Goethals Bridge (see Section 2.1).

The U.S. Coast Guard (USCG) issued its Draft General Conformity Determination on August 13, 2010, as part of the GBR Final Environmental Impact Statement (FEIS), with a 30-day comment period concluding on September 13, 2010. Copies of the Draft General Conformity Determination were also provided via e-mail and postal service to USEPA Region 2; State (New Jersey Department of Environmental Protection [NJDEP], New York State Department of Environmental Conservation [NYSDEC]) and local (New York City Department of Environmental Protection [NYCDEP]) air quality agencies; and the two pertinent Metropolitan Planning Organizations (North Jersey Transportation Planning Authority [NJTPA], New York Metropolitan Transportation Council [NYMTC]). A formal public notice of the availability of the Draft General Conformity Determination was published in the *Staten Island Advance* and the *New Jersey Star Ledger* on September 15, 2010 with a 30-day comment period concluding on October 15, 2010.

The USCG received comments on the Draft General Conformity Determination from the following agencies:

- USEPA – letter dated September 9, 2010;
- NJDEP – letter dated September 14, 2010; and
- NYSDEC – letter dated August 24, 2010.

The comment letters and subsequent correspondence between the USCG and the commenting agencies have been posted to docket number USCG-2009-0097 of the Docket Management Facility of the U.S. Department of Transportation.

NYMTC advised that it had no comments via e-mail on September 21, 2010. No comments were received from NJTPA and NYCDEP, and no public comments were received.

1.1 Transportation Conformity Requirements

The USEPA promulgated regulations to address the conformity requirements of the Clean Air Act. On November 24, 1993, the USEPA promulgated final transportation conformity regulations at 40 C.F.R. Part 93 Subpart A to address transportation plans, programs, and projects developed, funded or approved under title 23 U.S.C. or the Federal Transit Act, 49 U.S.C 1601 et seq. These regulations have been revised several times since they were first issued to clarify and simplify them.

A Transportation Improvement Program (TIP) is a staged, multiyear, intermodal program of transportation projects covering a metropolitan planning area, consistent with that area's Transportation Plan (also known as a Long Range Transportation Plan or LRTP). A TIP includes projects (planned and future) anticipated within 3 to 5 years. The planning horizon for the LRTP is at least 20 years.

The Metropolitan Planning Organization (MPO) is the organization responsible, together with the state, for preparing the TIP and LRTP for a region. The MPO for the northern New Jersey segment of the New York-New Jersey-Connecticut (NY-NJ-CT) region, within which the project site lies, is the North Jersey Transportation Planning Authority (NJTPA); the MPO for the New York segment of the region is the New York Metropolitan Transportation Council (NYMTC).

In New Jersey, the GBR Project is included in the 2010-2013 TIP for the NJTPA portion of the NY-NJ-CT region, as well as NJTPA's latest Regional Transportation Plan (PLAN 2035), which was approved by the NJTPA Board of Trustees on August 24, 2009. In New York, the GBR Project is included in NYMTC's "Draft Conformity Determination," dated September 17, 2009, for the 2008-2012 TIP and the 2010-2035 RTP, with a project number of X770.47 and a project completion date of June 15, 2015.[1]

1.2 General Conformity Requirements

On November 30, 1993 (revised March 24, 2010), the USEPA promulgated final general conformity regulations at 40 C.F.R. Part 93 Subpart B for all federal activities except those covered under transportation conformity. Since the GBR project requires approval by the USCG, but will not be funded or require approval under Title 23 U.S.C. or the Federal Transit Act, 49 U.S.C 1601 *et seq.* at this time, general conformity requirements are applicable. General conformity regulations apply to a federal action in a nonattainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutants caused by the federal action equal or exceed certain *de minimis* rates, thus requiring the federal agency to make a determination of general conformity.

The study areas defined in the environmental impact statement (EIS) for the GBR Project in New Jersey and New York are currently designated as nonattainment for both ozone and particulate matter (PM) of equal to or less than 2.5 microns ($PM_{2.5}$) and maintenance for CO. Therefore, conformity regulations apply to these pollutants, and annual emissions of these pollutants generated by the proposed project in the entire New Jersey-New York study area were compared to the general conformity *de minimis* thresholds.

The general conformity regulations incorporate a stepwise process, beginning with an applicability analysis. According to USEPA guidance (USEPA 1994), before any approval is given for a federal action to go forward, the regulating federal agency must apply the applicability requirements found at 40 C.F.R. § 93.153(b) to the federal action and/or determine the regional significance of the federal action to evaluate whether, on a pollutant-by-pollutant basis, a determination of general conformity is required. The guidance states that the applicability analysis can be (but is not required to be) completed concurrently

[1] The timing of construction has recently been determined to be on a two-year delayed schedule (i.e., 2013-2017).

with any analysis required under the National Environmental Policy Act (NEPA). If the regulating federal agency determines that the general conformity regulations do not apply to the federal action, no further analysis or documentation is required. If the general conformity regulations do apply to the federal action, the regulating federal agency must next conduct a conformity evaluation in accord with the criteria and procedures in the implementing regulations; publish a draft determination of general conformity for public review; and then publish the final determination of general conformity.

As discussed in a February 25, 2010, meeting with the USEPA, construction of the GBR project is estimated to exceed USEPA-established *de minimis* levels (in tons per year) for NOx (nitrogen oxides, a precursor to ozone) in the New York/New Jersey region, a nonattainment area. Therefore, the GBR project requires a General Conformity Determination to show how its construction will conform to the New Jersey and New York State Implementation Plans (SIP).

The Port Authority of New York and New Jersey (Port Authority), the project sponsor, plans to use emission credits from the Harbor Deepening Project (HDP) to offset the increased emissions from the GBR project construction, as described later in this document.

The HDP is generating excess credits as part of its Staten Island Ferry retrofit and marine vessel engine replacement programs. The Port Authority reached consensus regarding the utilization of the HDP credits and the implementation of an additional MVERP as a contingency for the GBR Project with the HDP Regional Air Team (comprised of the USEPA, the US Army Corps of Engineers [USACE], New York State Department of Environmental Conservation [NYSDEC], New Jersey Department of Environmental Protection [NJDEP] and the Port Authority).

2.0 Description of the Federal Action

In accordance with applicable general conformity regulations and guidance, when a general conformity determination is necessary, the lead federal agency, which for this project is the USCG, is required to conduct a general conformity evaluation and then issue a positive conformity determination before the federal action is approved. Each federal agency is responsible for determining conformity of those proposed actions over which it has jurisdiction. This final general conformity determination includes all activities related to the proposed project. The Project is more fully described in Section 2.1, below.

General conformity requirements only apply to federal actions proposed in nonattainment areas (i.e., areas where one or more NAAQS are not being achieved at the time of the proposed action and requiring SIP provisions to demonstrate how attainment will be achieved) and in maintenance areas (i.e., areas recently reclassified from nonattainment to attainment and requiring SIP provisions to demonstrate how attainment will be maintained). The attainment status in the vicinity of the GBR Project area is discussed in Section 3.

2.1 Goethals Bridge Project

The GBR Project, proposed and sponsored by the Port Authority of New York and New Jersey (Port Authority), is replacement and demolition of the existing Goethals Bridge. Based on the New Alignment South alternative, which has been identified in the Final EIS (FEIS) as the preferred alternative, the Proposed Project consists of a cable-stayed, 6-lane replacement bridge in an alignment south of the existing 4-lane Goethals Bridge, and removal of the existing bridge after construction of the new bridge. The replacement bridge project right-of-way would be a maximum width of 310 feet, including a 210-foot-wide bridge structure and two 50-foot buffer areas on either side of the bridge structure. The replacement bridge includes the following components:

- six 12-foot-wide travel lanes, three on each roadway deck (i.e., one roadway for eastbound traffic and one roadway for westbound traffic);
- a 12-foot-wide outer shoulder on each roadway;
- a 5-foot-wide inner shoulder on each roadway;
- a minimum 10-foot-wide sidewalk/bikeway along the northern edge of the westbound roadway; and
- a central area to be maintained between the eastbound and westbound roadway decks with sufficient width to accommodate the provision of future transit service, should future conditions warrant inclusion of such service during the service life of the bridge.

The total out-to-out width of the main span of the replacement bridge would be a maximum of 210 feet. Part of that width comprises a 65-foot-wide central area between the eastbound and westbound decks, which accommodates the towers and support cables, as well as the 27-foot-wide potential mass transit corridor. Navigational clearance beneath the new bridge is proposed to be a minimum of 135 feet above mean high water (MHW), which is unchanged from the clearance of the existing bridge. The top elevation of the two bridge towers is proposed to be 272 feet above mean sea level (MSL), which is higher than the 248 feet above MSL associated with the existing bridge's truss superstructure.

Other elements of the Proposed Project include:

- new approach spans with similar dimensions as the bridge itself on both the New Jersey and the New York ends of the new bridge;

- permanent fencing at ground level along both sides of the right-of-way of the proposed replacement bridge approach spans, including the adjacent buffer areas, except through open waters;
- a permanent access road in New York located generally below the proposed replacement bridge approach spans for purposes of construction, maintenance and security;
- replacement of the Travis Branch railroad bridge over I-278 in Staten Island in order to accommodate the wider roadway;
- re-alignment of Gulf Avenue in Staten Island; and
- construction staging areas of approximately five acres on each side of the Arthur Kill.

The existing bridge, including its main truss span, New Jersey and New York approach spans and abutments, would be entirely demolished and removed, after construction of the new bridge is completed.

The Port Authority anticipates that the construction period for the new bridge and demolition of the existing bridge would range between 52 and 60 months, depending on the type of superstructure (i.e., steel girder, pre-cast/stressed concrete, or segmental concrete) to be selected for the main bridge span and its approaches. For purposes of estimating construction-phase emissions for this Determination, the superstructure type that represents the worst case in terms of equipment usage (i.e., steel girder) was assumed. The FEIS assumed initiation of construction in 2011 and opening of the new bridge to traffic in late 2015.[2]

As part of the environmental review of the GBR Project, the USCG has prepared this final general conformity determination to demonstrate compliance with the general conformity requirements in support of the USCG's issuance of a Bridge Permit.

The FEIS for the GBR Project includes construction mitigation measures to minimize construction-phase NOx emissions, which are included in this Determination, set forth below:

- Emission Control Measures for Diesel Equipment Exhaust:
  - Ultra-low sulfur diesel fuel would be used for construction vehicles and equipment;
  - Engines for non-road construction equipment with a horsepower (HP) rating above 50 HP would be in compliance with USEPA's Tier 2 standards;
  - Eighty percent of construction equipment with engines above 50 HP would be retrofitted with best available control technology (BACT) that has been verified by USEPA and/or the California Air Resources Board, which reduce PM emissions up to 90 percent (without increasing nitrogen oxide [NOx] emissions), using diesel particulate filters, diesel oxidation catalysts, flow-through filter technology, etc.;
  - Limit unnecessary idling times on diesel powered engines to 3 consecutive minutes;
  - Diesel equipment exhausts would be located away from sensitive land uses; and
  - Electric compressors and pumps would be used where possible, instead of diesel-powered equipment.

2 The timing of construction has recently been determined to be on a two-year delayed schedule (i.e., 2013-2017). The difference between the construction period assessed for impacts and the currently anticipated construction schedule should not result in a significant difference in impacts.

- Emission Control Measures for Fugitive Dust:
  - Wet suppression, with or without approved binding agents, would be used on-site on a routine basis with hoses or a sprinkler system during deconstruction and material-handling activities aimed at a 10-percent moisture content in the ground;
  - Wet spray power vacuum street sweepers would be used on paved roadways;
  - Calcium chloride would be used instead of wet suppression when freezing conditions exist;
  - Wheel-wash stations or crushed stone at construction ingress/egress areas would be used;
  - Dump trucks during material transport on public roadways would be covered; and
  - Truck speed within the construction sites would be limited to less than 5 miles per hour (mph).

These mitigation measures specified by the USCG in this final general conformity determination are mitigation measures that have been expressly adopted by the USCG in approving the overall project and certifying the FEIS, and have been committed to by the Port Authority as project sponsor. These provisions ensure that the measures will be properly implemented through incorporating mitigation measures into all Port Authority construction bid specifications documents for the GBR Project.

2.2 Relationship to Other Environmental Analyses

A Draft Environmental Impact Statement (DEIS) was published for public review and comment in May 2009 providing an analysis of four build alternatives and a No-Build alternative. The Final EIS (FEIS) will be published in August 2010 documenting the integrated analysis of all alternatives considered and identification of the New Alignment South as the preferred alternative (and this Conformity Determination will be included as part of the FEIS). The USCG is the lead agency for the NEPA analysis documented in the EIS. The EIS was prepared to also be sufficient for purposes of the City of New York's City Environmental Quality Review (CEQR) and Uniform Land Use Review Procedure (ULURP).

NEPA requires that the air quality impacts of the Proposed Project's implementation be analyzed and disclosed. Regulatory guidance implementing this statute requires that the air quality impacts from the project be determined by identifying the project's associated incremental emissions and air pollutant concentrations and comparing them, respectively, to emissions thresholds and state and national ambient air quality standards. The air quality impacts of the GBR Project under future Build conditions were also compared in the FEIS to the future No-Build conditions for NEPA purposes. The general conformity determination is discussed in the FEIS.

This final general conformity determination is being published with the USCG Record of Decision (ROD) for the federal action.

3.0 Regulatory Procedures

The general conformity regulations establish certain procedural requirements that must be followed when preparing a general conformity evaluation. This section addresses the major applicable procedural issues and specifies how these requirements are met for the evaluation of the federal action. The procedures required for the general conformity evaluation are similar but not identical to those for conducting an air quality impact analysis pursuant to NEPA regulations.

3.1 Use of Latest Planning Assumptions

The general conformity regulations require the use of the latest planning assumptions for the area encompassing the federal action, derived from the estimates of population, employment, travel, and congestion most recently approved by the metropolitan planning organizations (MPOs) in both New Jersey and New York (40 C.F.R. § 93.159(a)). The traffic data used in this air quality analysis (see FEIS Sections 5.20 and 5.21 and Appendix J) are consistent with the most recent estimates made by NYMTC and the NJTPA for traffic volume growth rates, including forecast changes in vehicle miles traveled (VMT) and vehicle hours traveled (VHT). NYMTC and NJTPA developed these estimates from their traffic assignment models based on current and future population, employment, and travel and congestion information. These assumptions are consistent with those in the current conformity determinations for the New Jersey and New York Transportation Plans and TIPs.

3.2 Use of Latest Emission Estimation Techniques

The general conformity regulations require the use of the latest and most accurate emission estimation techniques available, unless such techniques are inappropriate (40 C.F.R. § 93.159(b)). Vehicular emission factors were estimated using USEPA's MOBILE 6.2.03 (EPA420-R-03-010) emission factor algorithm. This version includes the effects of the new vehicle standards, vehicle turnover, and emission factors for particulate matter. The following modeling inputs were applied:

- New Jersey
  - New Jersey Department of Environmental Protection (NJDEP) input files with 2003 New Jersey State registration distribution by age, as provided by the New Jersey Department of Transportation (NJDOT);
  - New Jersey inspection/maintenance, anti-tampering and low emission vehicle (LEV) programs;
  - Silt loading factors as per NJDEP guidance;
  - USEPA default diesel sales fractions, mileage accumulation rates and natural gas vehicle fractions; and
  - In estimating PM emissions from diesel engines, the following sulfur contents were used: 400 parts per million (ppm) for 2004 (i.e., existing conditions), and 15 ppm for future analysis years (to account for the future required use of ultra-low sulfur diesel [ULSD] diesel fuel).
- New York
  - New York State Department of Environmental Conservation (NYSDEC) input files, with engine-operating start and distribution parameters and VMT for Richmond, Kings and New York counties;
  - New York State inspection/maintenance, anti-tampering and LEV programs;
  - Silt loading factors as per NYSDOT guidance;

- New York State 2006 vehicle registration and national default mileage accumulation data;
- New York State 2006 diesel sales fraction data; and
- In estimating PM emissions from diesel engines, the following sulfur contents were used: 400 ppm for 2004 (existing conditions), and 15 ppm for future analysis years (to account for the future required use of ULSD diesel fuel).

- Off-Road Emissions
  - Fugitive dust emission factors for demolition, excavation, truck loading, and re-entrained dust were based on the equations recommended in USEPA's AP-42 Report "Compilation of Air Pollutant Emission Factors," Section 13.2.3.3, Heavy Construction Operations, 13.2.1 Fugitive Dust from Paved Roads;
  - Emission rates of PM_{10} and $PM_{2.5}$ from diesel engines of construction equipment were estimated using the USEPA NONROAD Emission Model (Report No. NR-009A, November 2002, USEPA 420-P-02-016). $PM_{2.5}$ emission factors for diesel powered construction equipment were assumed to be 92 percent of the estimated PM_{10} emission factors for each type of equipment, which is the recommended percentage from both USEPA's NONROAD and Mobile 6.2 emission factor models; and
  - Re-entrained dust from moving delivery vehicles was estimated using the current USEPA AP-42 equations for fugitive dust sources for PM_{10} and $PM_{2.5}$ emissions.

3.3 Emission Scenarios

The general conformity regulations require that the evaluation must reflect certain emission scenarios (40 C.F.R. §93.159(d)). Specifically, these scenarios generally include the evaluation of emissions from a proposed project for the following years: (1) for nonattainment areas, the year mandated in the CAA for attainment and for maintenance areas, the farthest year for which emissions are projected in the approved maintenance plan; (2) the year during which the total of direct and indirect emissions for the federal action are projected to be the greatest on an annual basis; and (3) any year for which the applicable SIP specifies an emissions budget. Both the operational and construction phases of a project have to be considered, and the following applies to the Proposed Project.

- Emissions generated during the operational phase of the Proposed Project would clearly meet the emission requirements for the years associated with Items 1 and 3 for the following reasons:
  - The Proposed Project is included in the approved TIPs for both New Jersey and New York and are, therefore, included in the regional emission budgets for both states; and
  - Emissions generated during the operational phase of the Proposed Project would be less than those emitted in the No-Build scenario (see FEIS Section 5.21.4).

  In addition, microscale analyses conducted for the EIS demonstrate that the operational phase of the Proposed Project would not cause or exacerbate a violation of the NAAQS for all applicable pollutants.

- Emissions generated during the Proposed Project's construction phase, which would include the year with the greatest amount of total direct and indirect emissions (Item 2), are subject to general conformity regulations because they will increase regional emission rates and, as such, have the potential to cause or exacerbate an exceedance of an NAAQS. Therefore, analyses were conducted to estimate the amounts of emissions that would be generated during the Proposed Project's construction phase (for comparison with the general conformity applicability rates) and the potential impacts of these emissions on local air quality levels. Emissions generated at the

Proposed Project's construction sites (e.g., tailpipe emissions from the on-site heavy-duty diesel equipment and fugitive dust emissions generated by vehicles traveling within the construction sites) and on the area's roadways by vehicles traveling to and from these sites (by vehicles transporting materials and the workers traveling to and from work) were considered.

Annual emissions were estimated for each year of the Proposed Project's construction period and microscale analyses were conducted for the year with the highest emissions. These emissions are described in more detail in Section 5.

4.0 Applicability Analysis

As stated previously, the first step in a general conformity evaluation is an analysis of whether the requirements apply to a federal action proposed to be taken in a nonattainment or a maintenance area. Unless exempted by the regulations or otherwise presumed to conform, a federal action requires a general conformity determination for each pollutant where the total of direct and indirect emissions caused by the federal action would equal or exceed an annual *de minimis* emission rate.

4.1 Attainment Status of Project Area

The study areas in both New Jersey and New York that would be affected by the construction of the GBR Project are currently designated as nonattainment for both ozone and $PM_{2.5}$ and maintenance for CO. Therefore, the lead federal agency must demonstrate project-level compliance with the general conformity rule following requirements for each of these pollutants and their precursors. As these areas are part of the New Jersey-New York-Connecticut nonattainment region for these pollutants, emissions generated within this entire region were considered in this demonstration.

4.2 Exemptions from General Conformity Requirements

As noted previously, the general conformity requirements apply to a federal action if the net project emissions equal or exceed certain *de minimis* emission rates. The only exceptions to this applicability criterion are the topical exemptions summarized below. However, the emissions caused by the Proposed Project do not meet any of these exempt categories.

- Actions that would result in no emissions increase or an increase in emissions that is clearly below the *de minimis* levels (40 C.F.R. § 93.153(c)(2)). Examples include administrative actions and routine maintenance and repair.
- Actions where the emissions are not reasonably foreseeable (40 C.F.R. § 93.153(c)(3)).
- Actions which implement a decision to conduct or carry out a conforming program (40 C.F.R. § 93.153 (c)(4)).
- Actions which include major new or modified sources requiring a permit under the New Source Review (NSR) program (40 C.F.R. § 93.153(d)(1)).
- Actions in response to emergencies or natural disasters (40 C.F.R. § 93.153(d)(2)).
- Actions which include air quality research not harming the environment (40 C.F.R. § 93.153(d)(3)).
- Actions which include modifications to existing sources to enable compliance with applicable environmental requirements (40 C.F.R. § 93.153(d)(4)).
- Actions which include emissions from remedial measures carried out under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) that comply with other applicable requirements (40 C.F.R. § 93.153(d)(5)).

In addition to these topical exemptions, the general conformity regulations allow each federal agency to establish a list of activities that are presumed to conform (40 C.F.R. § 93.153(f)). The USCG has not established a presumed-to-conform list of activities at the time of this evaluation.

4.3 *De minimis* Emission Rates

The general conformity requirements will apply to the federal action for each pollutant for which the total of direct and indirect emissions caused by the federal action equal or exceed the *de minimis* emission rates shown below. These emission rates are expressed in units of tons per year (tpy) and are compared to the total of direct and indirect emissions caused by the Proposed Project for the calendar year during which the net emissions are expected to be the greatest. The applicable threshold levels for general conformity for the project area (which is located within an ozone transport region), according to 40 CFR Part 93, are shown in Table 1.

TABLE 1
GENERAL CONFORMITY APPLICABILITY RATES

Pollutant	Applicability Threshold
Carbon Monoxide (CO)	100 tons per year
Volatile Organic Compounds (VOCs)	50 tons per year
Nitrogen Oxides (NOx)	100 tons per year
PM2.5 (Direct Emissions)	100 tons per year
Sulfur Dioxide (as a PM2.5 Precursor)	100 tons per year

Because O_3 is a secondary pollutant (i.e., it is not emitted directly into the atmosphere but is formed in the atmosphere from the photochemical reactions of VOC and NO_x in the presence of sunlight), its *de minimis* emission rate is based on primary emissions of its precursor pollutants - VOC and NO_x. If the net emissions of either VOC or NO_x exceeds the *de minimis* emission rate for O_3 (USEPA 1994), the federal action is subject to a general conformity evaluation for O_3.

4.4 Eight-Hour vs. One-Hour Ozone Standard

The VOC and NOx values shown in Table 1 are based on the study area being designated as "nonattainment" for the 8-hour ozone standard. However, the study area was previously designated as "severe nonattainment" for the previous (1-hour) ozone standard. USEPA has stated that the 8-hour ozone standard is the applicable standard for demonstrating general conformity (USEPA e-mail correspondence to USCG, dated October 18, 2010). The USCG concurs with USEPA's opinion. The values associated with the 8-hour standard for a nonattainment area are shown in Table 1.

In commenting on the Draft General Conformity Determination, NJDEP and NYSDEC stated their position that, pursuant to the anti-backsliding requirements of the CAA, the applicability rates for a severe nonattainment area should be applied. These would be 25 tons per year for both nitrogen oxides and volatile organic compounds.

4.5 Applicability for Federal Action

The applicability of the general conformity requirements to the federal action was evaluated by comparing the total of direct and indirect emissions for the calendar year of greatest emissions to the *de minimis* emission rates specified in Table 1. Where the total of direct and indirect emissions attributable to the federal action was found to be below the *de minimis* emission rates for a pollutant, that pollutant is excluded from general conformity requirements and no further analysis is required. Those pollutants that could not be excluded from applicability must undergo a general conformity evaluation.

4.5.1 Methodology

As shown in the GBR FEIS (Section 5.21.4), the results of the regional analyses conducted for the proposed project demonstrate that emissions generated during the operational phase would be less than those emitted in the No-Build scenario and that the microscale analyses demonstrate that the preferred alternative would not cause or exacerbate a violation of the NAAQS for these pollutants. As such, emissions generated during the Proposed Project's construction phase are the only emissions subject to this general conformity determination.

The analysis conducted for the FEIS to estimate potential direct and indirect air quality impacts caused by emissions generated by both on-site (e.g., demolition activities, construction equipment operations, dredging and tug boat activities, and truck movements) and off-site (e.g., motor vehicle traffic effects due to truck trips and ramp closures) construction-phase activities included the following:

- Estimation of direct emissions generated by the construction activities (e.g., deconstruction, concrete and steel construction, dredging, etc.), including fugitive dust emissions and emissions released from diesel-powered equipment (including tug boats) and trucks based on the hours of operation of each piece of equipment;
- Identification of heavily traveled truck routes to estimate the cumulative effects of on-site construction activity emissions and off-site traffic emissions;
- A dispersion modeling analysis of the two major construction areas, one in Elizabeth, New Jersey, and the other in Staten Island, New York;
- A dispersion modeling analysis of the effects of the indirect emissions generated by project-related vehicles at the roadway intersections/interchanges adjacent to the construction areas using traffic data that include construction-related vehicles and background traffic; and
- A comparison of the cumulative (direct and indirect) modeling results to the applicable NAAQS for the applicable pollutants.

Emission rates for these activities were estimated based on the following:

- The number of hours per day and duration of each construction activity;
- The number and type of construction equipment to be used;
- Horsepower (HP) and utilization rates (hours per day) for each piece of equipment;
- The quantities of construction/demolition material produced and removed from each site; and
- The number of truck trips needed to remove construction/demolition material, and to bring the supply materials to each site.

4.5.2 Estimated Emissions and Comparison to *De minimis* Thresholds

Total annual estimated emissions generated within the New York-New Jersey-Connecticut region during the Proposed Project's construction period, as presented in the GBR FEIS, are provided in Table 2. These values are the peak direct emissions (including emissions generated by construction-related marine vessels) during each analysis year plus maximum annual off-site emissions. Peak indirect emission estimates are based on the following conservative assumptions that were developed by the GBR Project's design engineers:

- All dump trucks, girder delivery trucks, rebar delivery trucks, pipe pile trucks, and steel demolition trucks would travel 60 miles each way within the region, to and from the construction sites;
- All trucks delivering concrete to the construction sites would travel 10 miles each way; and
- Construction workers would travel 50 miles each way to and from the construction site.

The values presented in Table 2 are provided for comparison with the general conformity applicability threshold values.

TABLE 2
TOTAL ANNUAL EMISSIONS FROM CONSTRUCTION EQUIPMENT AND ACTIVITIES AT NEW JERSEY AND NEW YORK CONSTRUCTION SITES
(TONS PER YEAR)

Pollutant	Estimated Emissions					Conformity Applicability Thresholds for an Ozone Nonattainment Area
	2011	2012	2013	2014	2015	
CO	**149**	**170**	**155**	**140**	**137**	100
NO_x	**114**	**153**	**130**	*96*	*92*	100
PM_{10}	5	4	3	3	2	100
$PM_{2.5}$	3	3	3	2	2	100
SO_2	7	10	8	5	5	100
VOCs	4	4	4	4	4	50

4.5.3 Regional Effects

As the regional emissions for all of the applicable pollutants are lower during the operations phase of the GBR Project than under the No-Build Alternative (i.e., Build Alternative will result in decreased regional emissions of all applicable pollutants), only emissions generated during the construction phase were compared to these threshold levels to determine conformity compliance. As shown in Table 2, construction-phase emissions (in New Jersey and New York combined) are less than the general conformity applicability rates, with the following exceptions:

- Annual estimated NOx emissions are greater than the applicability rate for an ozone nonattainment area of 100 tons per year for the first 3 years of the construction phase; and
- Annual estimated CO emissions are greater than the applicability rate of 100 tons per year for all years of the construction phase. However, as discussed in Section 5.1.2, offsets are not necessary for CO emissions.

As such, a general conformity determination is required for these pollutants for the GBR Project's construction-phase years. This determination includes:

- A commitment from the Port Authority that all construction-phase NOx emissions for years exceeding the 8-hour ozone nonattainment area thresholds will be offset by the utilization of excess credits from the HDP[3];
- A determination that Project-generated $PM_{2.5}$ emissions would not exceed the conformity applicability threshold for $PM_{2.5}$; and
- A demonstration, based on the results of microscale CO analyses that the Project would not cause or exacerbate a localized violation of a NAAQS.

No additional analyses are required for the other pollutants.

3 Without setting a precedent, the Port Authority has advised that it would also commit to offset NOx emissions during the construction period that would satisfy the position of the NYSDEC and NJDEP regarding applicability of thresholds for a severe nonattainment area for the 1-hour ozone standard. Further, the Port Authority, as a contingency plan, subject to Port Authority Board authorization, would implement an additional Marine Vessel Engine Replacement Program, if necessary.

5.0 General Conformity Evaluation

For federal actions subject to a general conformity evaluation, the regulations delineate several criteria that can be used to demonstrate conformity (40 C.F.R. § 93.158). In fact, a combination of these criteria may be used to support a positive general conformity determination (USEPA 1994). The approach taken to evaluate the Proposed Project relies on a combination of these available criteria. This section summarizes the findings to make the determination.

5.1 Conformity Requirement of Proposed Project

Based on the results shown in Table 2, construction-phase emissions (in New Jersey and New York combined) conformity determinations are required for:

- NOx – because annual estimated emissions are greater than the applicability rate of 100 tons per year for 3 years of the construction phase of the project; and
- CO – because annual estimated emissions are greater than the applicability rate of 100 tons per year for all years of the construction phase.

5.1.1 Compliance with Conformity Requirements for NOx Emissions

To support the general conformity compliance determination, the USCG demonstrates herein that the emissions of NO_x (a precursor to O_3 and $PM_{2.5}$) caused by the construction of the Proposed Project will not result in an increase in regional NOx emissions. This will be achieved by off-setting all of the NOx emissions generated by the construction of the GBR for the years when the conformity applicability thresholds for an ozone nonattainment area are exceeded (currently estimated to be three years).

Upon initiation of project construction, the project contractor will monitor construction equipment emissions and will provide regular reports (at a timetable yet to be established) to an agent agreed to by the USACE and the Port Authority who will keep a Mobile Source Trading Inventory, in effect a balance sheet of the offset credit generation and utilization.

5.1.2 Compliance with Conformity Requirements for CO Emissions

As discussed in the GBR FEIS, CO is a pollutant that is of concern on a microscale basis. As such, a detailed mobile source dispersion analysis was conducted for the FEIS (see Section 5.21.2) that demonstrated that the CO emissions generated during the Proposed Project's construction phase would not cause or exacerbate a localized violation of an ambient CO standard near any of the roadways that would be affected by project-related changes in traffic. Potential construction-phase air quality impacts associated with the operation of vehicles (including trucks used for the transportation of rock and debris removal, transport of construction materials and cement, and construction workers' vehicles) on the roadway network and changes in ramp configurations (as a result of lane closures in New Jersey during peak construction periods) were estimated.

"Hot-spot" (intersection-level) modeling analyses were conducted to estimate future CO levels with and without the Proposed Project. Analyses were conducted following USEPA's *Intersection Modeling Guidelines* (EPA-454/R-92-005) for CO modeling methodology and receptor placement. The following intersections/areas were evaluated:

- New Jersey – Bayway Avenue/Atlantic Street and New Jersey Turnpike Interchange 13; and
- New York – Forest Avenue/ Goethals Road North and Staten Island Expressway.

The CAL3QHC dispersion model was applied. Emission factors were estimated using the USEPA Mobile 6.2.03 emission algorithm and AM and PM peak traffic conditions were considered.

The result of this analysis is that the maximum estimated pollutant concentrations during the construction phase of the preferred alternative (i.e., with project-related vehicles and with emissions generated by the operation of construction-site equipment) is below the NAAQS for CO. The maximum estimated 8-hour concentration (including background levels) is 2.8 ppm in New York and 4.6 ppm in New Jersey. As these values are below the 8-hour (i.e., the critical averaging period for this pollutant) standard of 9 ppm, the result of this analysis is that the Proposed Project would not cause or exacerbate a violation of a CO standard.

6.0 Reporting

To support a decision concerning the federal action, the USCG is issuing this final general conformity determination with the ROD for the Goethals Bridge Replacement Project.

6.1 Draft General Conformity Determination

The USCG provided copies of the draft general conformity determination to the appropriate regional offices of USEPA, and to the New York State Department of Environmental Conservation and the New Jersey Department of Environmental Protection, for a 30-day review. The USCG also placed a notice in a daily newspaper of general circulation announcing the availability of the draft general conformity determination and requesting written public comments during a 30-day period.

6.2 Final General Conformity Determination

The USCG is providing copies of this final general conformity determination to the appropriate regional offices of USEPA within 30 days of its issuance. The USCG will also place a notice in a daily newspaper of general circulation announcing the availability of its final general conformity determination within 30 days of its promulgation. As part of the general conformity evaluation, the USCG has documented its responses to all comments received on the draft general conformity determination and will make both the comments and responses available upon request by any person within 30 days of the promulgation of the final general conformity determination.

6.3 Frequency of General Conformity

The general conformity regulations state that the status of a specific conformity determination lapses 5 years after the date of public notification for the final general conformity determination, unless the action has been completed or a continuous program has been commenced to implement the action (40 C.F.R. § 93.157(a)).

7.0 Findings and Conclusions

As part of the environmental review of the Proposed Project, the USCG conducted a general conformity evaluation pursuant to 40 C.F.R. Part 93 Subpart B. The general conformity regulations apply at this time to the USCG issuance of a Bridge Permit because the project area is located in an area that is designated as a nonattainment area for the 8-hour ozone standard , nonattainment for $PM_{2.5}$, and a maintenance area for CO. The USCG conducted the general conformity evaluation following all regulatory criteria and procedures and in coordination with USEPA. Based on this review, the USCG has concluded that the Proposed Project's emissions can be accommodated in both the New Jersey and New York SIPs. USEPA reviewed and agreed with the regulatory analysis. The USCG has determined that the Proposed Project utilizing the New Alignment South will conform to the approved SIPs, based on the findings below:

- The Port Authority, the project sponsor, would commit that all construction-phase NOx emissions for the years that the conformity applicability thresholds will be exceeded for an 8-hour ozone nonattainment area for the construction phase of the project will be offset by the utilization of excess credits from the HDP. [4]
- A determination that project-generated $PM_{2.5}$ emissions would not exceed the conformity applicability threshold for $PM_{2.5}$; and
- A demonstration, based on the results of microscale CO analyses, that the project would not cause or exacerbate a localized violation of a NAAQS.

Therefore, the USCG hereby concludes that the Proposed Project utilizing the New Alignment South conforms to the purpose of the approved SIPs and is consistent with all applicable requirements.

4 Without setting a precedent, the Port Authority has advised that it would also commit to offset NOx emissions during the construction period that would satisfy the position of the NYSDEC and NJDEP regarding applicability of thresholds for a severe nonattainment area for the 1-hour ozone standard. Further, the Port Authority, as a contingency plan, subject to Port Authority Board authorization, would implement an additional Marine Vessel Engine Replacement Program, if necessary.

8.0 Statement of Conformity

Based on the results of the analyses provided in this document, I have determined that the Goethals Bridge Replacement Project, utilizing the New Alignment South, will comply with the General Conformity Rule, provided that the NOx emissions caused by the construction of the Proposed Project for at least the years or portions thereof when the conformity applicability thresholds for an ozone nonattainment area are exceeded will be offset through the use of excess NOx credits generated as part of the Port Authority's Harbor Deepening Project, and that this will be accomplished under the auspices of the US Army Corps of Engineers and the Port Authority of New York and New Jersey.

JAN 14 2011

Date

Gary Kassof
Bridge Program Manager
First Coast Guard District
By Direction of the District Commander

9.0 References

40 C.F.R. Part 93 Subpart A. *Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Laws.*

40 C.F.R. Part 93 Subpart B. *Determining Conformity of General Federal Actions to State or Federal Implementation Plans.*

Port Authority of New York & New Jersey. 2007. *Sustainable Design Project Manual*, Engineering Department.

U.S. Environmental Protection Agency (USEPA). 1994. General Conformity Guidance: Questions and Answers. July 13. Web site: http://www.epa.gov/ttn/oarpg/conform/gcgqa_71394.pdf.

U.S. Environmental Protection Agency (USEPA). 2010. Final Revisions to the General Conformity Regulations. March 24.

ATTACHMENT A

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

COMMITMENT TO MINIMIZE AND OFFSET NOX EMISSIONS

DURING GOETHALS BRIDGE REPLACEMENT PROJECT CONSTRUCTION

The Port Authority of New York and New Jersey
Commitment to
Minimize and Offset NOx Emissions during
Goethals Bridge Replacement Project Construction

Introduction

The Port Authority of New York and New Jersey (Port Authority) has applied to the United States Coast Guard (USCG) for a Bridge Permit for the Port Authority's Goethals Bridge Replacement (GBR) Project (Project). Section 176(c) of the Clean Air Act (CAA) prohibits Federal entities from taking actions (such as issuing a Bridge Permit) in nonattainment or maintenance areas, which do not conform to the State Implementation Plan (SIP) for the attainment and maintenance of the national ambient air quality standards (NAAQS). The construction of the Project in New York and New Jersey would generate oxides of nitrogen (NOx), a pollutant, which, if not offset by credits derived from another project, would result in air emissions that would exacerbate air quality in an ozone nonattainment area. As detailed in the Final General Conformity Determination (GCD), the USCG conducted a general conformity evaluation pursuant to 40 C.F.R. Part 93 Subpart B. Based on this review, the USCG has concluded that the proposed Project's emissions can be accommodated in both the New Jersey and New York SIPs. The United States Environmental Protection Agency (USEPA) reviewed and agreed with the regulatory analysis. The USCG has determined that the Project utilizing the New Alignment South will conform to the approved SIPs, based on the findings below:

- The Port Authority, the Project sponsor, would commit that all construction-phase NOx emissions for years exceeding the 8-hour ozone nonattainment area thresholds will be offset by the utilization of excess credits from the Harbor Deepening Project (HDP);[1]
- A determination that Project-generated particulate matter of equal to or less than 2.5 microns ($PM_{2.5}$) emissions would not exceed the conformity applicability threshold for $PM_{2.5}$; and
- A demonstration, based on the results of microscale carbon monoxide (CO) analyses, that the Project would not cause or exacerbate a localized violation of a NAAQS.

This statement should satisfy the requirement for a Port Authority Commitment.

Commitment

Offsets: The Port Authority, the Project sponsor, hereby commits that all construction-phase NOx emissions for the years that the conformity applicability thresholds will be exceeded for an ozone nonattainment area (100 tons per year) for the construction phase of the Project will be

[1] Without setting a precedent, the Port Authority has advised that it would also commit to offset NOx emissions during the construction period that would satisfy the position of the NYSDEC and NJDEP regarding applicability of thresholds for a severe nonattainment area for the 1-hour ozone standard . Further, the Port Authority, as a contingency plan, subject to Port Authority Board authorization, would implement an additional Marine Vessel Engine Replacement Program, if necessary.

offset by the utilization of excess credits from the HDP. USEPA has stated that the 8-hour ozone standard for an ozone nonattainment area is the applicable standard for demonstrating general conformity (USEPA e-mail correspondence to USCG, dated October 18, 2010). The USCG concurs with USEPA's opinion. However, the USEPA, as a member of the Regional Air Team (RAT) (which also includes the United Army Corps of Engineers (USACE), New York State Department of Environmental Conservation (NYSDEC), New Jersey Department of Environmental Protection (NJDEP), and the Port Authority), by letter dated September 9, 2010, requested that a consensus concerning the mobile source offsets for this Project be reached with the RAT to offset the emissions from the Project. Consensus on the utilization of the HDP excess credits was agreed to at the November 17, 2010, RAT meeting. Additionally, at the request of NJDEP (by letter dated September 13, 2010) regarding the development of a contingency plan, should those HDP-associated credits not be fully realized and/or sufficient, the Port Authority, as a contingency plan, subject to Port Authority Board authorization, would implement an additional Marine Vessel Engine Replacement Program, if necessary.

NYSDEC, by letter dated August 24, 2010, and NJDEP, by letter dated September 13, 2010, stated that the threshold for a severe nonattainment area for the 1-hour ozone standard should apply. Without setting a precedent, the Port Authority hereby commits to offset NOx emissions during the entire construction period when NOx emissions exceed 25 tons (i.e., the applicability threshold for a severe nonattainment area for the 1-hour ozone standard) to satisfy the position of NYSDEC and NJDEP.

Actions to Minimize Emissions: In addition, to minimize construction-phase NOx emissions, pursuant to the Port Authority's sustainable design guidelines, the Port Authority hereby commits that the following emission control measures for diesel equipment exhaust and fugitive dust, would be incorporated into all construction bid specifications documents for the GBR Project.

<u>Emission Control Measures for Diesel Equipment Exhaust</u>:

- Ultra-low sulfur diesel fuel would be used for construction vehicles and equipment;
- Engines for non-road construction equipment with a horsepower (HP) rating above 50 HP would be in compliance with USEPA's Tier 2 standards;
- Eighty percent of construction equipment with engines above 50 HP would be retrofitted with best available control technology (BACT) that has been verified by USEPA and/or the California Air Resources Board, which reduce PM emissions up to 90 percent (without increasing NOx emissions), using diesel particulate filters, diesel oxidation catalysts, flow-through filter technology, etc.;
- Limit unnecessary idling times on diesel powered engines to three consecutive minutes;
- Diesel equipment exhausts would be located away from sensitive land uses; and
- Electric compressors and pumps would be used where possible, instead of diesel-powered equipment.

Emission Control Measures for Fugitive Dust:

- Wet suppression, with or without approved binding agents, would be used on-site on a routine basis with hoses or a sprinkler system during deconstruction and material-handling activities aimed at a 10 percent moisture content in the ground;
- Wet spray power vacuum street sweepers would be used on paved roadways;
- Calcium chloride would be used instead of wet suppression when freezing conditions exist;
- Wheel-wash stations or crushed stone would be used at construction ingress/egress areas;
- Dump trucks would be covered during material transport on public roadways; and
- Truck speed within the construction sites would be limited to less than 5 miles per hour (mph).

Discussion

The Volatile Organic Compound (VOC) and NOx values are based on the study area being designated as "nonattainment" for the 8-hour ozone standard. However, the study area previously was designated as "severe nonattainment" for the previous (1-hour) ozone standard. As noted above, USEPA has stated that the 8-hour ozone standard is the applicable standard for demonstrating general conformity (USEPA e-mail correspondence to USCG, dated October 18, 2010). The USCG concurs with USEPA's opinion.

In commenting on the Draft GCD, NJDEP and NYSDEC stated their position that, pursuant to the anti-backsliding requirements of the CAA, the applicability rates for a severe nonattainment area should be applied. These would be 25 tons per year [tpy] for both nitrogen oxides and volatile organic compounds.

The GBR construction equipment's NOx emissions (i.e., from construction activities that would be permitted by the USCG and USACE) is currently estimated not to exceed 160 tpy. This includes the application of emission control measures. The construction phase is currently estimated from 2013 to 2017. NOx offsets would be accomplished by the utilization of excess credits generated from the Port of New York and New Jersey HDP. Pursuant to a January 19, 2006, Memorandum of Understanding for the Staten Island Ferries Retrofit Project between the City of New York and the Port Authority, the Port Authority is entitled to 70 percent of NOx offsets remaining from an engine retrofit project after application of emissions from the HDP. With regard to such 70 percent of excess NOx emission credits, because of the joint USACE/Port Authority funding of the HDP, the Port Authority would share such excess credits with the USACE.

Based on a study prepared by The Louis Berger Group, Inc./PB Americas, Inc. incorporated in the Goethals Bridge Replacement Final Environmental Impact Statement (FEIS) Construction Impacts Section 5.21.7 (Table 5.21.8 p. 5-228) (August 2010), GBR Project construction-phase emissions are estimated not to exceed 160 tpy. A USACE document entitled "SNEO Program Netting", dated November 17, 2010, projects that there will be excess credits from HDP offset

sources in sufficient quantities, which would be available for application to offset construction-phase emissions of the GBR Project. If those HDP associated credits are not fully realized, and/or sufficient, the Port Authority, as a contingency plan, subject to Port Authority Board authorization, would implement an additional Marine Vessel Engine Replacement Program, if necessary.

The Port Authority of New York and New Jersey

By: _____
Ernesto L. Butcher

Title: Chief Operating Officer

Date: 12/16/10

Port Authority Use Only:	
Approval as to Terms:	Approval as to Form:
CAA	H.K.B.

Attachments:

- January 19, 2006 - Memorandum of Understanding Staten Island Ferries Retrofit Project between the City of New York and the Port Authority
- August 2010 GBR FEIS Section 5.21.7 (Table 5.21.8 p. 5-228)
- August 24, 2010 - NYSDEC letter
- September 9, 2010 - USEPA letter
- September 13, 2010 - NJDEP letter
- October 18, 2010 - USEPA e-mail correspondence to USCG
- November 17, 2010 - USACE SNEO Program Netting

MEMORANDUM OF UNDERSTANDING

Staten Island Ferries Retrofit Project

AGREEMENT made as of this 19th day of January, 2006 by and between the Port Authority of New York and New Jersey ("PANY/NJ"), a body corporate and politic, created by Compact between the States of New York and New Jersey with the consent of Congress of the United States of America, having an office at 225 Park Avenue South, New York, New York 10003 and the City of New York, (the "City") acting by and through its Commissioner of the Department of Transportation (DOT) having an office at 40 Worth Street, New York, New York 10013.

BACKGROUND

WHEREAS, the PANY/NJ has proposed to the DOT the significant opportunity to use, implement and apply the benefits of certain air emissions control devices (the "Devices") that have been demonstrated through the results of a project (the "Demonstration Project") involving the installation of the Devices on one of the Staten Island ferries to significantly reduce emissions of Nitrogen Oxide ("NOx"), and, as an additional benefit, to moderately reduce Particulate Matter ("PM") (collectively, the "Pollutants") in the United States Environmental Protection Agency ("EPA")-designated New York, New Jersey, Long Island and Connecticut Non-Attainment Area (the "Area") all as more particularly described in a certain agreement (the "Demonstration Agreement") entered into between the parties and dated November 18, 2003; and

WHEREAS, the PANY/NJ, in conjunction with the United States Army Corps of Engineers – New York District ("ACOE-NYD"), on May 28, 2004, entered into a Project Cooperation Agreement ("PCA") pursuant to the Harbor Deepening Project ("HDP"), a project that will deepen federal channels in the New York and New Jersey Harbor to 50-feet, and in the course of the project, equipment will be used that will emit Pollutants in excess of amounts deemed acceptable in the Area by the State Implementation Plans ("SIPs") of the States of New York and New Jersey; and

WHEREAS, based on the success of the Demonstration Project, and as part of its efforts to offset the excess amount of Pollutants created as a result of the HDP, the PANY/NJ has proposed a project (the "Retrofit Project") to install the Devices on the

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remainder of the Staten Island Ferry fleet all as more fully described and set forth in the Scope of Work Staten Island Ferry Retrofit Project contained in the exhibit attached to this Agreement, hereby made a part hereof, and marked "Exhibit A" (the "Scope of Work"); and

WHEREAS, the Regional Air Team ("RAT")[1], a body of federal and state (New York and New Jersey) agencies formed to develop an implementable air emissions mitigation plan referred to as the Harbor Air Management Plan ("HAMP") for the HDP, has concurred that the Retrofit Project as herein described is a preferred and implementable air emissions mitigation component of the HAMP; and accordingly, the ACOE-NYD on the basis of the HAMP dated December 2003, issued a Statement of Conformity ("SOC"), dated April 14, 2004, recognizing the Retrofit Project as the preferred HAMP mitigation to meet General Conformity requirements for the HDP; and

WHEREAS, DOT has identified potential advantages resulting from the Retrofit Project; and

WHEREAS, the parties hereto have carefully assessed the results of the Demonstration Project, and have concluded that the implementation of the Retrofit Project is prudent and in their mutual interest, and has the potential to reduce air emissions of NOx and/or PM, thereby creating an offset of each such air emittent ("NOx Offset" and "PM Offset", respectively, and collectively, "Offsets"); and

WHEREAS, at its meeting on July 26, 2001 the Board of Commissioners of the PANY/NJ authorized the Executive Director of the PANY/NJ to execute the PCA with the ACOE-NYD for the HDP and to execute such other related contracts, agreements and documents as may be required to fulfill the PANY/NJ's responsibility under the PCA;

NOW, THEREFORE, in consideration of the premises and mutual covenants herein, the parties hereto agree as follows:

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[1] The RAT is comprised of the: United States Environmental Protection Agency-Region 2 (USEPA), the Army Corps of Engineers New York District (ACOE-NYD), New Jersey Department of Environmental Protection (NJDEP), New York State Department of Environmental Conservation (NYSDEC) and PANY/NJ.

ARTICLE I. PANY/NJ RESPONSIBILITIES

1.1 As set forth in the Scope of Work, the PANY/NJ, at its sole cost and expense, will make its best effort to select and utilize the services of an emissions consultant ("Consultant") to determine retrofit specifications for each applicable Staten Island ferry and to solicit vendors through a Request for Proposal ("RFP") process to provide turnkey services to retrofit with Emission Reduction Devices (the "Devices") the Molinari class (includes the Guy V. Molinari, the John J. Marchi, and the Spirit of America) and Barberi class (includes the Andrew J. Barberi and the Samuel I. Newhouse) Staten Island ferries deemed by the PANY/NJ suitable for the Devices. In accordance with the Scope of Work, the turnkey services will encompass the design, manufacture and installation of the Devices on the main engines of the suitable ferries, and commissioning the vessels, including obtainment of approval for the design, vessel modifications, installation and final inspection from the United States Coast Guard and the American Bureau of Shipping. Additionally, the PANY/NJ will make its best effort to enter into a cost effective agreement with Argillon, LLC to retrofit the John Noble, an Austen class vessel, with Selective Catalytic Reduction ("SCR") and Diesel Oxidation Catalyst Devices. Argillon, LLC retrofitted the demonstration vessel, the Alice Austen, an Austen class vessel. PANY/NJ will, to the best of its ability, insure that its vendors conduct retrofit activities in accordance with the vessel outages as identified in Article II, Section 2.1.

1.2 For the term of this MOU, repair of the Devices and material necessary for the operation of the Devices will be the responsibility of the PANY/NJ or its designated contractor, contingent upon Article II, Sections 2.6 and 2.10. The PANY/NJ will pay for the cost of repair associated with the Devices. During the term of the MOU, PANY/NJ shall respond promptly to any request of the DOT for technical assistance, modification or adjustments to the Devices and will keep DOT informed of the status of any request.

1.3 The PANY/NJ will, for the term of this MOU, collect emissions data and perform related monitoring/tracking and recordkeeping in accordance with methods, schedules, and reporting protocols to be developed by its Consultant in coordination with the RAT.

1.4 The PANY/NJ or its Consultant will, for the term of this MOU, periodically, in accordance with manufacturer specifications and recommendations, overhaul and/or replace essential elements of the Devices, contingent upon Article II, Sections 2.6 and 2.10.

Additionally the PANY/NJ will contract for service of the Devices for the term of this MOU.

1.5 The PANY/NJ will, for the term of this MOU and at its sole cost and expense, procure Urea, a chemical that is necessary for the functioning of the SCR Devices. A vendor for the supply of Urea will be selected by the PANY/NJ through its Consultant and a bid or RFP process. Further, if determined to be cost effective, the PANY/NJ will, at its sole cost and expense, install or caused to be installed, a permanent transfer station for the storage and dispensing of Urea at a location to be designated by DOT. The Urea transfer station will incorporate design and construction by the PANY/NJ or its contractor and the maintenance and repair of the Urea transfer station for the term of this MOU.

1.6 PANY/NJ will retain ownership of Devices and the Urea transfer station for the term of this MOUPANY/NJ will provide notification to DOT of transfer of ownership to DOT of the Devices and Urea transfer station upon completion of the HDP or at such time Offset needs are met for the HDP or any other PANY/NJ project where such Offsets are needed.

1.7 The PANY/NJ will comply with all applicable environmental laws with respect to its responsibilities under this MOU; however, it is the PANY/NJ's position that it is not subject to the New York State Environmental Quality Review Act ("SEQRA") or New York City Environmental Quality Review ("CEQR") and their respective regulatons. Should it be determined that the Retrofit Project constitutes an action by DOT requiring the preparation of an Environmental Assessment or an Environmental Impact Statement pursuant to SEQRA or CEQR, the PANY/NJ will provide reasonable and necessary assistance as requested by DOT.

1.8 PANY/NJ will, for the term of this MOU, be solely responsible for all costs associated with or related to damage to the Devices caused by PANY/NJ personnel and/or PANY/NJ contractors, including but not limited to repairs to the Devices and repairs to and cleaning of vessels.

ARTICLE II. DOT'S RESPONSIBILITIES

2.1 DOT agrees to grant and/or arrange for the PANY/NJ, or a contractor acting on its behalf, reasonable access to all of the ferries described in Article I for the purpose of performing the activities set forth in the Scope of Work including, but not limited to:

the installation of the Devices; construction and installation of the Urea transfer station; conducting monitoring/tracking and recordkeeping activities; performing overhaul and replacement of essential elements of the Devices. Such reasonable access shall be in accordance with DOT's U.S. Coast Guard-approved facility and vessel security plan as applicable. Depending on the Scope of Work options selected, it is anticipated that installation of the Devices, overhaul and replacement activities will be performed during short term and long term lay-up periods such as, but not limited to, the Staten Island Ferry Dry Dock Schedule as shown in Exbibit B. In order to coordinate the installation of Devices with the need for HDP Offsets, as shown on Exhibit C, United States Army Corps of Engineers – New York District Harbor Deepening Project Emissions Offsets Summary , DOT will, to the best of its ability, make the Barberi class Staten Island Ferries available for engine mechanical upgrades and adjustments for a period of up to two weeks for each vessel during the months of January and February, 2006. Additionally, DOT will, to the best of its ability, make the Barberi class Staten Island Ferries available for the installation of SCR Devices and PM reduction technology for a period of up to four months for each vessel during the months from April through September 2006, with no more than one vessel out of service at any one time.

2.2 If the Barberri class Staten Island Ferries can not be made available by DOT as indicated in Section 2.1, PANY/NJ reserves its right to adjust and/or terminate its solicited contracts for the work indicated in Section 2.1 and Article I, Section 1.1.

2.3 DOT will become the owner of the Devices and the Urea transfer station upon the expiration of the term of this MOU in accordance with the provisions in Article I, Section 1.6 .

2.4 DOT agrees to permit PANY/NJ, or a contractor acting on its behalf, to enter upon DOT premises upon fourteen (14) days prior written notice by PANY/NJ for the purpose of conducting any and all necessary installations of the Devices and the transfer station and all other work described in the Scope of Work provided that DOT, in its sole discretion, shall retain the right to delay such permission in the best interest of the City by giving PANY/NJ ten (10) days written notice. However, nothing herein shall limit DOT's or the City's right to delay such permission if it is deemed, in DOT's or the City's sole discretion, that there exists an emergency situation or a threat to life, property or public safety.

2.5 DOT agrees to provide such access as identified in Article II, Section 2.1 without cost to the PANY/NJ.

2.6 DOT will perform, at its sole cost and expense, routine maintenance and procedures necessary to keep the Devices in good working order and to ensure that the necessary Offsets are obtained, including:

2.6.1 Accept weekly Urea deliveries, perform vessel Urea filling, and operate and maintain the Urea transfer station upon its installation.

2.6.2 Provide and change air compressor filters associated with the air delivery system used for Urea injection at a frequency of no more than twice per year per vessel.

2.6.3 Perform annual catalyst inspections and rotations per vessel.

2.6.4 Perform quarterly inspection and cleaning of Urea injection lances.

2.6.5 For routine vessel fuel injector replacements, utilize fuel injectors certified to meet Tier 1 NOx emissions standards when these Devices have been deemed and approved by the RAT as an acceptable pollutant mitigation alternative for the generation of Offsets.

2.7 DOT agrees that if any work for which it is responsible pursuant to this MOU related to maintaining the Devices or the Urea transfer station is performed by a contractor acting on DOT's behalf, then such contractor shall possess and maintain insurance adding the City, DOT and PANY/NJ as additional insureds thereon.

2.8 DOT personnel will receive deliveries of equipment necessary for the installation and maintenance of the Devices and the construction of the Urea transfer station, and provide security for such equipment at a predesignated work site, to be selected at the sole discretion of DOT, at the sole cost and responsibility of DOT. However, DOT shall not be required to provide any increase to the level of staffing of security personnel that it currently provides.

2.9 Any labor cost and liability of DOT personnel for training, operations and maintenance, and possible assistance in the installation associated with the Devices will be the responsibility of the DOT.

2.10 DOT will keep the ferries used in the Retrofit Project in good working order.

2.11 DOT will cooperate and participate as necessary in the application for any permits and/or approvals, including but not limited to applications or other submittals for the legal recognition and obtainment of Offsets, needed to meet the objectives of the Retrofit Project and this MOU , including the execution of any application or other document.

2.12 If required, DOT will undertake, at its sole cost and expense and in a timely manner so as not to cause undue delay, all actions necessary for DOT and/or the City to comply with SEQRA and CEQR and their respective regulations, and any other applicable environmental laws with respect to DOT's or the City's responsibilities under this MOU.

2.13 DOT agrees to notify PANY/NJ of any changes in operations that may potentially affect the functionality of the Devices and/or the calculations of Offsets, such as a change in fuel quality, engine load rebalancing, or vessel schedules.

2.14 DOT will, for the term of this MOU, be solely responsible for all costs associated with or related to damage to the Devices caused by DOT personnel and/or DOT contractors, including but not limited to repairs to the Devices and repairs to and cleaning of vessels.

ARTICLE III. DETERMINATION AND ALLOCATION OF OFFSETS

The parties recognize that any NOx Offset and any PM Offset resulting from the Retrofit Project shall be applied to such emittents from the HDP, as permitted. However, should any NOx Offset or any PM Offset remain following such application, then the parties agree to allocate seventy percent (70%) of such remaining Offsets to PANY/NJ and thirty percent (30%) of such remaining Offsets to the DOT for application, as permitted, to projects other than the HDP that either PANY/NJ or the City of New York undertake and for which such Offsets are needed.

ARTICLE IV. TERM

4.1 This MOU, with respect to its terms and conditions as related specifically to the Pollutants, the Devices and Urea, shall continue in full force and affect from the date first written above and for so long as emissions reductions of the Pollutants are legally required for the HDP and sufficient Offsets are being produced and are legally recognized as available to meet the requirements of the HDP, and also for such time as Offsets are being utilized for any other PANY/NJ project.

4.2 At such time that the HDP is completed, which is currently estimated to be ten (10) years, or Offsets are no longer legally required and available to meet the requirements of the HDP with respect to the Pollutants or the PANY/NJ is not using Offsets for other projects, this MOU shall terminate and the respective rights and obligations of the parties shall end.

ARTICLE V. CONFIDENTIALITY

5.1 PANY/NJ and its vendors agree that any information, including but not limited to designs, plans, maps, drawings, or other data concerning the operation, location or functionality of DOT or City facilities and vessels, obtained during the term of this MOU shall be kept confidential and shall not be released to anyone without the DOT's prior approval. Further, PANY/NJ agrees to either safeguard or dispose of such information and material in a secure manner acceptable to the DOT.

5.2 Without disclosing its source, the parties to this MOU may use information gleaned from the Retrofit Project for the purpose of writing specifications to be used in any bid document or in any Requests for Proposals or any Requests for Information ("RFI") that may be issued at any time during or subsequent to this MOU.

ARTICLE VI. TERMINATION

This MOU shall terminate (i) by expiration of its term as set forth in Article IV or (ii) by mutual agreement of the parties herein.

ARTICLE VII. CONTACT PERSONS

Any notices to be given under this MOU shall be given in writing and delivered by hand or sent by certified mail, postage prepaid return receipt requested, addressed as follows:

If to PANY/NJ:

The Port Authority of New York & New Jersey
225 Park Ave. South -11th Floor
New York, New York 10003

Attn: Steve Dorrler

Manager – Waterways Planning and Development

Port Planning and Development Division

Port Commerce Department

[(212) 435 - 4273; sdorrler@panynj.gov]

With a copy to:

The Port Authority of New York & New Jersey
225 Park Ave. South - 15th Floor
New York, New York 10003
Attn: General Counsel

If to City/DOT:

N.Y.C. Department of Transportation
Division of Passenger Transport
59 Maiden Lane, 35th Floor
New York, NY 10013
Attn: Louis Calcagno, PhD.
Assistant Deputy Commissioner
Alternative Fuel Program
[(212) 487-6820; lcalcagno@dot.nyc.gov]

With a copy to:

NYCDOT
40 Worth Street
New York, N.Y. 10013
Attn: Office of General Counsel
[(212) 442-7730]

ARTICLE VIII. <u>SEVERABILITY</u>

Should any provision of this MOU be deemed to be invalid or unenforceable by any Court of competent jurisdiction, such provision shall be severed from this MOU and the remainder of this MOU shall continue in full force and effect.

ARTICLE IX. CLAIMS AND ACTIONS THEREON

9.1 No action shall lie or be maintained against the PANY/NJ or the City/DOT upon any claims arising from this MOU unless such action shall be commenced within six (6) months of the termination of or conclusion of this MOU or within six (6) months after the accrual of the Cause of Action, whichever occurs first.

9.2 In the event any claim is made or any action brought in any way relating to the MOU herein, the PANY/NJ and the City/DOT shall diligently render to the other, without additional compensation, any and all assistance, which either party may require of the other.

9.3 The PANY/NJ and the City/DOT shall report to the other in writing within thirty (30) working days of the initiation by or against it of any legal action or proceeding in connection with or relating to this MOU.

ARTICLE X. GENERAL

10.1 Failure to act upon any right or remedy contained in this MOU shall not constitute a waiver of such right or remedy nor shall it preclude a subsequent enforcement of such right or remedy.

10.2 Waiver by PANY/NJ or City/DOT of a breach of any provision of this MOU shall not be deemed to be a waiver of any other or subsequent breach and shall not be construed to be a modification of the terms of the MOU unless and until the same shall be agreed to in writing by the parties as required and attached to the original MOU.

10.3 City/DOT and PANY/NJ may waive their respective rights, powers or privileges under this MOU; provided that any such waiver shall be in writing and provided further, that no failure or delay on the part of any party to exercise any right, power or privilege under this MOU will operate as waiver thereof, nor will any single or partial exercise of any right, power or privilege under this MOU preclude any other or further exercise thereof or the exercise of any such waiver operate or be construed as a future waiver of such right, power or privilege thereunder.

10.4 All Exhibits to this MOU shall be deemed part of this MOU. All captions and headings contained in this MOU are for ease of identification only and do not constitute part of this MOU.

ARTICLE XI. FORUM PROVISION

This MOU shall be construed pursuant to the laws of the State of New York. Any dispute arising from this MOU shall be adjudicated in the courts of the State of New York.

ARTICLE XII. CONFLICT OF INTEREST

No officer, agent, employee, or representative of the City or DOT received any payment or other consideration for the making of this MOU nor has any legal interest, directly or indirectly, in this MOU.

ARTICLE XIII. MERGER

13.1 This MOU may only be amended by a written document, executed by both parties herein.

13.2 This written MOU contains all the terms and conditions agreed upon by the parties hereto, and no other agreement, oral or otherwise, regarding the subject matter of this MOU shall be deemed to exist or to bind any of the parties hereto or to vary any of the terms contained herein.

ARTICLE XIV. INDEMNIFCATION

14.1 The PANY/NJ and the City/DOT hereby covenant and agree that with respect to the performance of this MOU, each will indemnify and save harmless the other, its Commissioners, officers, agents, representatives and employees against, any and all claims, demands, penalties, fines, settlements, damages, injuries, losses, costs, expenses and judgments of whatever kind or nature to the extent arising out of its respective negligent or wrongful acts or omissions or those of any of its Commissioners, officers, agents, representatives and employees, provided, that neither the PANY/NJ nor the City/DOT shall have any obligation with respect to damages to the extent caused by the negligence and/or intentional tortious acts of the other, its Commissioners, officers, agents, representatives and employees. The PANY/NJ and the City/DOT agree that each

shall be responsible for its own defense in connection with any claims or liabilities arising from the performance of this MOU. Neither the City/DOT nor the PANY/NJ will settle any such claim, liability or action without the other party's prior written consent, provided, that if the party whose consent is requested shall unreasonably refuse to consent to any such settlement or shall fail to do so within a reasonable time after such request is made, then, in addition to the obligation to indemnify the requesting party for all amounts, including those in excess of the proposed settlement, such non-consenting party shall also be responsible for any legal fees and expenses incurred by the other party in connection with its defense after the date of such non-consent

.

14.2 Notwithstanding any provisions of this MOU to the contrary, neither the PANY/NJ nor any of its contractors nor any Commissioner, officer, agent, representative or, employee thereof, shall be liable to the City or to the DOT, and neither the City/DOT nor any Commissioner, officer, agent, representative or employee thereof shall be liable to the PANY/NJ, for consequential damages of any kind or nature in any event whatsoever, even if arising from any act, omission or negligence of such party or from the breach by such party of its obligations under this MOU.

ARTICLE XV. INSURANCE

15.1 The PANY/NJ or a contractor acting on its behalf, agrees to procure, with companies authorized to do business in the State of New York, and maintain at its own cost and expense, during the term of this MOU, the following insurance adding DOT and the City as additional insured parties:

(a) Commercial General Liability Insurance to protect DOT and the City against claims for property damage and for personal injuries, including accidental death. Such insurance shall have a single combined limit of $10,000,000 per occurrence and $20,000,000 aggregate.

(b) Environmental Impairment Liability Insurance shall be procured by the contractor hired by the PANY/NJ to protect DOT and the City against any and all claims for property damage or personal injuries, including accidental death. Such insurance shall have a single combined limit of $1,000,000 per occurrence and $10,000,000 aggregate.

15.2 The liability policy or policies carried by the contractor and subcontractors must contain "Cross-Liability/Severability of Interests" coverage, providing that the protection afforded the contractor thereunder, with respect to any claim or action against the contractor by a third person, shall pertain and apply with like effect with respect to any claim or action against the contractor by the PANY/NJ, or against the PANY/NJ by the contractor, but said endorsement shall not limit, vary, change or affect the provisions afforded the PANY/NJ as an additional insured.

15.3 A copy of the certificate for such insurance shall be provided to the Commissioner of DOT, or his designee, before the commencement of any work by the contractor pursuant to this MOU. The policies shall not be canceled, terminated or modified unless fifteen (15) days prior written notice is sent by registered mail to the Commissioner, Department of Transportation, 40 Worth Street, Room 1001, New York, New York 10013.

15.4 Notwithstanding any provision of such policy to the contrary, notice by or on behalf of the City/DOT as Additional Insureds of any occurrence, offense, claim or suit, if such notice is required, will be deemed timely if given to the Insurance Company as soon as practicable after a Notice of Claim adequately specifying the occurrence, offense, claim or suit as one potentially covered under the policy has been filed with the Comptroller of the City of New York ("Comptroller"); however, in no event shall notice be deemed untimely so long as it is given within 180 days of the filing of the Notice of Claim.

15.5 Any notice, demand or other writing by or on behalf of the PANY/NJ or its Contractor to the Insurance Company relating to any occurrence, offense, claim or suit shall also be deemed to be a notice, demand or other writing on behalf of the City/DOT as Additional Insureds, and any response thereto on behalf of the Insurance Company shall be sent to the PANY/NJ or its Contractor, to the City/DOT at the New York City Law Department, Insurance Law Unit, Affirmative Litigation Division, 100 Church Street, New York, NY 10007, and to the Comptroller at NYC Comptroller's Office, Insurance Unit, 1 Centre Street, Room 1222, New York, NY 10007.

ARTICLE XVI. NO PERSONAL LIABILITIES

Neither the Commissioners of the PANY/NJ, nor the Commissioners of the City or the DOT, nor any of them, nor any officers, employees or representatives of the

PANY/NJ, the DOT or the City, shall be charged personally with any liability or held personally liable under any provision of this MOU, or because of its execution or attempted execution, or because of any breach or attempted or alleged breach of any provision of this MOU or otherwise.

IN WITNESS WHEREOF, the parties hereto have executed this MOU as of the date first above written.

PORT AUTHORITY OF NY/NJ

By _____

Ernesto L. Butcher
Chief Operating Officer

NOTARY

_____

APPROVED	
TERMS	FORM
SK	AC

CITY OF NEW YORK

By _____

Howard Altschuler
Deputy Commissioner

APPROVED AS TO FORM
CERTIFIED AS TO LEGAL AUTHORITY
Steve Stein Cash
ACTING CORPORATION COUNSEL
DEC 27 2005

NOTARY

SARAH L. WILKINS
Notary Public, State of New York
No. 31-4819596
Qualified in New York County
Commission Expires July 31, 20 06

Approved As To Form
Certified As To Legal Authority

_____

Acting Corporation Counsel

(PANY/NJ ACKNOWLEDGEMENT)

STATE OF NEW YORK)
) : ss.
COUNTY OF NEW YORK)

On the day of Jan. 13 in the year 2006, before me, the undersigned, a Notary Public in and for said state, personally appeared Ernesto L. Butcher, Chief Operating Officer, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument the person upon behalf of which the individual acted, executed the instrument.

LUCY AMBROSINO
NOTARY PUBLIC, STATE OF NEW YORK
No. 01AM6101070
QUALIFIED IN NEW YORK COUNTY
MY COMMISSION EXPIRES NOV. 3, 2007

(notarial seal and stamp)

(City/DOT ACKNOWLEDGEMENT)

STATE OF NEW YORK)
) : ss.
COUNTY OF NEW YORK)

On the day of Jan. 19th in the year 2006, before me, the undersigned, a Notary Public in and for said state, personally appeared Howard Altschuler, Deputy Commissioner, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument the person upon behalf of which the individual acted, executed the instrument.

(notarial seal and stamp)

SARAH L. WILKINS
Notary Public, State of New York
No. 31-4819596
Qualified in New York County
Commission Expires July 31, 2006

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EXHIBIT A
SCOPE OF WORK STATEN ISLAND FERRY RETROFIT PROJECT

The Retrofit Project involves tasks associated with the implementation of certain emissions reduction technologies and equipment (the "Devices") associated with those technologies whereby the selected Devices and instruments will be installed on the Staten Island Ferries ("SIF"), for a maximum total of six additional ferries. Individual ferries potentially included in this Retrofit Project are identified below:

1. John Noble (2nd Austen class vessel)
2. Andrew J. Barberi (Barberi class vessel)
3. Samuel I. Newhouse (Barberi class vessel)
4. Guy V. Molinari (1st Molinari class vessel)
5. Senator John J. Marchi (2nd Molinari class vessel)
6. Spirit of America (3rd Molinari class vessel)

Device selection will be predicated on the duty cycle, exhaust temperature profile, and technological feasibility of installing such devices on a given vessel. Request for Proposals will encompass soliciting for the following emission control technologies and associated Devices:

- OPTION 1 - Selective Catalytic Reduction ("SCR") and Diesel Oxidation Catalyst ("DOC") or other PM reduction technology (i.e. Diesel Particulate Filter ("DFP")), Partial Filter). SCR shall be specifically designed to operate with 32.5% Urea reagent.
- OPTION 2 - Engine manufacturer approved mechanical upgrades and adjustments to the main propulsion engines such as replacement, internally retarded injectors and revised power assemblies (pistons and liners) that achieve both reduced NOx and reduce lube oil consumption
- OPTION 3 - Other technologies, including but not limited to, NOx adsorbers or scrubbers to the extent they can provide a 25% minimum NOx reduction, are deemed cost effective and have a proven track record in a parallel application

The following tasks, which will require DOT's cooperation for successful completion, are included in the Scope of Work. The PANY/NJ's Consultant for the Retrofit Project will oversee each task:

1) **Information Gathering on Engines.**

a. **SIF Drawings, Specifications and Operational Parameters** - A list will be generated detailing existing vessel information (structural drawings, engine specification, operational parameters, etc.). This information will be used to provide vendors information on the Staten Island Ferries and for emission reduction calculations. DOT shall provide the most current information available, but makes no representation as to the accuracy of such information. Further, vendors shall be advised not to rely solely on such vessel information provided by DOT, but shall be obligated to conduct a detailed vessel ("field") survey to ensure system design comports with as-built vessel characteristics.

b. **Data Logging** – The Data Logging Protocol established for the Alice Austen ferry in the Demonstration Project will be implemented for the Retrofit Project.

c. **Instrument Installation** - Instruments (such as data loggers, temperature gauges, etc.) will be supplied by the consultant and installed on one Barberi and one Molinari class ferry.

2) **Emission Reduction Technologies (ERT) Devices ("Devices") and Consumables Vendor Selection** - The list of vendors/suppliers may be providers of any of the following

a. Selective Catalytic Reduction Devices;
b. SCR catalysts;
c. Diesel Oxidation Catalysts ;
d. Diesel particulate filters;

NOx Scrubbers or Adsorbers

e. Tier 1 Certified Engine Kits including fuel injectors and power assemblies, and
f. Urea

Vendor selection will be coordinated and reviewed by the PANY/NJ, DOT . Devices will be purchased by PANY/NJ.

3) **Device Installation and Commissioning.** Device installation will occur during vessel outages that are agreeable to both PANY/NJ and DOT. Tasks to be performed by the selected Device vendor include:

a) Complete vessel ("field") survey to confirm as-built vessel characteristics
b) Complete design of the emission control system
c) Naval engineering of the system
d) Removal of existing equipment that will be replaced by new equipment
e) Complete restoration of any interferiences removed
f) Bilge and vessel cleaning incurred during the installation, and return of vessel to a passenger-ready state
g) Complete system installation, including all necessary labor, materials and equipment and field supervision for the installation and support equipment onboard the ferry
h) Facilitate United States Coast Guard and American Bureau of Shipping plan review and surveys, and the issuance of all required approvals
i) Training of DOT personnel on new system

4) **Measuring and Monitoring ("M/M") Protocol Implementation.** As developed as part of the Demonstration Project, which used the Alice Austen ferry, the RAT-Approve M/M protocols will be implemented on Molinari and Barberi class vessels. System verification testing will be completed during regular revenue service.

EXHIBIT B
STATEN ISLAND FERRY DRY DOCK SCHEDULE

STATEN ISLAND FERRY DRY DOCK SCHEDULE

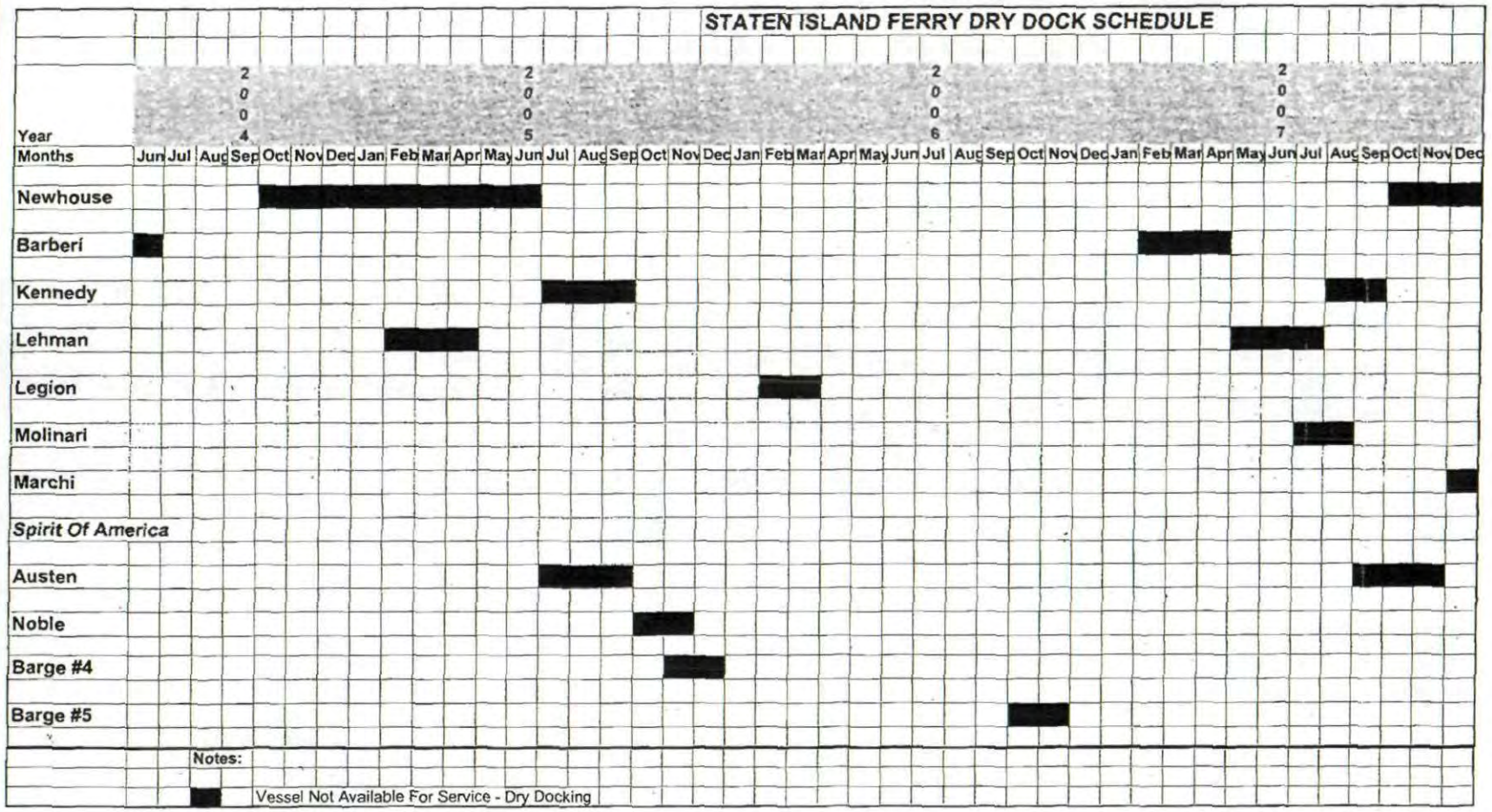

EXHIBIT C

UNITED STATES ARMY CORPS OF ENGINEERS – NEW YORK DISTRICT

HARBOR DEEPENING PROJECT EMISSIONS OFFSETS SUMMARY

USACE - New York District
Harbor Deepening Project
HDP Emissions/Offsets Summary

12/20/2005

DRAFT

DRAFT

NOx Emissions (Based on 12 Dec 2005 volume update)
w/10% contingency (S-AK-1 adjusted to 2007 start, Sept '05)

Channel/Contract	2005 (tons)	2006 (tons)	2007 (tons)	2008 (tons)	2009 (tons)	2010 (tons)	2011 (tons)	2012 (tons)	2013 (tons)	2014 (tons)
Ambrose 1	48.7	167.6	141.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ambrose 2	0.0	0.0	0.0	150.2	202.3	61.5	0.0	0.0	0.0	0.0
S-AK-1	0.0	0.0	78.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-AK-2	0.0	0.0	0.0	36.9	48.3	0.0	0.0	0.0	0.0	0.0
S-AK-3	0.0	0.0	0.0	0.0	0.0	95.0	116.8	17.0	0.0	0.0
S-AN-1	0.0	18.5	38.5	20.1	0.0	0.0	0.0	0.0	0.0	0.0
S-AN-2	0.0	0.0	0.0	9.9	34.4	0.0	0.0	0.0	0.0	0.0
S-BR-1	0.0	0.0	0.0	0.0	0.0	6.6	38.9	72.7	100.7	16.0
S-E-1	0.0	0.0	0.0	0.0	0.0	0.0	30.4	82.6	0.0	0.0
S-KVK-1	0.0	0.0	0.0	125.5	65.4	27.9	0.0	0.0	0.0	0.0
S-KVK-2	163.8	235.3	34.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-NB-1	0.0	49.2	131.0	16.5	0.0	0.0	0.0	0.0	0.0	0.0
S-NB-2	0.0	0.0	0.0	64.4	159.5	67.1	0.0	0.0	0.0	0.0
	212.5	470.7	424.4	423.4	509.9	258.2	186.1	172.2	100.7	16.0
Total Project Est. Emissions	2,774.2									

NOx Offsets (Based on 30 June 05 SIF Schedule & Mar 05 Port Jersey Projections & Dec '05 RAT updates)

Offset Source	2005 (tons)	2006 (tons)	2007 (tons)	2008 (tons)	2009 (tons)	2010 (tons)	2011 (tons)	2012 (tons)	2013 (tons)	2014 (tons)
KVK-5 Tugs	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	0.0
Alice Austen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
John Noble	0.0	12.4	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
Andrew Barberi	5.5	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1
Samuel Newhouse	5.5	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1
Guy V. Molinari	0.0	0.0	19.4	46.7	46.7	46.7	46.7	46.7	46.7	46.7
John J. Marchi	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spirit of America	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PJ Tugs	26.0	0.0	67.5	135.0	135.0	135.0	135.0	135.0	135.0	135.0
MVERP	0.0	66.7	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Offset Subtotal (w/o P&G)	87.0	261.2	485.6	580.3	580.3	580.3	580.3	580.3	580.3	530.3
Total Offsets	4,846.3									
Surplus Offsets (w/o P&G)	-125.5	-209.5	61.2	156.9	70.4	322.2	394.3	408.1	479.6	514.3
P&G Credits (max)	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Offset Potential (incl P&G)	287.0	461.2	485.6	580.3	580.3	580.3	580.3	580.3	580.3	530.3
Surplus Offsets (incl P&G)	74.5	-9.5	61.2	156.9	70.4	322.2	394.3	408.1	479.6	514.3

TABLE 5.21-8
TOTAL ANNUAL EMISSIONS FROM CONSTRUCTION EQUIPMENT AND ACTIVITIES AT NEW JERSEY AND NEW YORK CONSTRUCTION SITES

Pollutant	Emissions (Tons/Year)					Conformity Applicability Values (Tons/Year)*
	2011	*2012*	*2013*	*2014*	*2015*	
CO	149	170	155	140	137	100
NO_x	114	153	130	96	92	100
PM_{10}	5	4	3	3	2	100
$PM_{2.5}$	3	3	3	2	2	100
SO_2	7	10	8	5	5	100
VOCs	4	4	4	4	4	50

Source: Berger/PB, 2008.
Note: *Conformity applicability values are discussed in 5.21.8.

5.21.7.6 Off-Site (Mobile Source) Analysis

Potential construction-phase air quality impacts associated with the operation of vehicles (including trucks used for the transportation of rock and debris removal, and transport of construction materials and cement, and construction workers' vehicles) on the roadway network and changes in ramp configurations (as a result of lane closures in New Jersey during peak construction periods) were estimated.
The following intersections/areas were evaluated:

- New Jersey – Bayway Avenue/Atlantic Street and NJ Turnpike Interchange 13; and
- New York – Forrest Avenue and Goethals Road and Staten Island Expressway.

5.21.7.7 Total Construction-Related Impacts

The highest project-generated increments from on-site and off-site construction activities, the highest total increments, and the maximum estimated total concentrations (including the background concentrations) of each pollutant of concern, with the implementation of the anticipated emission control measures, are shown in Table 5.21-9 for New York and Table 5.21-10 for New Jersey.

New York State Department of Environmental Conservation
Division of Air Resources
Bureau of Air Quality Planning, 2nd Floor
625 Broadway, Albany, NY 12233-3251
Phone: (518) 402-8396 • **Fax:** (518) 402-9035
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

AUG 24 2010

Docket Management Facility (M-30)
U.S. Department of Transportation
West Building Ground Floor
Room W12-140
1200 New Jersey Avenue, SE
Washington, DC 20590-0001

Re: Docket No. USCG-2009-0097

Comments of the New York State Department of Environmental Conservation on the U.S. Coast Guard's "Draft General Conformity Determination, Goethals Bridge Replacement (GBR) Project" (July, 2010)

Dear Commander:

The New York State Department of Environmental Conservation (Department) has completed its review of the Draft General Conformity Determination, Goethals Bridge Replacement (GBR) Project, dated July 2010. The Department notes that references to the 8 hour ozone standard designation of "moderate" for the New York City (NYC) metropolitan area need to be changed to "severe," and that the conformity and emission assessments in the determination be modified accordingly.

While the NYC metropolitan area is classified as moderate nonattainment for ozone under the 8 hour ozone standard, the one-hour ozone classification of severe is still controlling based on the December 22, 2006 decision by the US Court of Appeals in South Coast Air Quality Mgmt. Dist. v. EPA, 472 F.3d 882 (D.C. Cir. 2006), and subsequent amendment at 489 F.3d 1245, wherein the court required use of one-hour motor vehicle emissions budgets as part of eight-hour conformity determinations until eight-hour motor vehicle emissions budgets were available. Therefore, the one-hour classification is still applicable in accordance with the decision and the anti-backsliding provisions of the CAA.

Conformity and emission assessments throughout the determination and associated tables need to include the 25 tons per year (tpy) thresholds for NOx and VOC that apply to severe ozone nonattainment areas. Reference to the 25 tpy threshold would also extend the number of years that construction emissions exceed the 25 tpy threshold for NOx from 3 to 5 years.

Thank you again for the opportunity to submit the Department's comments regarding this Draft Conformity Determination.

Sincerely,

Michael P. Sheehan
Chief, Mobile Source Planning Section

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

SEP 14 2010

SEP 09 2010

Mr. Gary Kassof
Bridge Program Manager
First Coast Guard District
Battery Building
One South Street
New York, NY 10004

Dear Mr. Kassof:

The Environmental Protection Agency (EPA) has reviewed the final environmental impact statement (FEIS) for the Goethals Bridge Replacement Project (GBR) (CEQ#20100313) between Staten Island, New York and Elizabeth, New Jersey. This review was conducted in accordance with Section 309 of the Clean Air Act, as amended (42 U.S.C 7609, PL 91-604-12(a), 84 Stat. 1709) and the National Environmental Policy Act (NEPA).

The Goethals Bridge, constructed in the 1920s, provides a link over the Arthur Kill along Interstate 278 which begins as U.S. Route 1/9 in Linden, New Jersey, and continues across northern Staten Island as the Staten Island Expressway, and then across the Verrazano Bridge into Brooklyn and Queens. The Port Authority of New York and New Jersey (PANYNJ) owns and operates the Goethals Bridge. The purpose of the proposed project is to eliminate the functional and physical obsolescence of the existing bridge, and address the aging structure's escalating maintenance, repair, and structural needs and costs.

With regard to the project's general conformity determination, the emissions analysis should include any construction activities that will be permitted by the Army Corps of Engineers. Project-related emissions resulting from the actions of multiple Federal agencies cannot be separated for the purposes of a general conformity applicability analysis or determination. Also, EPA understands that the Port Authority of New York and New Jersey has proposed to use supplemental emission credits from the Harbor Deepening Project to offset the emissions from the Goethals Bridge project. As a member of the Regional Air Team, EPA requests that a consensus concerning the mobile source offset for this project is gained from the Regional Air Team before moving forward on this decision.

Thank you for the opportunity to comment. If you have any questions, please call Lingard Knutson of my staff at (212) 637-3747.

Sincerely,

John Filippelli, Chief
Strategic Planning and Multi-Media Programs Branch

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
BUREAU OF AIR QUALITY PLANNING
P.O. Box 418
TRENTON, NJ 08625-0418
TEL: (609) 292-6722

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

September 13, 2010

Docket Management Facility (M-30)
U.S. Department of Transportation
West Building Ground Floor
Room W12-140
1200 New Jersey Avenue, SE
Washington, D.C. 20590-001

Re: Docket No. USCG-2009-0097

Dear Commander:

The New Jersey Department of Environmental Protection (Department) has reviewed the Goethals Bridge Final Environmental Impact Statement (August 2010) (EIS) and the Draft Conformity Determination (July 2010) (Determination) for the Goethals Bridge Replacement Project (Project). Thank you for the opportunity to comment on the EIS and Determination. These comments are attached and serve to address both the EIS and the Determination

Based on our review at this time, the Department can not concur with the finding that this Project conforms to New Jersey's State Implementation Plan (SIP) until there is an adequate resolution to our comments. The Department's main concerns regarding the EIS and Determination are:

1. The Determination and EIS do not appear to include emissions associated with the Untied States Army Corps of Engineers' (USACE) permits. Therefore, the total direct and indirect emissions for this project may not have been properly identified. The Federal conformity regulation at 40 CFR 93.158 (a)(2) (Criteria for determining conformity of general Federal actions) requires that for precursors of ozone, nitrogen dioxide or PM, the total of the direct and indirect emissions from the action are fully offset so there is no net increase in emissions of that pollutant. It is unclear from the EIS and Determination that this criteria has been satisfied.

2. The Conformity Determination indicates that the Project will conform to New Jersey's SIP by using excess credits from the Harbor Deepening Project to mitigate NOx emissions above the de mininis levels. It is not possible at this time to predict with certainty whether sufficient

surplus NOx emissions from the Harbor Deepening Project will be available for use on this Project. A contingency plan with implementable mitigation measures should be develop as part of the Conformity Determination to ensure that no shortfalls will occur to avoid disruption on this Project. The Federal conformity regulation at 40 CFR 93.158 (a)(2) (Criteria for determining conformity of general Federal actions) requires that for precursors of ozone, nitrogen dioxide or PM, the total of the direct and indirect emissions from the action are fully offset so there is no net increase in emissions of that pollutant.

3. The de minimis levels associated with Severe Ozone Nonattainment areas should be used in the Project evaluation. The New York – New Jersey – Long Island (NY-NJ-CT) nonattainment area was previously classified as a Severe ozone nonattainment area under the 1-hour ozone National Ambient Air Quality Standards. (NAAQS). To prevent backsliding and to meet the goal of the Clean Air Act (42 U.S.C.7502 (e)) to achieve attainment of the Ozone NAAQS, the de minimis emissions levels established for General conformity projects for a Severe nonattanment area at 40 CFR 93.153 (b) (1) should be used. Using the 1-hour ozone de minimis levels, the project emissions will exceed the NOx de minimis level of 25 tons per year for each year of the project.

4. Additional documentation is needed to support the emissions estimates for the nonroad equipment in Table 2 (Total Annual Emissions from Construction Equipment and Activities at New Jersey and New York construction Sites).

The Department will continue to work with the USCG and the Port Authority of New York and New Jersey to resolve these issues in order for the project to move forward. If you have any questions, please contact Angela Skowronek at (609) 984-0337.

Sincerely,

Sharon Davis

Sharon Davis
Acting Section Chief
Bureau of Air Quality Planning

New Jersey Department of Environmental Protection – Comments on the Goethals Bridge Replacement Project.

General Comment

The Environmental Impact Statement (EIS) and the Draft Conformity Determination (Determination) do not appear to include a Draft Statement of Conformity. A Draft Statement of Conformity is usually included in the Determination. Projects such as the Delaware River Main Channel Deepening Project and the New York and New Jersey Harbor Deepening Project included Draft Statements of Conformity.

1) 1.2 General Conformity Requirements (Page 2)

The Determination states, "The Port Authority of New York & New Jersey (Port Authority) the project sponsor, plans to use emission credits from the Harbor Deepening Project to offset the increased emissions from the GBR project construction.

Comment

40 CFR 93.158 (a)(2) (Criteria for determining conformity of general Federal actions) states, "For precursors of ozone, nitrogen dioxide or PM, the total of direct an indirect emissions from the action are fully offset within the same nonattainment or maintenance area ...so that there is not net increase in emissions of that pollutant." It is not possible at this time to predict with certainty whether sufficient surplus NO_x emissions from the Harbor Deepening Project will be available for use on the Goethals Bridge Replacement Project. A contingency plan with implementable mitigation measures should be developed for the Goethals Bridge Replacement Project as part of the General Conformity Determination to ensure that no shortfalls will occur due to a lack of surplus NO_x emissions reductions to avoid the disruption of the project.

2) 1.2 General Conformity Requirements (Page 2)

The Determination states, "The Harbor Deepening Project has generated excess emissions credits as part of its Staten Island Ferry retrofit and marine vessel engine replacement programs. The Port Authority has requested the utilization of the credits for the GBR through the HD Regional Air Team...and is working with the USACE in establishing the methodology by which NO_x will be accounted for, both in terms of generation and offsets"

Comment

See comment 1. The Department will continue to work with the Regional Air Team to develop a mutually agreeable Surplus NO_x Emission Offset protocol for the use of surplus NO_x emissions.

3) 2.0 Description of the Federal Action (Page 3)
The Determination states, "This final general conformity determination is related only to those activities included in the USCG's federal action pertaining to the GBR project, which is issuance of a bridge permit."

Comment
Table 7.1-1 Federal Permits and Approvals of the Final EIS (page 7-1) states that a Section 404 Dredge and Fill Permit and a Section 10 River and Harbors Act Permit are required from the United States Army Corps of Engineers (USACE). Page 1 of the Forward in the Final EIS states that the United States Coast Guard is the lead Federal agency and the USACE is a federal cooperating agency on this project. Section 93.150 (a) (Prohibition) of the Federal General Conformity regulation states, "No department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or approve ay activity which does not conform to an applicable implementation plan."

40 CFR 93.154 (Federal agency conformity responsibility) states, "...Where multiple Federal agencies have jurisdiction for various aspects of a project, a Federal agency may choose to adopt the analysis of another Federal agency or develop its own analysis in order to make its conformity determination." The United States Environmental Protection Agency's guidance, "General Conformity Guidance: Questions and Answers (July 13, 1994) states, "If two different Federal agencies have jurisdiction over the same Federal project, one agency cannot rely on the fact that the other agency made a positive conformity determination and forego making its own conformity determination. If one agency makes a positive determination, the other agency should either go through its own conformity analysis and make its own conformity determination or choose to adopt by reference or other means, the analysis, assumptions, and conclusion made by the first agency, as long as this analysis includes the entire scope of the project. If each of the agencies has jurisdiction over parts of the emissions from that action, then each agency must complete its own analysis and make separate conformity determination for the portion of the action over which it has responsibility."

Please clarify if this Determination includes the emissions (direct/indirect) associated with the USACE's permits. The emissions associated with the USACE's permits must be included in this Determination or a separate Applicability Analysis and Conformity Determination must be completed by the USACE. The total direct and indirect emissions from the USCG and the USACE permits for the Goethals Bridge Replacement project must be identified and a mitigation plan for the total direct and indirect emissions must be developed before conformance to the New Jersey State Implementation Plan can be determined.

4) 2.1 Goethals Bridge Project, (Page 4)
The Determination states, "The Port Authority anticipates that the construction period for the new bridge and demolition of existing bridge would range between 52 to 60 months, depending on the type of superstructure (i.e. steel girder, pre-cast/stressed concrete, or segmental concrete) to be selected for the main bridge span and its approaches."

Comment
40 CFR 93.153 (b) (Applicability) states that, "...a conformity determination is required for each pollutant where the total of direct and indirect emissions in a nonattainment or maintenance area caused by the Federal action would equal or exceed any of the rates in (b)(1) or (b)(2). In addition, 40 CFR 93.158 (a)(2) (Criteria for determining conformity of general Federal actions) states, "For precursors of ozone, nitrogen dioxide, or PM, the total of direct and indirect emissions from the action are fully offset within the same nonattainment or maintenance area...so that there is no net increase in emissions of that pollutant."

Please explain how the total direct and indirect emissions were determined for this project even though the superstructure type has not been selected. Please clarify if different construction equipment will be used for the different types of superstructures. Please clarify what type of superstructure was used for the emissions in Table 2 Total Annual Emissions from Construction Equipment and Activities at New Jersey and New York Construction Sites.

5) 2.1 Goethals Bridge Project, (Page 4)
The Conformity Determination states, "The FEIS for the GBR Project includes a list of construction mitigation measures that will be implemented as part of the Project: these measures are considered part of project construction as designed."

Comment
Please clarify that the "construction mitigation measures" listed in the FEIS are also the emission control measures listed in the Determination.

6) 2.1 Goethals Bridge Project, (Page 4)
The Conformity Determination states, "The Port Authority's sustainability design guidelines will be followed during the construction of the Proposed Project to minimize construction-phase emissions."

Comment
Please provide a reference for the Port Authority's "sustainability design guidelines" or provide a description of them in the Determination.

7) 4.1 Attainment Status of Project Area, (Page 9)
The Conformity Determination states, "The study areas in both New Jersey and New York that would be affected by the construction of the GBR Project are currently designated as nonattainment for both ozone and PM 2.5 and maintenance for CO. Therefore, the lead federal agency must demonstrate project-level compliance with the general conformity rule following requirements for each of these pollutants."

Comment
40 CFR 93.158(a)(2) (Criteria for determining conformity of general Federal actions) states, "For precursors of ozone, nitrogen dioxide, or PM, the total of direct and indirect emissions from the action are fully offset within the same nonattainment or maintenance area...so there is not net increase in emissions of that pollutant." Please add "and precursors" after "pollutants".

8) 4.3 De minimis Emission Rates (Page 10)
The Conformity Determination states that, "The applicable threshold levels for general conformity for the project area which is located within an ozone transport region, according to 40 CFR Part 93, are shown in Table 1."

Comment
The de minimis levels in Table 1 are for the 8-hour Ozone NAAQS. Section 93.153(b) (Applicability) of the Federal General Conformity regulation states, "...a conformity determination is required for each criteria pollutant or precursor where the total direct or indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed any of the rates in paragraphs (b)(1) of this section." Under the 1-hour Ozone National Ambient Air Quality Standards (NAAQS), the New York-Northern New Jersey-Long Island NY (NY-NY-CT) nonattainment area was classified as a "severe" nonattainment area. Under this classification, the de minimis level for Oxides of Nitrogen (NO_x) is 25 tons per year (tpy) and the de minimis level for Volatile Organic Compounds (VOCs) is 25 tpy. The State of New Jersey continues to be in nonattainment for the 8-hour ozone NAAQS. In order to prevent backsliding and to meet the goal of the Clean Air Act (42 U.S.C. 7502(c)) to achieve attainment of the NAAQS, it is necessary to use the de minimis emissions levels established for General Conformity projects under the 1-hour Ozone NAAQS at (40 CFR 93.153(b)(1). This comment was included in the Department's comments on the Draft

Environmental Assessment. Please use the 1-hour Ozone de minimis levels in the Applicability Analysis and Conformity Determination.

In addition, 40 CFR 93.158(a)(2) (Criteria for determining conformity of general Federal actions) indicates that for ozone and nitrogen dioxide," the total of direct and indirect emissions from the action are fully offset within the same nonattainment or maintenance area... so that there is no net increase in emissions of that pollutant." 40 CFR 93.158(d) states that, "any analyses required under this section must be completed, and any mitigation requirement necessary for a finding of conformity must be identified before the determination of conformity is made." In light of the above, a mitigation plan will be required for criteria pollutant emissions and precursors above the 1-hour Ozone de minimis levels.

9) 4.4.1 Methodology, (Page 10)
The Conformity Determination states, "The analysis conducted for the FEIS to estimate potential air quality impacts caused by on-site (e.g. demolition activities, construction equipment operations, and truck movements) and off-site (e.g. motor vehicle traffic effects due to truck trips ad ramp closures) construction phase activities included the following: ..."

Comment
40 CFR 93.153 (b) (Applicability) states that, "...a conformity determination is required for each pollutant where the total of direct and indirect emissions in a nonattainment or maintenance area are caused by the Federal action would equal or exceed any of the rates in (b)(1) or (b)(2). In addition, 40 CFR 93.158 (a)(2) (Criteria for determining conformity of general Federal actions) states, "For precursors of ozone, nitrogen dioxide or PM, the total of direct and indirect emissions from the action are fully offset within the same nonattainment or maintenance area...so that there is no net increase in emissions of that pollutant." The Federal General Conformity regulation requires that the total of the direct an indirect emissions must be identified and mitigated. 40 CFR 93.152 (Definitions) defines direct emissions as, "those emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and originate in a nonattainment or maintenance area and occur at the same time and place as the action and are reasonably foreseeable. Indirect emissions are defined as, "emissions of a criteria pollutant or its precursors: 1) That are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place as the action: 2) that are reasonably foreseeable; 3) that the agency can practically control; and 4) For which the agency has a continuing program responsibility.

The Federal General Conformity regulation does not address or define "on-site" and "off-site" emissions. The relevance of the geographic location of emissions for General Conformity is within or outside of the nonattainment area; not on or off the construction

site. Please clarify that the Determination includes the direct and indirect emissions for the project as defined in the Federal General Conformity regulation

10) 4.4.2 Estimated Emissions and Comparison to De minimis Thresholds, (Page 11)
The Conformity Determination states, "Total annual estimated emissions generated within the new York-New Jersey- Connecticut region during the Proposed Project's construction period, as presented in the GBR FEIS, are provided in Table 2."

Comment
Please provide the backup information (including work hours, calculations, emission factors, load factors etc.) for the equipment used to support the estimates in Table 2.

11) 4.4.2 Estimated Emissions and Comparison to De minimis Thresholds (Page 11)
The Conformity Determination states that "These values are the peak on-site emissions (including emissions generated by construction –related marine vessels) during each analysis year plus maximum annual off-site emissions. Peak off-site emission estimates are based on the following conservative assumptions that were developed by GBR Project's design engineers."

Comment
Comment 9 & 10 (above) also applies to this portion of the project.

12) 4.4.2 Estimated Emissions and Comparison to De minimis Thresholds (Page 11)
The Determination states, "The values presented in Table 2 are provided for comparison with the general conformity applicability threshold values."

Comment
Comment 8 (above) also applies to this portion of the project. Using the appropriate de minimis levels under the 1-hour NAAQS, Oxides of Nitrogen (NOx) is 25 tons per year (tpy) and Volatile Organic Compounds (VOCs) is 25 tpy, the project will also be above the NO_x de minimis levels in 2014 and 2015.

13) 4.4.3 Regional Effects, (Page 12)
The Determination states, "As the regional emissions for all of the applicable pollutants are lower during the operations phase of the GBR Project than under the No-Build Alternative, only emissions generated during the construction phase were compared to these threshold levels to determine conformity compliance."

Comment
Comment 12 (above) also applies to this portion of the project.

14) 4.4.3 Regional Effects, (Page 12)
The Determination states, "As shown in Table 2, construction-phase emissions (in New Jersey and New York combined) are less than the general conformity applicability rates, with the following exceptions: Annual estimated NO_x emissions are greater than thae applicability rate of 100 tons per year for the first 3 years of the construction phase and annual estimate CO emissions are greater than the applicability rate of 100 tons per year for all years of the construction phase."

Comment
Comment 8 (above) applies to this portion of the project.

15) 4.4.3 Regional Effects, (Page 12)
The Determination states, "As such, a general conformity determination is required for this project for these pollutants for these years."

Comment
Comment 8 (above) applies to this portion of the project.

16) 4.4.3 Regional Effects, (Page 12)
The Determination states," This determination, which will be published coincident with the Record of Decision for the GBR Project will include: A commitment from the Port Authority that all construction - phase NO_x emissions for these years will be offset by the utilization of excess credits from the Harbor Deepening Project; and a demonstration, based on the results of area wide and microscale CO analyses that the CO emissions generated during the Proposed Project's construction phase meets the requirement of the Conformity Rule. No additional analyses are required for the other pollutants.

Comment
Comments 1, 3, and 8 (above) apply to this portion of the project.

17) 5.1 Conformity Requirement of Proposed Project (Page13)
The Determination states, "Based on the results shown in Table 2, construction-phase emissions (in New Jersey and New York combined) conformity determinations are

required for: NO_x because annual estimated emissions are greater than the applicability rate of 100 tons per year for the first 3 years of the construction phase of the project; and CO because annual estimated emissions are greater that the applicability rate of 100 tons per year for all years of the construction phase.

Comment
Comments 1, 3, and 8 (above) apply to this portion of the project.

18) 5.1.1 Compliance with Conformity Requirement for NOx Emissions. (Page 13)
The Determination states, "To support the general conformity compliance determination, the USCG demonstrates herein that the emissions of NO_x (a precursor to O_3 and $PM_{2.5}$) caused by the construction of the Proposed Project will not result in an increase in regional NO_x emissions. This will be achieved by off-setting all of the NO_x emissions generated by the construction of the GBR for the 3 years when the conformity applicability thresholds are exceeded. The Port Authority, which is the sponsor of the proposed project, will accomplish this through the use of excess NO_x credits generated as part othe Port Authority's Harbor Deepening Project (HDP), under the auspices of the USACE and the Port Authority, for use during the Staten Island Ferry Retrofit Program and marine vessel engine replacement projects. Pursuant to the Memorandum of Understanding for the Staten Island Ferries Retrofit Project (January 19, 2006) the Port Authority is entitled to 70 percent of the excess credits associated with the Staten Island Ferry Retrofit Project. In the event that insufficient credits would be available form the Staten Island Ferry Retrofit Program, credits associated with the marine vessel engine replacement project would be considered as a source of excess credits."

Comment
Comments 1, 3, and 8 (above) apply to this portion of the project.

19) 5.1.1 Compliance with Conformity Requirement for NO_x Emissions.
The Determination states, "Upon the initiation of project construction, the project contractor will monitor construction equipment emissions and will provide regular reports (at a timetable yet to be established) to an agent agreed to by the USACE and the Port Authority who will keep a Mobile Source Trading Inventory, in effect a balance sheet ot the offset credit generation and utilization."

Comment
Comments 1, 2, 3, 4, 8 and 9 (above) apply to this portion of the project.

20) 5.1.2 Compliance Requirements for CO, (Page 13
The Determination states, "The maximum estimated 8-hour concentration (including background levels) is 2.8 ppm in New York and 4.6 ppm in New Jersey. As these values are below the 8-hour (i.e. the critical averaging period for this pollutant) standard of 9 ppm the result of this analysis is that the Proposed Project would not cause or exacerbate a violation of a CO standard.

Comment
Comments 3, 4, and 8 (above) apply to this portion of the project.

21) 6.2 Final General Conformity Determination (Page 15)
The Determination states, " As part of the general conformity evaluation, the USCG has documented its responses to all comments received on the draft general conformity determination and will make both the comments and responses available upon request by any person within 30 days of the promulgation of the final general conformity determination.

Comment
The Department cannot concur with the Determination until there is adequate resolution of these comments.

22) 7.0 Findings and Conclusions (Page 16)
The Determination states, "Based on this review, the USCG concluded that the Proposed Project's emissions can be accommodated in both the New Jersey and New York SIPs. USEPA reviewed and agreed with the regulatory analysis. The USCG has determined that the Proposed Project as designed will conform to the approved SIPs, based on the findings below: a commitment from the Port Authority, the project sponsor, that all construction-phase NO_x emission for the years that the conformity applicability thresholds will be exceeded witll be offset by the utilization of excess credits from the Harbor Deepening Project... Therefore, the USCG herewith concluded that the Proposed Project as designed conforms to the purpose of the approved SIPs and is consistent with all applicable requirements.

Comment

The Department cannot concur with the Determination until there is adequate resolution of these comments.

-----Original Message-----
From: Kassof, Gary
Sent: Monday, October 18, 2010 1:41 PM
To: 'Musumeci.Grace@epamail.epa.gov'
Cc: Laurita.Matthew@epamail.epa.gov; Moltzen.Michael@epamail.epa.gov; Knutson.Lingard@epamail.epa.gov; Filippelli.John@epamail.epa.gov
Subject: RE: GOETHALS BRIDGE REPLACEMENT PROJECT GENERAL CONFORMITY COMMENTS

Grace,
Thanks for the reply to my voice mail.
I think to best support the CG's case file, a letter from EPA presenting your position and rationale for acceptance of the 8 hour standard is necessary. I do want to present EPA's justification to NJDEP and NYSDEC for their review and consideration. Thanks for your cooperation.

Gary Kassof

-----Original Message-----
From: Musumeci.Grace@epamail.epa.gov
[mailto:Musumeci.Grace@epamail.epa.gov]
Sent: Monday, October 18, 2010 9:00 AM
To: Kassof, Gary
Cc: Laurita.Matthew@epamail.epa.gov; Moltzen.Michael@epamail.epa.gov; Knutson.Lingard@epamail.epa.gov; Filippelli.John@epamail.epa.gov
Subject: FW: GOETHALS BRIDGE REPLACEMENT PROJECT GENERAL CONFORMITY COMMENTS

Gary,
I received your voice mail message asking the status of EPA's review.
Below is our statement. If you require a signed letter, please let us know.
Thanks,
Grace

Thank you for the opportunity to review the Coast Guard's response to comments. EPA agrees that the 8-hour ozone standard is the applicable standard for demonstrating general conformity. If you have further questions please contact Matt Laurita at laurita.matthew@epa.gov

----- Forwarded by Matthew Laurita/R2/USEPA/US on 10/05/2010 04:06 PM
----- ----Original Message-----
From: Kassof, Gary
Sent: Thursday, September 23, 2010 2:54 PM
To: 'filippelli.john@epa.gov'; 'mpsheeha@gw.dec.state.ny.us'; 'sharon.davis@dep.state.nj.us'; 'angela.skowronek@dep.state.nj.us'
Cc: 'knutson.lingard@epa.gov'; 'lauritia.matthew@epa.gov'
Subject: GOETHALS BRIDGE REPLACEMENT PROJECT GENERAL CONFORMITY COMMENTS

Mr. Filippelli, Mr. Sheehan, Ms Davis, Ms Skowronek,
Thank you for your comments on the Draft General Conformity Determination (GCD) and the Final EIS for the Goethals Bridge Replacement project for which the Coast Guard is federal lead agency.
We have reviewed your comments regarding the GCD and offer the attached as response. We request that you review our response and provide comment at your earliest convenience.
As always the Coast Guard appreciates your agencies'

participation in the NEPA and General Conformity processes.

Gary Kassof
Bridge Program Manager
First Coast Guard District

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SNEO Program Netting

17-Nov-10

Annual Offsets Summary by Year, tons — DRAFT — DRAFT

Offset Source	Program	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
									NOx Offsets								
KVK-5 Tugs (Repowers)	HDP	50.9	50.9	50.9	50.9	50.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alice Austen (SCR)	HDP	8.25	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
John Noble (SCR)	HDP	0.0	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
Andrew Barberi (Tier 1)	HDP	111.6	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0
Samuel Newhouse (Tier 1)	HDP	93.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0
Guy V. Molinari (Tier II)	HDP	0.0	52.5	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
John J. Marchi (Tier II)	HDP	0.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Spirit of America (Tier II)	HDP	0.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
John F. Kennedy (Tier I)	HDP	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6
PJ Tugs (Repowers)	HDP	120.0	171.1	171.1	171.1	171.1	171.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MVERP (Repowers done) *	HDP	129.8	129.8	129.8	129.8	129.8	129.8	129.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MVERP2 (Repowers planned)	HDP	222.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6	0.0	0.0	0.0	0.0	0.0	0.0
Offsets subtotal (in place)		830.8	941.5	941.5	941.5	941.5	890.6	719.5	589.7	589.7	589.7	359.1	359.1	359.1	359.1	359.1	359.1
Offsets subtotal (planned)		0.0	209.0	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5	226.5
Offsets (w/HDP Contingency; w/o SNEO Contingency)		830.8	1,150.5	1,168.0	1,168.0	1,168.0	1,117.1	946.0	816.2	816.2	816.2	585.6	585.6	585.6	585.6	585.6	585.6
Offsets (w/HDP Contingency; w/SNEO Contingency)		**747.7**	**1,035.5**	**1,051.2**	**1,051.2**	**1,051.2**	**1,005.4**	**851.4**	**734.6**	**734.6**	**734.6**	**527.0**	**527.0**	**527.0**	**527.0**	**527.0**	**527.0**
HDP Emis Requirement (w/HDP Contingency)		**785.5**	**481.9**	**396.6**	**290.2**	**7.3**	**66.9**	**91.3**	**69.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
TOTAL AVAILABLE SNEO (w/HDP & SNEO Contingencies)		**-37.8**	**553.5**	**654.6**	**761.0**	**1,043.9**	**938.5**	**760.1**	**665.2**	**734.6**	**734.6**	**527.0**	**527.0**	**527.0**	**527.0**	**527.0**	**527.0**

Key: In Place
Planned

Note: There is not contingency taken with P&G shutdown credits.

Annual Available SNEO Allocation by Agency (w/Contingency), tons

Agency		Annual Allocation %	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
										Allocated SNEO								
USACE-NYD	*Tugs*		*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*
	SIFF		*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*
Available SNEO			**0.0**	**235.8**	**278.1**	**323.3**	**443.4**	**395.4**	**309.5**	**261.0**	**288.2**	**288.2**	**184.5**	**184.5**	**184.5**	**184.5**	**184.5**	**184.5**
PANYNJ	*Tugs*		*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*	*50.0%*
	SIFF		*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*
Available SNEO			**0.0**	**235.8**	**278.1**	**323.3**	**443.4**	**395.4**	**309.5**	**261.0**	**288.2**	**288.2**	**184.5**	**184.5**	**184.5**	**184.5**	**184.5**	**184.5**
			2.5%	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*
NYCDOT	*Tugs*		*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
	SIFF		*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*
Available SNEO			**0.0**	**82.0**	**98.5**	**114.5**	**157.0**	**147.6**	**141.2**	**143.2**	**158.1**	**158.1**	**158.1**	**158.1**	**158.1**	**158.1**	**158.1**	**158.1**
TOTAL ALLOCATED SNEO (w/SNEO Contingency)			**0.0**	**553.5**	**654.6**	**761.0**	**1,043.9**	**938.5**	**760.1**	**665.2**	**734.6**	**734.6**	**527.0**	**527.0**	**527.0**	**527.0**	**527.0**	**527.0**

Note: The PANYNJ retains 200 tpy NOx ERCs for contingency - to be used only as "last resort"

Annual Project Emissions, tons

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Agency/Project	Status / Notes	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
		Project NOx Emissions															
USACE-NYD																	
FIMP		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TBD		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TBD		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TBD		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total USACE-NYD	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
PANYNJ																	
Goethals Bridge		0.0	0.0	0.0	160.0	160.0	160.0	160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Berth 4 (?)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TBD		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TBD		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total PANYNJ	**0.0**	**0.0**	**0.0**	**160.0**	**160.0**	**160.0**	**160.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
NYCDOT																	
TBD	**Total NYCDOT**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total Project NOx Emissions		0.0	0.0	0.0	160.0	160.0	160.0	160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10% Emissions Contingency		0.0	0.0	0.0	16.0	16.0	16.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL PROJECT NOx EMISSIONS (w/SNEO Contingency)		**0.0**	**0.0**	**0.0**	**176.0**	**176.0**	**176.0**	**176.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annual Netted Remaining SNEO (SNEO = Project Emissions - Allocated SNEO), tons

Agency/Project	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	Project Contract Allocations & Estimated NOx Emissions															
USACE-NYD																
Total Project Emissions (w/Contingency)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Allocated SNEO (w/Contingency)	0.0	235.8	278.1	323.3	443.4	395.4	309.5	261.0	288.2	288.2	184.5	184.5	184.5	184.5	184.5	184.5
Netted Remaining SNEO	**0.0**	**235.8**	**278.1**	**323.3**	**443.4**	**395.4**	**309.5**	**261.0**	**288.2**	**288.2**	**184.5**	**184.5**	**184.5**	**184.5**	**184.5**	**184.5**
PANYNJ																
Total Project Emissions (w/Contingency)	0.0	0.0	0.0	160.0	160.0	160.0	160.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Allocated SNEO (w/Contingency)	0.0	235.8	278.1	323.3	443.4	395.4	309.5	261.0	288.2	288.2	184.5	184.5	184.5	184.5	184.5	184.5
Netted Remaining SNEO	**0.0**	**235.8**	**278.1**	**163.3**	**283.4**	**235.4**	**149.5**	**261.0**	**288.2**	**288.2**	**184.5**	**184.5**	**184.5**	**184.5**	**184.5**	**184.5**
NYCDOT																
Total Project Emissions (w/Contingency)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Allocated SNEO (w/Contingency)	0.0	82.0	98.5	114.5	157.0	147.6	141.2	143.2	158.1	158.1	158.1	158.1	158.1	158.1	158.1	158.1
Netted Remaining SNEO	**0.0**	**82.0**	**98.5**	**114.5**	**157.0**	**147.6**	**141.2**	**143.2**	**158.1**	**158.1**	**158.1**	**158.1**	**158.1**	**158.1**	**158.1**	**158.1**
TOTAL NETTED REMAINING SNEO (w/SNEO Contingency)	**0.0**	**553.5**	**654.6**	**601.0**	**883.9**	**778.5**	**600.1**	**665.2**	**734.6**	**734.6**	**527.0**	**527.0**	**527.0**	**527.0**	**527.0**	**527.0**

USACE - New York District

Harbor Deepening Project: HDP Emissions/Offsets Summary

17-Nov-10

Emissions Summary by Year - tons DRAFT DRAFT

Contract	Status / Notes	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
		Project NOx Emissions (overall schedule updated July 2010)												
S-AM-1	Complete	0.0	208.2	105.8	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-AM-2	Complete	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-AM-3a	Start 2011	0.0	0.0	0.0	0.0	0.0	0.0	110.3	12.3	0.0	0.0	0.0	0.0	0.0
S-AM-3b	Start 2011	0.0	0.0	0.0	0.0	0.0	0.0	12.3	110.3	0.0	0.0	0.0	0.0	0.0
S-AK-2	Start 2011/2012	0.0	0.0	0.0	0.0	0.0	0.0	20.7	103.2	0.0	0.0	0.0	0.0	0.0
S-AK-3	Start 2012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	208.4	0.0	0.0	0.0	0.0
S-AN-1a	Complete	0.0	0.0	31.4	30.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-AN-1b/S-AM-2b	In progress	0.0	0.0	0.0	0.0	32.6	181.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-AN-2	In progress	0.0	0.0	0.0	0.0	0.0	47.1	54.3	0.0	0.0	0.0	0.0	0.0	0.0
S-BR-1	Start 2014 (If it goes)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	60.9	83.0	63.1
S-E-1	Complete	0.0	0.0	0.0	0.0	54.8	35.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-KVK-1	In progress	0.0	0.0	0.0	47.3	81.8	211.0	39.4	0.0	0.0	0.0	0.0	0.0	0.0
S-KVK-2	Complete	103.0	287.8	53.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-NB-1	In progress	0.0	0.0	85.2	152.0	17.1	176.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S-NB-2/S-AK-1	Start Dec 2010	0.0	0.0	0.0	0.0	0.0	19.5	183.7	134.3	55.4	0.0	0.0	0.0	0.0
PJ-3	Complete	0.0	0.0	0.0	0.0	251.4	43.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PJ-4	Start 2011	0.0	0.0	0.0	0.0	0.0	0.0	17.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Project NOx Emissions		103.0	496.0	275.9	232.7	437.7	721.9	438.1	360.6	263.8	6.6	60.9	83.0	63.1
10% Emissions Contingency (no contingency for PJ-3)							63.6	43.8	36.1	26.4	0.7	6.1	8.3	6.3
Total Project NOx Emissions w/Contingency							**785.5**	**481.9**	**396.6**	**290.2**	**7.3**	**66.9**	**91.3**	**69.4**

Key: Actual (Reported) Emissions | Allocated by Contract | Estimated Emissions

Note: Schedules & volumes for the yellow highlighted projects are not final

Offsets Summary by Year - tons

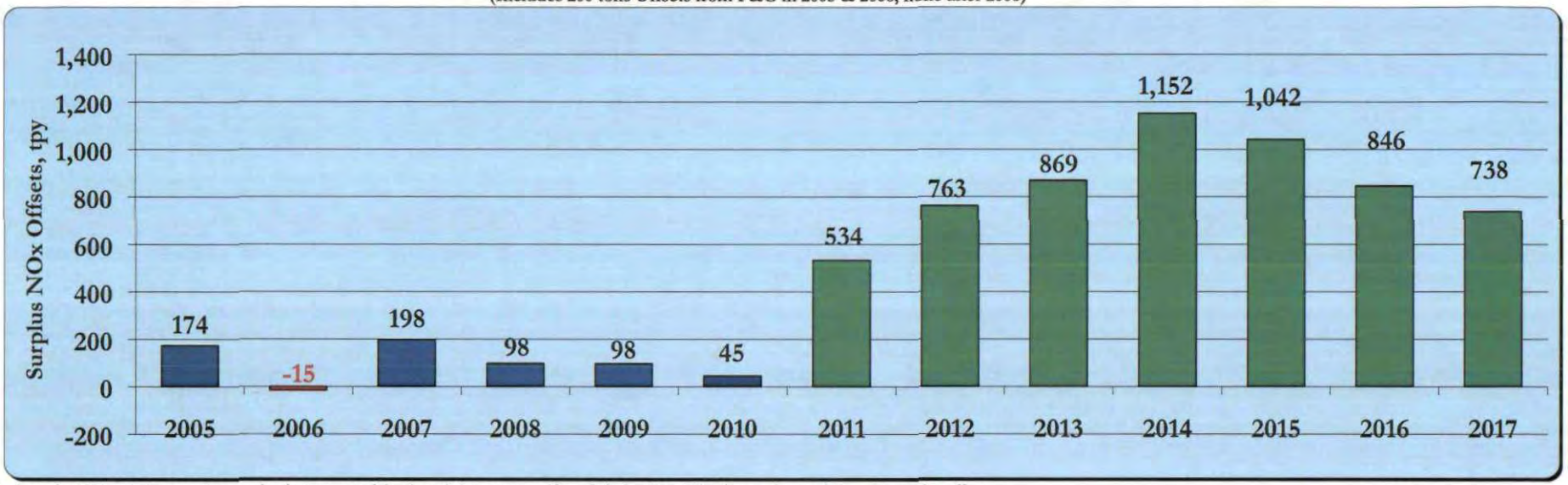
Offset Source	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	NOx Offsets (Based on Nov 2010 RAT Meeting Updates)												
KVK-5 Tugs (Repowers)	50.9	50.9	50.9	50.9	23.3	50.9	50.9	50.9	50.9	50.9	0.0	0.0	0.0
Alice Austen (SCR)	0.0	6.9	7.3	10.4	1.9	8.25	16.5	16.5	16.5	16.5	16.5	16.5	16.5
John Noble (SCR)	0.0	0.0	0.0	0.0	0.0	0.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Andrew Barberi (Tier 1)	0.0	0.0	16.1	115.3	85.7	111.6	124.0	124.0	124.0	124.0	124.0	124.0	124.0
Samuel Newhouse (Tier 1)	0.0	41.5	130.2	48.4	96.9	93.0	124.0	124.0	124.0	124.0	124.0	124.0	124.0
Guy V. Molinari (Tier II)	0.0	0.0	0.0	0.0	0.0	0.0	24.0	70.0	70.0	70.0	70.0	70.0	70.0
John J. Marchi (Tier II)	0.0	0.0	0.0	0.0	0.0	0.0	30.0	70.0	70.0	70.0	70.0	70.0	70.0
Spirit of America (Tier II)	0.0	0.0	0.0	0.0	0.0	0.0	12.0	70.0	70.0	70.0	70.0	70.0	70.0
John F. Kennedy (Tier I)	0.0	0.0	0.0	0.0	50.2	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6
PJ Tugs (Repowers)	26.0	165.0	141.6	0.0	130.3	120.0	171.1	171.1	171.1	171.1	171.1	0.0	0.0
MVERP (Repowers done)*	0.0	16.7	128.0	105.6	78.0	129.8	129.8	129.8	129.8	129.8	129.8	129.8	0.0
MVERP2 (Repowers mostly complete)**	0.0	0.0	0.0	0.0	69.1	222.6	230.6	230.6	230.6	230.6	230.6	230.6	230.6
Offsets subtotal (in place)	76.9	281.0	474.1	330.6	535.3	608.2	710.9	710.9	710.9	710.9	660.0	488.9	359.1
Offsets subtotal (planned)	0.0	0.0	0.0	0.0	0.0	222.6	304.6	448.6	448.6	448.6	448.6	448.6	448.6
Offset Subtotal (w/o P&G)	**76.9**	**281.0**	**474.1**	**330.6**	**535.3**	**830.8**	**1,015.5**	**1,159.5**	**1,159.5**	**1,159.5**	**1,108.6**	**937.5**	**807.7**
Surplus Offsets (w/o Contingency)						**108.9**	**577.4**	**798.9**	**895.7**	**1,152.9**	**1,047.7**	**854.5**	**744.6**
Surplus Offsets (w/ 10% Emissions Contingency)						63.6	43.8	36.1	26.4	0.7	6.1	8.3	6.3
Surplus Offsets (w/Cont; w/o P&G)	-26.1	-215.0	**198.2**	**97.9**	**97.6**	**45.3**	**533.6**	**762.9**	**869.3**	**1,152.2**	**1,041.7**	**846.2**	**738.3**
P&G Credits (max)	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Offset Potential (incl P&G)	276.9	481.0	474.1	330.6	535.3	830.8	1,015.5	1,159.5	1,159.5	1,159.5	1,108.6	937.5	807.7
Surplus Offsets (incl P&G in '05 & '06)	**173.9**	-15.0	**198.2**	**97.9**	**97.6**	**45.3**	**533.6**	**762.9**	**869.3**	**1,152.2**	**1,041.7**	**846.2**	**738.3**

* 2007, 2008, and 2009 MVERP totals revised to reflect final numbers

** All 11 vessels have been completed.

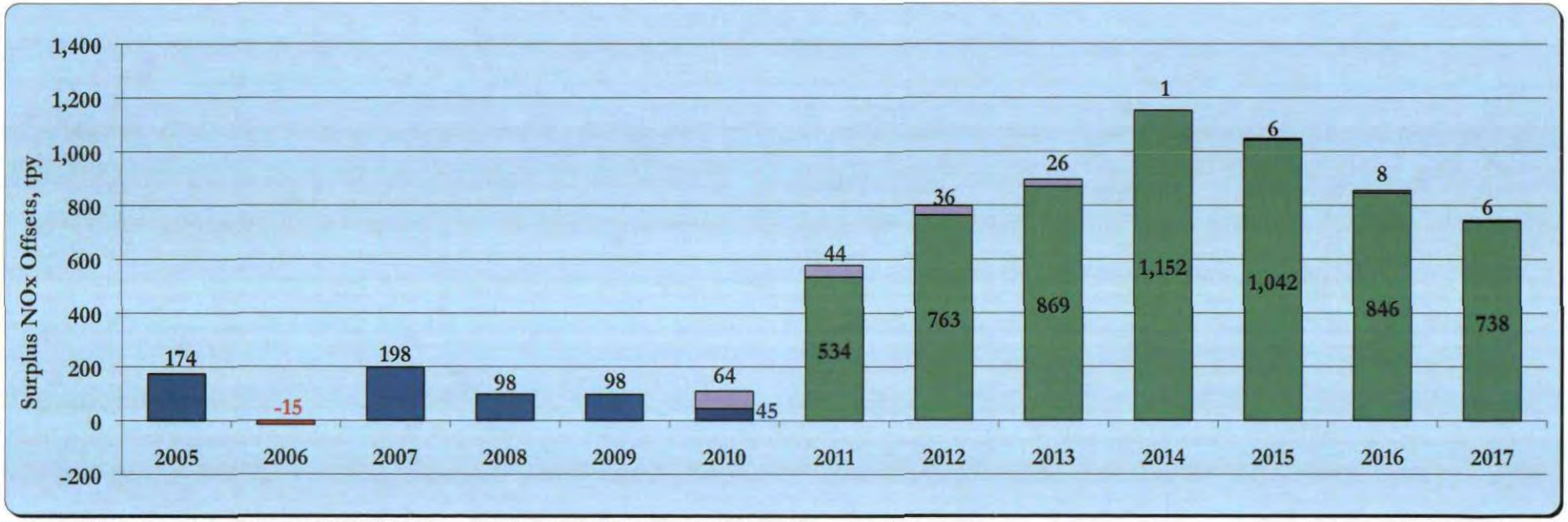
Key: Offsets in place | Offsets planned

NOx OFFSET BALANCE, as of 17 Nov 2010 - RESERVING THE 10% CONTINGENCY
(July 2010 Volume, Schedule and Calc Updates / Nov 2010 Offset Updatess)
(Includes 200 tons Offsets from P&G in 2005 & 2006, none after 2006)



In this chart, the 10% emissions contingency has been reserved for the existing contracts if needed; therefore, it has been subtracted from the surplus offsets.

NOx OFFSET BALANCE, as of 17 Nov 2010 - ILLUSTRATING THE 10% CONTINGENCY (LAVENDER)
(July 2010 Volume, Schedule and Calc Updates / Nov 2010 Offset Updatess)
(Includes 200 tons Offsets from P&G in 2005 & 2006, none after 2006)



In this chart, the 10% contingency is shown as the lavender portion of the surplus offsets columns. The green bars are the remaining surplus offsets.
The total surplus offsets will be the sum of both portions, if the emissions contingency is not used.

USACE - New York District **DRAFT**

Harbor Deepening Project

HDP Contract Emission Tracking Sheet - 2010

DRAFT

Update: 16 Nov, 2010

CY 2010 Offsets Summary

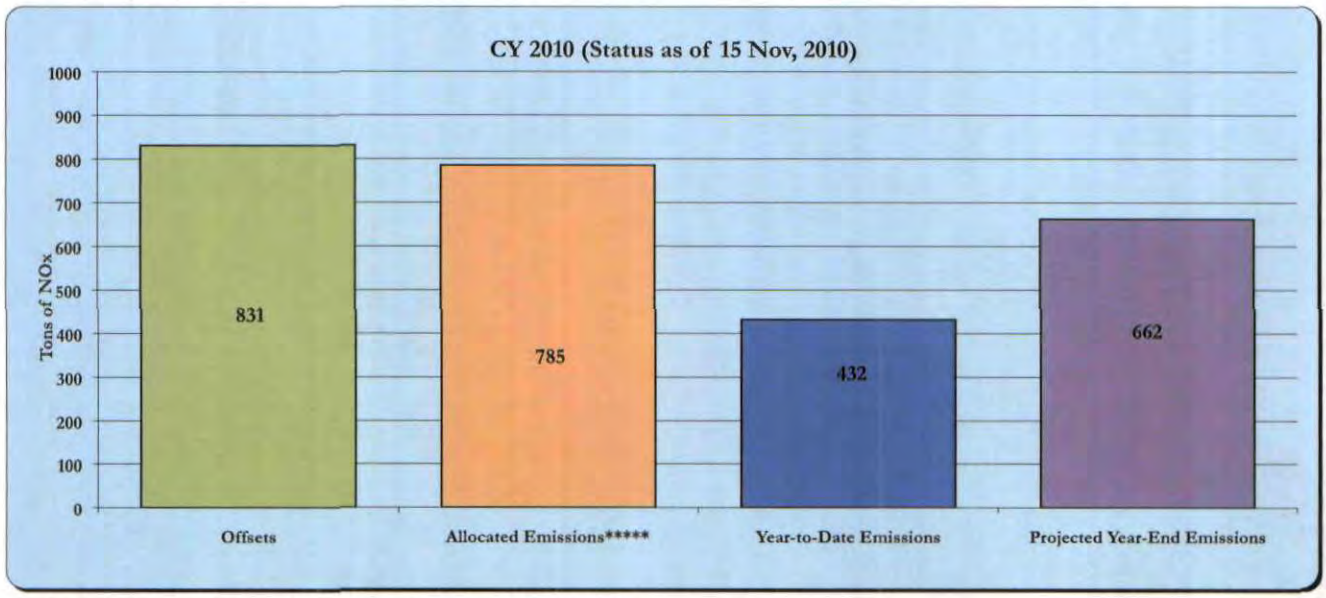
Offsets/Credits		tons NOx
Available Offsets	in place	608.2
	planned	222.6
P&G Credits		0
Total Offsets (in place and planned)		**830.8**
Year-to-Date Emissions		**432.1**
Emissions Allocated for Year*		**785.5**

2010 Contract Tracking		Contracts In Progress				Upcoming Contracts		Completed Contracts		
		GLDD	GLDD	GLDD	Donjon			Donjon	GLDD	GLDD
Emissions	**Total**	**S-NB-1**	**S-KVK-1**	**AN-1b / AM-2b**	**S-AN-2**	**PJ-4**	**S-NB-2 / S-AK-1**	**S-E-1**	**S-AM-2**	**PJ-3**
Maximum for Year*	785.5	194.0	232.1	199.8	51.8	0.0	21.5	35.1	7.3	43.8
Allocated for Year	721.9	176.4	211.0	181.6	47.1	0.0	19.5	35.1	7.3	43.8
Projected for Year**	662.3	130.1	208.2	175.7	42.6	0.0	19.5	35.1	7.3	43.8
Total To Date	432.1	100.9	119.5	109.5	16.0	0.0	0.0	35.1	7.3	43.8
Estimated Remaining**	230.2	29.2	88.7	66.2	26.6	0.0	19.5	0.0	0.0	0.0
Jan	76.9	3.4	19.2	16.5	0.0	0.0	0.0	11.4	0.0	26.4
Feb	43.9	6.2	0.2	20.5	0.0	0.0	0.0	9.8	0.0	7.2
Mar	25.5	2.3	0.0	9.8	0.0	0.0	0.0	12.9	0.0	0.5
Apr	15.5	3.9	0.8	6.5	0.0	0.0	0.0	0.3	0.9	3.1
May	48.3	4.3	17.4	16.1	0.0	0.0	0.0	0.0	6.4	4.1
Jun	42.4	25.1	9.0	5.1	2.8	0.0	0.0	0.0	0.0	0.4
Jul	39.1	27.2	8.9	0.0	2.6	0.0	0.0	0.0	0.0	0.4
Aug	29.8	8.1	20.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0
Sep	33.2	9.4	18.0	2.5	3.3	0.0	0.0	0.0	0.0	0.0
Oct	68.9	9.0	21.9	32.4	5.6	0.0	0.0	0.0	0.0	0.0
Nov	0									
Dec	0									
Adjustment to previous months***		2.0	4.1	0.1				0.7		1.7

* Including 10% contingency not allocated to contractors.

** For pending contracts, the projections are the same as the allocated emissions.

*** Adjustments to previous months' emissions, resulting in change to the total to date



***** Total of allocated emissions includes 10% contingency not assigned to dredging contractors.