Border Environment Cooperation Commission

San Luis Rio Colorado International Crossing II
San Luis Río Colorado, Sonora

1. General Criteria

1.a Project Type

A new international commercial port (ICP) is proposed to be located between the City of San Luis Rio Colorado (SLRC), Sonora and the City of San Luis, Arizona. The new ICP will be supported by private investment through a concession granted by the Mexican Transport and Communications Secretariat (SCT). The project falls under BECC's Air Quality Sector. Operator and concessionaire of the International Bridge, Cucapa, Variable Capital Company (CUCAPA) is the official sponsor of the project.

1.b Project Categories

The project is consistent with **the *Private-Sector Environmental Infrastructure Project-Exclusive Impact Category*.** This project falls into this category because it addresses the environmental infrastructure change that can improve the air quality of the region by reducing current traffic congestions in the area of the existing Port-of-Entry (POE). The revenue process will be generated from the collected fees that correspond to the private commercial vehicles service cost for using the proposed ICP, and will not come from the municipality of SLRC, Sonora nor San Luis AZ. The facility in operation is a concession granted to CUCAPA, and any impact will be exclusive to the facility. The community-at-large will not support the project implementation, although an indirect benefit will result to the community from the project.

1.c Project Location and Community Profile

The project will be developed in the city of San Luis Río Colorado, Sonora, located in the northwest of Mexico. It is limited to the north by the US-Mexico border and its sister city San Luis, Arizona; to the west by the municipality of Mexicali, BC; to the east by the municipalities of Plutarco Elías Calles and Puerto Peñasco; the Gulf of Santa Clara is to the south.

The city of San Luis is located on the Southwest corner of Arizona, within Yuma County in the United States. San Luis, AZ is the border town to SLRC, Sonora, Mexico and was established in 1930, as a U.S. Port of entry into Mexico.

The proposed ICP is to be located at the east end of the city of San Luis Rio Colorado, at the westerly border of Arizona and Sonora, Mexico (Barton-Aschman Associates, Inc., September 2000, Final EA). Approximately 5 miles east from the current location along the U.S.-Mexico border line, the new ICP will be located on an 83.7-acre site on the Mexican side, and will create segregation between commercial and non-commercial vehicles. This project will have a U.S. counterpart as a complement to the Mexican side that will be adjacent to the project on a 339-acre site.

The following image (Figure 1) shows the geographic location of SLRC, Sonora with regards to Phoenix and Tucson, AZ, and Mexicali, BC.

Figure 1. Google Earth Satellite Image with the Geographic Location of SLRC.

Demographics

San Luis Rio Colorado, Sonora

According to the 2005 census, carried out by the National Institute of Statistics, Geography and Data Processing (INEGI, for Spanish), in 2005, the municipality of San Luis Rio Colorado (SLRC) had a population of 157,076 inhabitants, with a municipal annual growth rate of 1.66%. According to the population projections of the National Population Council, (CONAPO, for Spanish), last year's (2007) population in SLRC was 161,795 inhabitants. The average per capita income amounts to approximately US$419.50 (NADB Estimation from INEGI statistics and the Minimum Wage National Commission).

San Luis, Arizona

The city was established in 1930 with the opening of the U.S. Custom along the border crossing with Mexico, and in the last twenty years it has registered an accelerated population increase going from 1,946 inhabitants in 1980, to approximately 20,000 in the year 2000. The growth is due to a constant migration from Mexico and California, productive activities in the border area, and the opportunities San Luis, AZ has to offer.

1.d Legal Authority

The SCT awarded the concession of the new international port to the company "Concesionaria y Operadora del Puente Internacional Cucapá S.A. de C.V.", which could translate to "Operator and Concessionaire of the International Bridge, Cucapa, Variable Capital Company (VCC)", on November 6th, 2007 in Mexico City.

According to the SCT concession, The Operator and Concessionaire of the International Bridge Cucapa (CUCAPA) will be responsible to operate and maintain the project for the next 30-years for it to be in excellent conditions. To comply with SCT regulations, CUCAPA will contract Mexican Federal Roads and Bridges Agency (Caminos y Puentes Federales, CAPUFE) to manage, operate, and maintain the facilities. CUCAPA will invest approximately US$12 MD on the construction activities of the new ICP, and with this, it will be the first Mexico-U.S. ICP that will function under a private inversion scheme.

CUCAPA is a partnership conformed of three enterprises: 1) Aeronautical Services and Development, VCC (Desarrollos y Servicios Aeronauticos, S.A. de C.V.); 2) Terramovil, VCC; and 3) Southeast Special Pavements, VCC (Pavimentos Especiales del Sureste, S.A. de C.V.).

Aeronautical Services and Development has experience on airport construction, operation and maintenance, they have participated on the concessions of Mexico's airport system. Terramovil and Southeast Special Pavements have vast experience on roadway construction and infrastructure, and have also participated on the concessions of Mexico's roadways.

The project falls within the scope of international agreements between Mexico and the United States, which are targeted at improving the environment and the quality of life of border residents. There are five bilateral agreements between both countries related to air quality; water quality, land protection and pollution control, and five of them have been taken into account since the onset of the project. These agreements are:

- 1889 International Boundary Convention
- 1983 La Paz Agreement, or Border Environmental Agreement
- 1990 Integrated Border Environmental Plan (IBEP)
- 1994 North American Free Trade Agreement (NAFTA)
- Border 2012 Program

1.e Project Summary

Project Description

This project intends to mitigate air quality concerns of the SLRC, Sonora-San Luis, AZ region by relocating the existing commercial POE between both border cities. Although current air quality data does not exist, but as further described under section 2.b, air quality of the surrounding area of the existing POE is estimated to exceed the U.S. EPA National Ambient Air Quality Standards (NAAQS) and the Mexican Health Agency (SSA, Secretaria de Salud), NOM-021-SSA1-1993 for carbon monoxide (CO). The new ICP will be relocated to a new site approximately 5 miles east of the current location along the U.S.-Mexico border, to an 83.7-acre site on the Mexican side, and a 339-acre site on the U.S. side, and will segregate commercial vehicles and passenger vehicles; Figures 2.1 and 3 show the location of the new ICP. The Mexican side of the new ICP will include a truck anti-idling/electrification station (TAS), which according to a Ross & Associates paper prepared for the EPA, is considered to be the highest rated activity to achieve diesel emissions reduction for On-Road Vehicles.

Currently, the existing POE consists of six passenger vehicle lanes and one commercial lane; with the implementation of this project, the existing ICP will be redesigned as a pedestrian and non-commercial port of entry, adding four new passenger vehicle lanes. The passenger vehicle lanes

will be relocated from the western side of the compound to the eastern side (currently used for commercial traffic) and the number of lanes will be increased from six to ten. On the eastern side, special lanes will be created for bus, high occupancy vehicle (HOV) and recreational vehicle

low-risk shipments across the U.S.-Mexico border. Dedicated FAST lanes will be available for greater speed and efficiency for processing transborder shipments (The White House, 2002; BDP International, 2003; U.S. CBP, 2007).

The proposed state-of-the-art infrastructure of the U.S. portion of the proposed ICP will have two primary inspection booths one of which will be dedicated to the FAST program; a bypass for oversize vehicles; 25 commercial docks with five enclosed for climate control; an export facility with six docks; a Vehicle and Cargo Inspection System (VACIS) gamma ray and X-ray inspection building; and HAZMAT facilities. This proposed ICP will facilitate the movement of commercial vehicle traffic from Mexico into the United States and divert truck traffic from downtown San Luis. Trucks from the proposed ICP will access Interstate 8 via a dedicated access road that connects to an Area Service Highway (ASH), also known as the Robert A. Vaughan Expressway. A State Motor Carrier Safety Inspection Station will be built contiguous with the proposed ICP as a separate Arizona Department of Transportation (ADOT) project.

According to the San Luis, Arizona Commercial POE Project Final Environmental Assessment (Final EA), the purpose of the project is to provide a more direct access to major transportation routes between the U.S. and Mexico, and to provide higher levels of service to users of the existing POE. The project would require three phases of construction spread out over a period of at least 10 years to allow for proper expansion to meet demands as they alter with time.

Phase I will consist of a new facility, including an administrative building, parking lot, access roadway, support facilities, inspection facilities, impoundment areas, and hazardous waste holding areas. The U.S. primary inspection system would include electronic inspection systems and other computerized processing systems, decreasing waiting times, providing a higher quality inspections, and increased safety. Phase II would close the existing commercial POE and would relocate any useable furnishings, fixtures, and equipment to the proposed ICP. Phase III would not occur until at least 10 years after Phase I is completed. This phase will expand the new facilities as demand requires.

Project Map

The following map presents the proposed facilities shown as “Nuevo Puerto Fronterizo” that translates to New Border Port (not to scale).

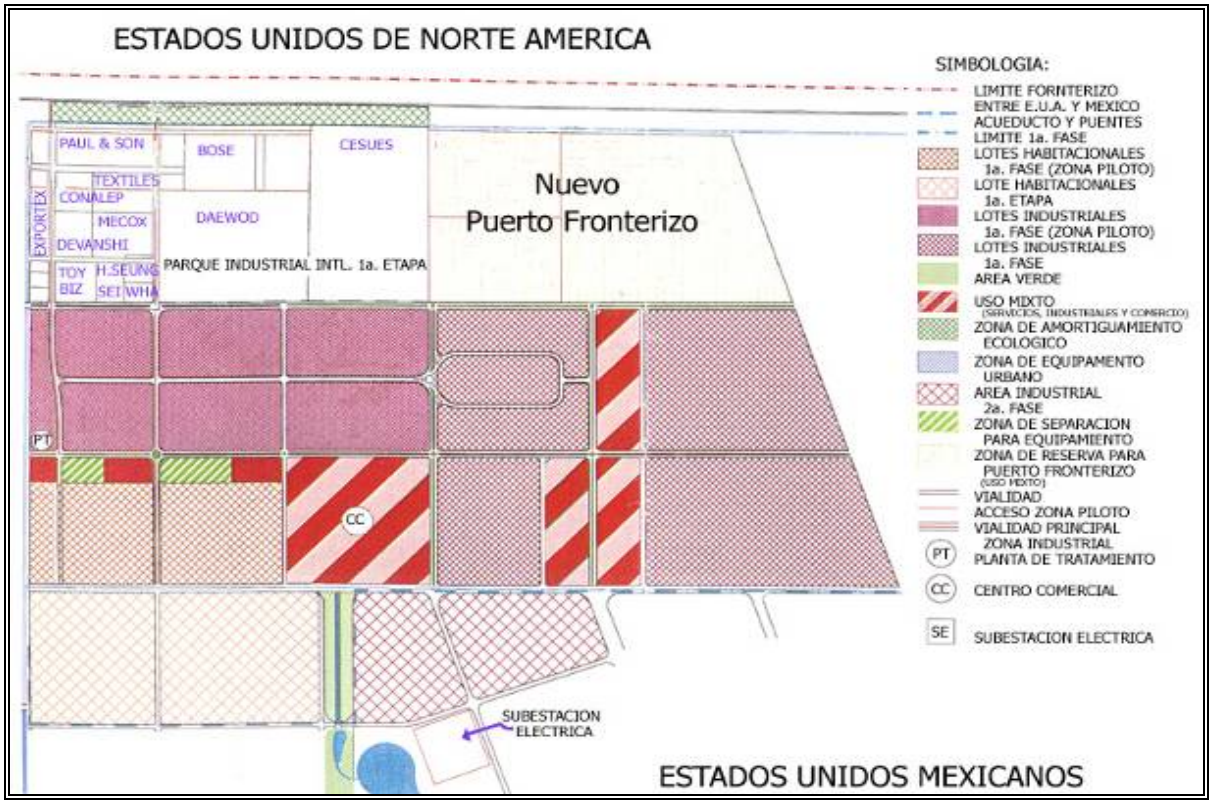


Figure 2.1 Proposed ICP facilities location on the Mexican side of project.

The following map (Figure 2.2) presents the proposed facilities in detail (not to scale). It also includes the route of the commercial vehicles going into the U.S. and going into Mexico with the appropriate parking lot spaces that will be equipped with the electric power for commercial vehicles to stop their engines while they wait to be inspected

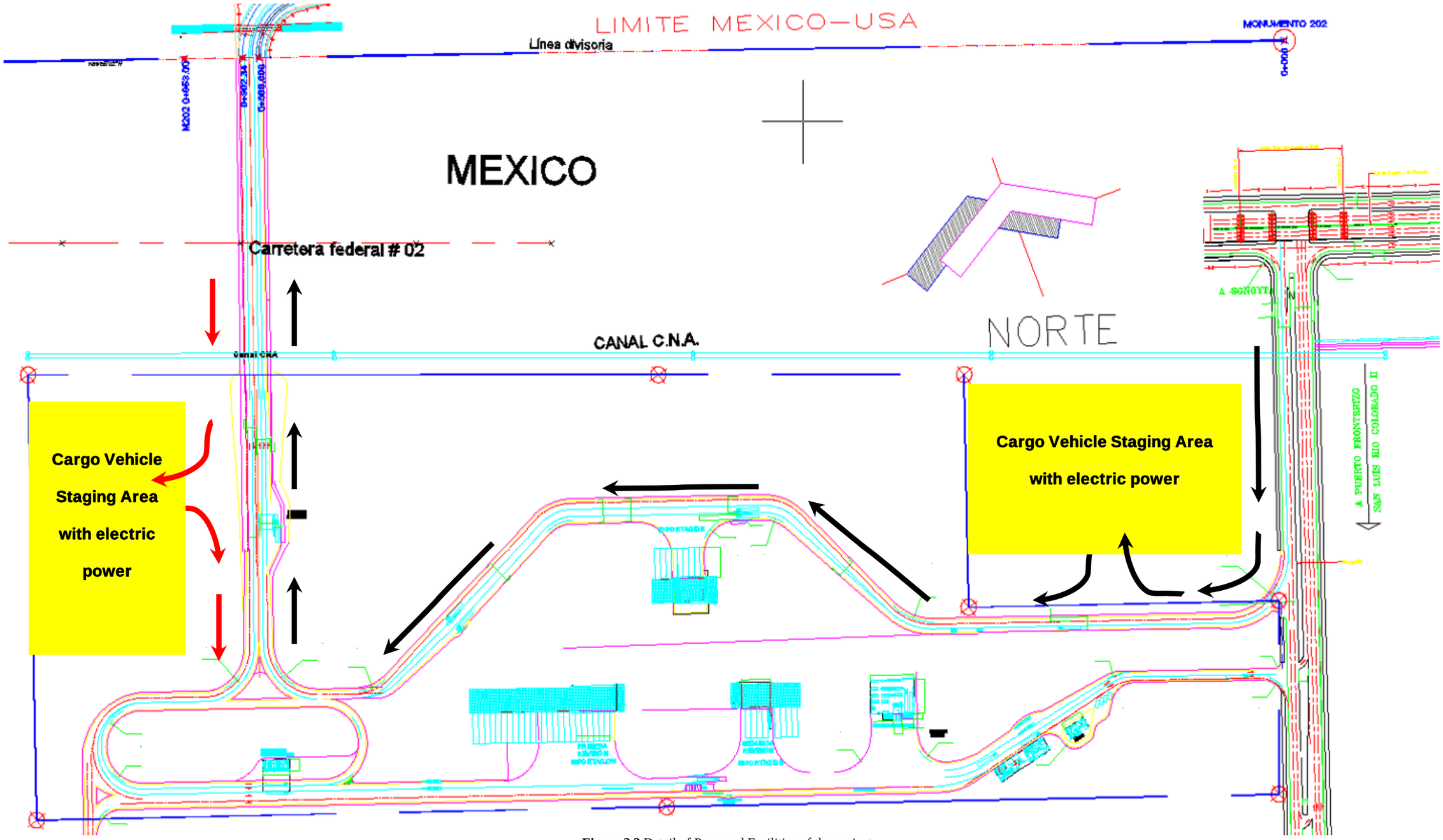


Figure 2.2 Detail of Proposed Facilities of the project.

The following Google Earth image shows the location of the proposed ICP compared to the existing POE.

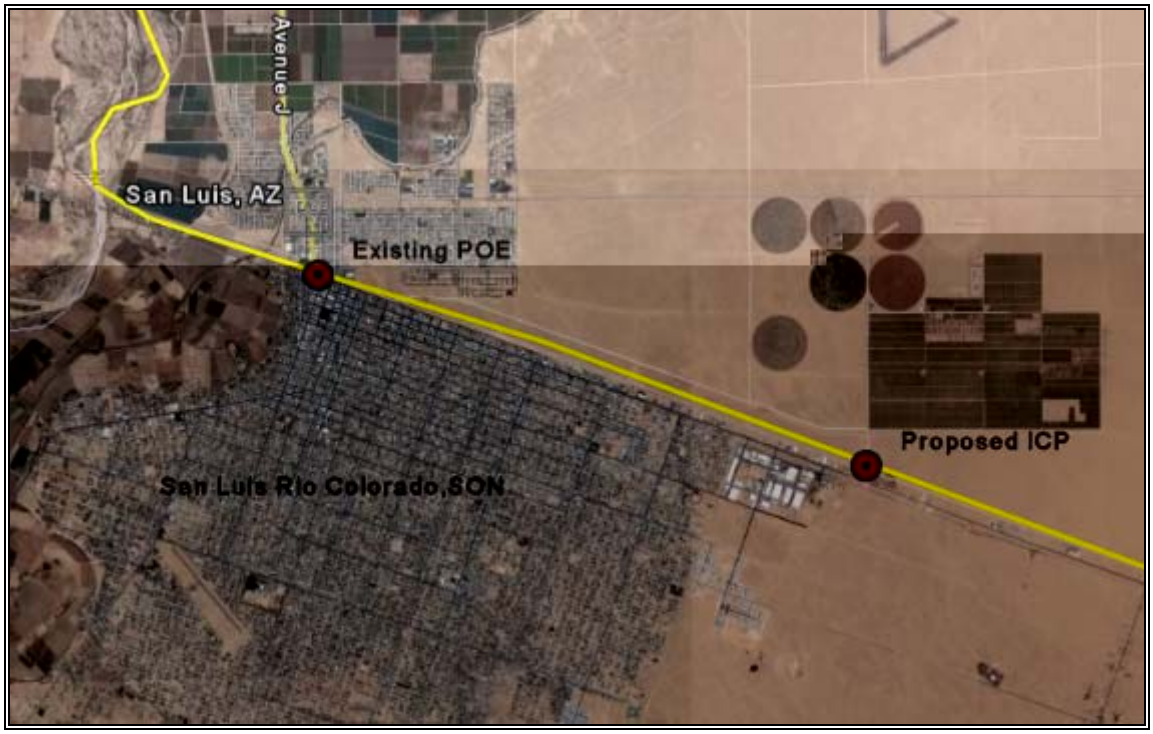


Figure 3. 5-mile distance (not to scale) from the Existing POE to the Proposed ICP.

Project Justification

Present Situation

Currently, passenger and commercial vehicles entering the U.S. from Mexico are delayed at the SLRC-San Luis border crossing due to traffic congestions at the existing international port of entry, these delays are due to the current inspection times, the lack of free-land, infrastructure, and proper equipment. According to Barton-Aschman, northbound traffic experience an average 1.8 hour delay per commercial vehicle; this delay causes substantial idling air pollutant emissions from diesel engines. Also, traffic jams occur around the principal avenues of SLRC due to the commercial vehicles traversing though the city of SLRC to access the existing port, located at the heart of the downtown area which is densely populated; at the same time, commercial vehicles park at random spots before completing their journey to the international port, either to rest, to eat or to use a public restroom. The frequent traffic congestion and subsequent transportation delays are the cause for harmful emission compounds to be present in the SLRC-San Luis air basin; the possible health effects related to air pollution emissions are shown later in Section 2.b (Table 3).

According to a feasibility study done in 1997 for the proposed ICP, the existing POE experiences operational problems, especially on the Mexican side of the international port, since commercial vehicles, once in Mexico, immediately after crossing the commercial POE, have to go through an intersection used by the passenger vehicles waiting to cross into the U.S. thus creating a complex traffic obstruction. The traffic congestion worsens, when the commercial vehicles are selected for

a second inspection by Mexican authorities; these cargo vehicles have to drive to a customs facility close to the San Luis Rio Colorado, Sonora downtown area where they are further inspected. The cargo vehicles contribute to an increase volume of traffic around the SLRC downtown area on Obregon Avenue; some, continue into the downtown area to park for certain periods of time.

Another operational issue at the existing POE is the hazardous cargo going into the U.S. According to the feasibility study, there are an undefined number of vehicles crossing industrial toxic waste from the "maquilas" waiting next to the passenger vehicles. This hazardous cargo represents a great hazard to passenger vehicles and people within the immediate area, especially during summer month when dangerous chemical reactions could occur due to extreme temperatures experienced while a cargo vehicle is waiting in line.

Expected Benefit

Air quality improvements will be facilitated by the following:

- ***Reduction*** in fuel consumption and associated emissions due to shorter travel distances and reduced idling time for vehicles utilizing the new international crossing.
- ***Reduction*** of traffic congestion in route to and at the existing POE crossing, reducing gas pollutants within a concentrated geographic area caused by constant idling, accelerating, and decelerating of vehicles.
- ***Diversion*** of commercial traffic flow towards a new roadway on Avenue E in Yuma County from the proposed ICP, reducing driving distances, traffic concentration, and potential idling times.
- ***Elimination*** of the ultrafine diesel particle emissions at the existing POE and surrounding area, resulting from the relocation of commercial trucks to the east of the city at the proposed ICP.
- ***Reduction*** of the overall ultrafine diesel particle emissions with the construction of a new ICP, which will include the FAST Program and the staging area. This will expedite the overall inspection at the new infrastructure, resulting in less commercial vehicle idling emissions.
- ***Reduction*** of current crossing times at the existing POE with its expansion.
- ***Reduction*** of traffic jams at the surrounding areas of the existing POE associated with commercial vehicles interference to passenger vehicles crossing and local traffic further reducing commercial vehicle idling emissions.

Additionally, benefits such as safer pedestrian crossing infrastructure, less stressful travel conditions, and better air quality result in an improved quality of life, contributing to the sustainable development of the surrounding areas.

Under the existing conditions, the average delay is 42 minutes per passenger vehicle, but as mentioned previously, this idling period may increase up to 1.5 hours during peak times (Barton-Aschman, 2000), according to the U.S. Environmental Protection Agency (EPA) idling vehicles can release approximately 13 grams of air pollutants per minute (EPA, 1999). With the implementation of the project and the construction of a new ICP, and its state-of-the-art infrastructure, the increased capacity to accommodate more vehicles per minute will result in

decrease delays for both commercial and non-commercial vehicles. Since commercial vehicles will now be able to stop their engines at the TAS while waiting to be inspected in Mexico, and the non-commercial inspection periods will be more efficient at the existing POE with the additional lanes; delays are anticipated to be reduced by approximately 30 percent (ATTACHEMENT A, Air Quality Report; ATTACHEMENT B, Air Quality Report Supplement; BECC, 2008). The project implementation will also include paving of existing dirt roadways to have an adequate access to a new ICP, resulting in the alleviation of air pollutant emissions by controlling particle matter (PM) emissions from the unpaved roads located in the vicinity of the new ICP.

There will be an air quality improvement with the reduction of pollutant concentration that will result from the implementation of this project. According to the model used in the Air Quality Report by BECC, it's estimated that 97 percent of the currently affected area would potentially be below the NAAQS limits for carbon monoxide (CO) after the project implementation. A "no-deterioration" is expected from future conditions since pollutant concentrations at the current location will be reduced and the increase in the future site is minimal. Based on future conditions, there is a possible greater benefit in the reduction of concentrations at the existing POE than the increase expected at the proposed ICP, this is due to the potentially greater number of people exposed at the existing POE (those waiting to cross) than at the proposed ICP. Finally, even though the pollutant concentrations are expected to decrease, there is another health benefit attributed to the deviation of the commercial trucks. As mentioned in BECC's Air Quality Report, exposure to ultrafine, diesel particles results in negative health effects. The exposure to these particles will be reduced since the commercial trucks will no longer go through the city and wait at the existing POE, but rather drive by the eastside of the city to the proposed ICP. Models such as MOBILE6 and AIRMOD used for the purpose of this document (ATTACHEMENT C AND D), showed reductions by approximately half in the next 5-years, for certain air pollutants, achieving an air quality benefit for the SLRC, Sonora-San Luis, AZ air basin. Table 1 shows the results from ATTACHEMENT D, Assessment of Air Quality Impacts at the International POE in SLRC, Sonora – San Luis, AZ done by the University of Texas at El Paso. The assessment results from Table 1 show a significant improvement by reducing Air Pollutant emissions to the region's air basin ranging from 29 to 58%.

Table 1. Total Emissions of $PM_{2.5}$, VOCs, CO and NO_x for Calendar Years 2006, 2011, 2016, 2021, and 2026.

Year		Idle (U.S. ton)				Moving (U.S. ton)				Total (U.S ton)			
		$PM_{2.5}$	VOC	CO	NO_X	$PM_{2.5}$	VOC	CO	NO_X	$PM_{2.5}$	VOC	CO	NO_X
2006	No Action	0.30	50.15	295.62	15.00	0.18	30.94	182.85	9.11	0.48	81.09	**478.47**	24.11
2011	No Action	0.51	34.80	279.91	12.06	0.11	21.52	173.43	7.34	0.62	56.32	453.34	19.40
	Proposed	0.28	21.32	170.85	7.62	0.07	13.10	105.27	4.56	0.34	34.42	**276.12**	12.19
2016	No Action	0.41	28.95	275.80	8.07	0.08	17.96	170.80	4.94	0.49	46.91	446.60	13.01
	Proposed	0.28	17.63	168.51	5.05	0.05	10.88	103.74	3.05	0.33	28.51	**272.25**	8.10
2021	No Action	0.37	28.58	290.55	6.29	0.07	17.75	179.91	3.89	0.45	46.34	470.47	10.19
	Proposed	0.26	17.36	177.57	3.86	0.04	10.74	109.29	2.59	0.31	28.11	**286.86**	6.45
2026	No Action	0.40	30.84	317.18	6.33	0.08	19.16	196.39	3.93	0.47	50.00	513.57	10.26
	Proposed	0.28	18.73	193.84	3.84	0.05	11.59	119.31	2.38	0.33	30.31	**313.15**	6.21

With the implementation of proposed ICP, FAST program will be added as a service in the new U.S. facilities, which is not currently available. The implementation of this program would bring several benefits to its users: dedicated FAST lanes will be available for greater speed and efficiency for processing transborder shipments; additional security will be added to the supply chain as well as protecting the economic prosperity of the two countries; and reduced number of inspections results in reduced delays at the border that translate into reduced air pollutant concentrations (The White House, 2002; BDP International, 2003; U.S. CBP, 2007).

The diversion of diesel trucks will also be a benefit to the human health in this border region, since people living around the existing POE will no longer be exposed to ultrafine particles (UFP), which cause inflammatory response in the airways and impair regulation of vascular tone in healthy humans (Nemmar et al., 2007). According to BECC's Air Quality Report, the total health benefits of the project are anticipated to result in a reduction on short-term effects, such as *eye, nose and throat irritation, and upper respiratory tract infections* (i.e. bronchitis, pneumonia). In addition, a reduction on long-term effects may also result, such as *chronic respiratory diseases, lung cancer, heart disease, and possible brain, nerves, liver, or kidney damages,* which could be irreversible. (Section 1.2, Health effects of air pollution, of the SLRC Air Quality Report, by BECC, 2008).

The San Luis, Arizona Commercial POE Final EA states *"The Port of Entry project would reduce both commercial vehicle and non-commercial vehicle queuing delays by providing more efficient inspection services with the capacity to accommodate more vehicles per minute. Commercial vehicles would be able to* ***dock and turn off their engines*** *instead of waiting for a docking space to become available. Also, the improvements planned for the existing port of entry would reduce queuing delays for non-commercial vehicles. Separating the two port of entry stations into commercial and non-commercial ports decreases delays caused by mixed use and increases efficiency of inspection processing, which also reduces delays."* This will consequently translate to fewer air pollutants (i.e. NO, CO, PM) being inhaled by the region's population.

Important issues for Certification:

The Project falls within the BECC's priority sectors and complies with General Criteria.

Pending issues: None

2. Health and Environment

2.a Compliance with Applicable Environmental Laws and Regulations

The project is in compliance with the Mexican environmental and cultural resource laws. SEMARNAT required CUCAPA to develop an Environmental Impact Assessment (MIA, for Spanish), to achieve clearance from SEMARNAT. SEMARNAT has already completed its review and evaluation and has issued the MIA's ruling.

In addition, on the U.S. counterpart, a Final Environmental Assessment was prepared in September 2000, for the U.S. State Department of the Interior and the Bureau of Reclamation as a requirement for a Presidential Permit application for the proposed international port (Presidential Permit 07-01, Page 37073-37074). In July 2007, the U. S. State Department issued a Presidential Permit to construct, operate and maintain a new commercial land border crossing near San Luis, AZ, its access, and facilities (land, structure, or installations) at the international boundary between the U.S. and Mexico.

The project's Final EA was written in accordance with the National Historic Preservation Act (80 Stat. 917, 16 U.S.C. 470f et seq.), in compliance with the National Environmental Policy Act of 1969 (P.L. 91-190), the Council of Environmental Quality Regulations of 1978 (40 CFR Parts 1500-1508.

2.b Human Health and Environmental Impacts

In general, the proposed ICP will reduce air pollution from the SLRC, Sonora-San Luis AZ air basin as shown in the results from ATTACHEMENTS A, B, C and D; it will reduce air pollutants at the affected area currently estimated to be above the NAAQS and SSA standard NOM-021-SSA1-1993. To accomplish an air pollution reduction is an important task, given that several research investigations indicate that air pollution has been linked to short-term and long-term health effects, and the proposed ICP will mitigate air pollution effects. It has been researched that young children and elderly people, as well as those who already suffer from asthma, heart, or lung disease, are more vulnerable to serious health effects, and Table 3, later in this chapter, shows asthma as a common disease in SLRC. Children, in particular, are more prone to these health effects since they spend more time outdoors and inhale more volume of air than the average adult because their respiratory system is not fully developed. A 3-year monitoring study performed in Mexico City for 24-hour averages, showed that lung exposure to PM_{10} (particulate matter with an aerodynamic diameter less than 10 microns) and to nitrogen dioxide (NO_2) is associated with deficits in lung growth in children 8 years in age (Rosalba Rojas-Martinez et al., 2007). According to the USC Children's Health Study, results show that children with asthma get sicker when exposed to higher levels of pollutants associated with traffic emissions such as particulate matter (PM) and NO_2 (Andrea M. Hricko, 2004).

People who exercise outdoors are also exposed more to air pollution since they inhale more volume of air than the average adult at rest. Short-term effects include irritation to eyes, nose and throat, and upper respiratory tract infections like bronchitis and pneumonia. Long-term effects may include chronic respiratory disease, lung cancer, heart disease, and sometimes even damage to the brain, nerves, liver, or kidney. It has also been observed that morbidity and mortality are linked to episodes of air pollution (Shen et al., 2002; Nemmar et al., 2004; Desantes et al., 2005; Peters 2006; Wilson et al., 2006).

Biological test from an air quality study performed in Mexicali, Baja California, Mexico, identified that PM of geological origin are more closely associated with biologic mechanisms that can result in severe health consequences like pulmonary fibrosis, growth retardation and even cancer. In contrast, PM of anthropogenic origin produced more inflammation which can have serious pulmonary and cardiovascular impacts, such as lung and systemic cardiovascular diseases (Reyna et al., 2005-2007). This same study determined that 4 percent of the total PM emission came from mobile sources from which the majority (>80 percent) where heavy diesel engines such as commercial vehicles.

PM has been associated with adverse health effects, decreased heart-variability, and respiratory and cardiopulmonary related morbidity and mortality (Shen et al., 2002; Peters 2006; Wilson et al., 2006). Fine particulate air pollution has been linked to an increase in hospital admissions for respiratory and cardiovascular diseases (Desantes et al., 2006). Furthermore, research suggests that ultrafine particles (UFP) may be more responsible for the adverse health effects associated with PM. Nemmar and Inuwa (2007) suggest that UFP that are inhaled may be able to translocate into the blood stream and even taken up in the brain through olfactory epithelium. It is believed that UFP causes more damage to lungs because they are present in greater numbers, and are able to penetrate deeper into the lungs, have larger surface area which means increased potential for interaction with other organs, and because the inflammation produced increases as particle size decreases (Nemmar et al., 2004; Desantes et al., 2005; Desantes et al., 2006).

Diesel particles are mainly made up of ash and agglomerated solid carbonaceous material, sulfur, and volatile organic compounds (Desantes et al., 2005). UFP are mostly emitted from diesel-powered vehicles; additionally, diesel exhaust particles (DEP) are one of the main contributors to urban particulate pollution (Nemmar et al., 2004; Desantes et al., 2006). Animal research has shown that exposure to DEP causes heart rate and blood pressure to decrease, pulmonary inflammation, and thrombotic complications; it also causes inflammatory response in the airways and impairs regulation of vascular tone in healthy humans (Nemmar et al., 2007).

Human Heath Impacts

The article "Motor Vehicle Air Pollution and Public Health: Selected Cancers" published in the Environmental Defense Fund Web site reports several scientific studies conducted on the association of urban air pollutants with certain types of cancer, focusing on motor-vehicle-related air pollution. These studies have concluded that urban air pollution increases lung cancer risk and that vehicle emissions may be particularly important.

The article states *"…relatively small but rapidly growing body of epidemiological studies has emerged that links proximity to high-volume traffic roads and motor vehicle air pollutants with lung cancer in adults and with leukemia, and possibly Hodgkin's disease, in children. There exists strong evidence that occupational exposure to high level of diesel particulate emissions increases the risk of lung cancer, and similar levels of evidence for the link between occupational exposures to benzene and the risk of leukemia. Therefore, it is biologically plausible for similar associations to exist at the relatively lower ambient air pollution exposures that are associated with residing for significant length of time in close proximity to high volumes of motor vehicle traffic."*

The residents living in the immediate surroundings of the existing POE live in this very condition. Residents on both sides of the border are exposed to high volumes of vehicle traffic and the associated health risks.

According to a financial model completed by the sponsor, it is expected that an approximate growth of 7% will occur for passenger and commercial vehicles crossing this border region from 2007 to 2013. Then, for the years 2014 to 2023, an expected growth of 5% is expected. Finally, an estimated growth of 3.5% for the years 2024 to 2038 is anticipated.

Air pollutants generated by automobile combustion include the following elements: Carbon Monoxide (CO), Nitrogen Oxides (NO_x = NO and NO_2), and Volatile Organic Compounds (VOCs). The effects on human health associated with the exposure of these pollutants are presented in Table 2.

Table 2. Summary of Air Pollutant Health Effect Associated with its Exposure.

Pollutant	Effect
Carbon Monoxide	Interferes with the blood's ability to carry oxygen to the brain, heart, and other tissues. Unborn or newborn children and people with heart disease are in greatest danger from this pollutant, but even healthy people can experience headaches, fatigue and reduced reflexes due to CO exposure.
Mono-Nitrogen Oxides	The effect of NOx exposure on the respiratory system is similar to that of ozone and sulfur dioxide. Human health concerns include effects on breathing and the respiratory system, damage to lung tissue, and premature death. Small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease, such as emphysema and bronchitis, and aggravate existing heart disease.
VOCs	Toxic air pollutants such as benzene and formaldehyde are substances from automobile emissions that are known to cause or are suspected of causing cancer, genetic mutation, birth defects, or other serious illnesses in people even at relatively low levels.

A report researched and published by Environment and Human Health, Inc. (EHHI), titled “The Harmful Effects of Vehicle Exhaust”, describes the effects of vehicle emissions on these illnesses:

- Asthma
  Chemicals in vehicle exhaust are harmful to asthmatics. Exhaust can adversely affect lung function and may promote allergic reactions and airway constriction. All vehicles, especially diesel engines, emit very fine particles that deeply penetrate lungs and inflame the circulatory system, damaging cells and causing respiratory problems. Even short-term exposure to vehicle exhaust may harm asthmatics.

- Chronic Obstructive Pulmonary Disease
  Vehicle emissions are particularly harmful to people afflicted with chronic obstructive pulmonary disease (COPD), such as chronic bronchitis. Significant and replicated associations have been found between increased ozone levels and a range of adverse

effects on the lungs, and several studies have shown increased risk of hospital admission from COPD associated with high ozone levels.

- Cardiovascular Disease
  Mortality and hospital admissions for myocardial infarction, congestive cardiac failure and cardiac arrhythmia increase with a rise in the concentrations of particulate and gaseous pollutants. As concentrations of airborne particles increase, those with cardiovascular disease may experience increasing severity of symptoms, rates of hospitalization, and mortality. The risk of having a heart attack is greater for people exposed to pollution from heavy traffic, as well as for those living near air-polluted roadways.

- Cancer
  Vehicles emit numerous carcinogenic chemicals. Diesel contains benzene, formaldehyde, and 1,3-butadiene—all three are well recognized carcinogens. EPA estimates that vehicle emissions account for as many as half of all cancers attributed to outdoor air pollution.

- Diabetes
  Increasing levels of air pollution are associated with rising mortality rates among diabetics. Because of the overlap between diabetes and cardiovascular disease, the nature of this association is not yet clear.

According to Mexican National Health System (Sistema Nacional de Salud, for Spanish) and to the Mexican Health Agency (Secretaria de Salud, for Spanish), the yearly list of the 20 main diseases sources in SLRC establishes a clear link to human health risks from the exposure to air pollution and PM. Table 3 shows the major disease in SLRC from 2003 to 2007, with chronic respiratory diseases highest incidence rate for the past five years. Table 3 also shows other sources of diseases (pneumonia & bronchopneumonia, and asthma); and the percentage of respiratory diseases compared to the total diseases in the list. As expressed in the table, respiratory diseases account for more than 50 percent of the total reported diseases in the yearly list during 4 of the last 5 years.

Table 3. Summary of Respiratory Health Effects from the Yearly List of the 20 Main Diseases Sources in SLRC.

Year	Chronic Respiratory Diseases	Pneumonia & Bronchopneumonia	Asthma	TOTAL: Respiratory and Non-Respiratory	Percentage of Respiratory Diseases
2003	6,092	947	157	16,660	43%
2004	9,023	86	62	13,454	68%
2005	9,740	166	150	15,351	66%
2006	10,445	183	87	16,958	63%
2007	11,285	129	110	17,611	65%

With the implementation of the new ICP and the expansion of the existing POE, pollutants generated by automobile combustion and by diesel engines will be reduced proportionally to the

reduction of time spent idling at the existing POE. This pollution reduction will contribute to improve air quality in the area and the correspondent benefits to SLRC resident's health.

Environmental Impacts

The new ICP for SLRC will initially include the construction of one commercial vehicle port of entry facilities and it is estimated to reduce inspection rates from 3.2 minutes per vehicle to 1.5 minutes per vehicle. The current POE will expand from 6 to 10 lanes to also reduce the inspection times. As mentioned in Section 1.e, the potential benefits expected from the implementation of the proposed project include the following:

- ***Reduction*** in fuel consumption and associated emissions due to shorter travel distances and reduced idling time for vehicles utilizing the new international crossing. In turn, reduced emissions will result in improved air quality for the region.
- ***Reduction*** of traffic congestion in route to and at the existing POE crossing, reducing gas pollutants within a concentrated geographic area caused by constant idling, accelerating, and decelerating of vehicles and resulting in air quality improvements for the region.
- ***Diversion*** of commercial traffic flow towards a new roadway on Avenue E in Yuma County from the proposed ICP, reducing driving distances, traffic concentration, and potential idling times.
- ***Elimination*** of the ultrafine diesel particle emissions at the existing POE and surrounding area, resulting from the relocation of commercial trucks to the east of the city at the proposed ICP.
- ***Reduction*** of the overall ultrafine diesel particle emissions with the construction of a new ICP, which will include the FAST Program and the staging area. This will expedite the overall inspection at the new infrastructure, resulting in less commercial vehicle idling emissions.
- ***Reduction*** of current crossing times at the existing POE with its expansion.
- ***Reduction*** of traffic jams at the surrounding areas of the existing POE associated with commercial vehicles interference to passenger vehicles crossing and local traffic further reducing commercial vehicle idling emissions.

In order to provide a general quantification of the anticipated emission reductions achieved by shorter wait times, an analysis considering the number of vehicles estimated to utilize the new crossing and an assumed wait time reduction was performed. A screening tool available from the US EPA, SCREEN3, was initially utilized to estimate the air pollutant emissions under current and future conditions, the results are found in ATACHMENT A and B. After the initial results, MOBILE6 was the selected tool for use in this study. MOBILE6 is the newest emission model available at EPA for estimating speed dependent vehicle emissions from arterials and freeways, as well as non-speed dependent vehicle emissions from ramps and local roadways (Dowling et al., 2005). MOBILE6 emission estimates depend on various conditions, such as ambient temperatures, travel speeds, operating modes, fuel volatility, and mileage accrual rates. Many of the variables affecting vehicle emissions can be specified by the user. The model can be used to estimate emission factors for any calendar year between 1952 and 2050 (U.S. EPA, 2004).

MOBILE6 and AERMOD Modeling Results

ATTACHMENT C and D show in detail all the results from the model. MOBILE6 is an emission factor model developed by U.S. EPA, and was released on January of 2002. MOBILE6 produces different speed dependent emissions for arterials and freeways, along with non speed dependent rates for ramp and local road ways (Dowling et al., 2005).

MOBILE6 is a computer program that estimates hydrocarbon (HC), CO, NO_x, exhaust PM, tire wear PM, brake wear PM, sulfur dioxide (SO_2), ammonia (NH_3), six hazardous air pollutant (HAP), and carbon dioxide (CO_2) emission factors for gasoline-fueled and diesel highway motor vehicles, and for certain specialized vehicles such as natural-gas-fueled or electric vehicles that may replace them (U.S. EPA, 2003).

AERMOD is a steady-state plume model used to estimate pollutant concentrations from point, flare, area, line, and volume sources emissions. This model is unique since it can estimate concentrations based on turbulence expected form the planetary boundary layer (PBL); the model can account for plume rise, downwash, rural and urban dispersion parameters, irregular shaped area sources, and limited complex terrain. AERMOD consists of two pre-processors: the AERMET and the AERMAP. The AERMET is used to process meteorological data from the site which is being modeled in order for it to be read by AERMOD. AERMAP is used to characterize terrain as well as to generate receptor grids for AERMOD (Franco, C.L. 2006).

MOBILE6 and AERMOD were used to estimate CO, NO_x, $PM_{2.5}$, and VOC emissions and pollutant concentrations from idling and slowing moving vehicles at the SLRC POE under different conditions. As shown in ATTACHEMENT C and D, MOBILE6 and AERMOD gave us a clear perspective on current and future conditions; the air pollutants with the highest concentrations were detected. Results show that the current CO 1-hour and 8-hour concentrations are exceeding the NAAQS, but with the project implementation, both concentrations will be reduced by approximately half in the next 5-years. For $PM_{2.5}$ 24-hour concentrations and $PM_{2.5}$ annual concentrations reductions were found to be one-third in the next five years with the project implementation. MOBILE6 and AERMOD were and adequate tool to further detail the basic results from SCREEN3. According to the modeling, an air quality benefit will occur by reducing harmful NAAQS air pollutants from the SLRC, Sonora-San Luis, AZ air basin for the public's health benefit and the protection of the environment, mostly reducing CO and PM.

Current Air Quality at the Existing POE

There was no current air quality data available of the SLRC, Sonora – San Luis, AZ region, for that reason, the BECC initially issued an Air Quality Report (ATTACHMENT A and B) using basic SCREEN3 and the U.S. EPA idling vehicle emissions sheet (EPA, 1999) before moving forward to using MOBILE6/AERMODE and estimating the air pollutant emissions and concentrations from vehicles crossing through the POE. MOBILE6 was used to find annual $PM_{2.5}$, VOCs, CO, and NO_x emissions to the atmosphere at the San Luis POE. The construction of a new ICP for commercial vehicles appears to be effective in reducing pollutant emissions at the POE. The air environment for the residents of the communities neighboring the POE and the users and workers of the POE will undoubtedly benefit from the proposed ICP (See ATTACNMENT D).

The alternative of current conditions, base year 2006, was used to represent the current situation at the POE. The year 2006 was chosen because it's the most current year with published

information; for year 2007 only the first seven month's information is available. The estimated emissions from MOBILE6 which were later used for AERMOD dispersion modeling are shown in Figure 4. ATTACHEMENT C will show the AERMOD resulting dispersion modeling figures for the most noticeable air pollutants under current conditions.

As shown in Figure 4, the single highest emitting air pollutant during 2006 was CO, this according to MOBILE6. CO will have a total emission of 478.5 tons during 2006, while VOCs were estimated at a total of 81.1 tons, NO_x at 24 tons. $PM_{2.5}$ did not have a significant contribution in comparison with CO, VOCs or NO_x.

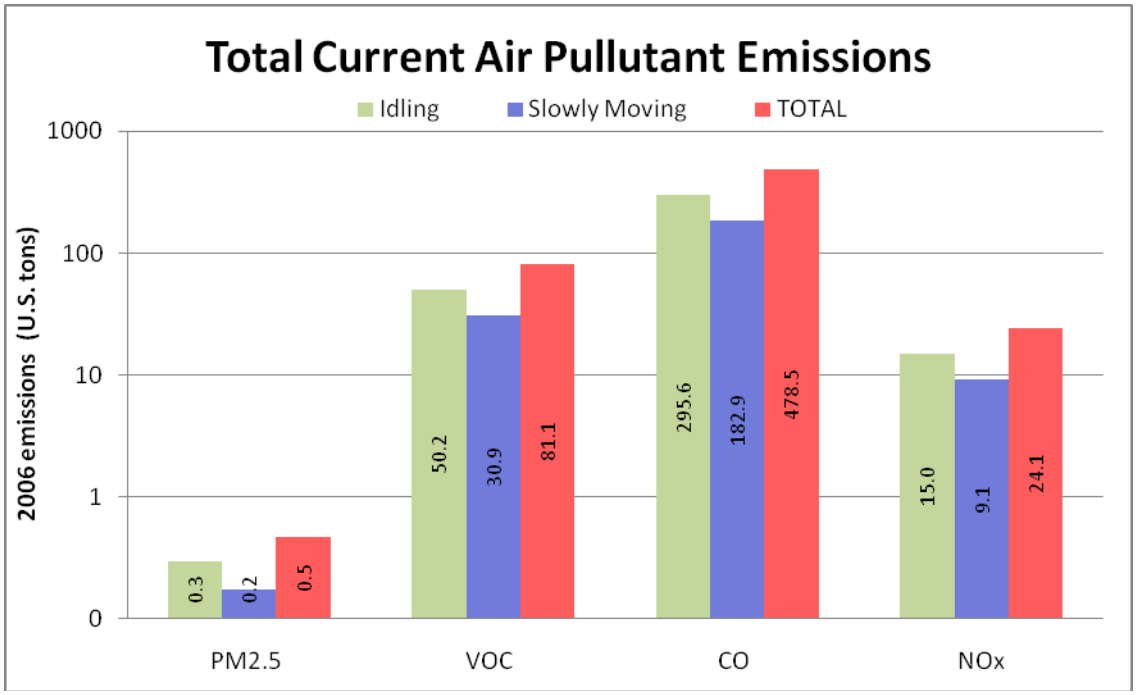


Figure 4. Current Air Pollutant emissions in U.S. tons estimated with MOBILE6.

Future Air Quality at the existing POE

Future air pollutant concentrations were initially estimated as described in ATTACHMENT A and B. Then, MOBILE6 was used to determine future projections and then AERMOD was used for dispersion modeling. As is described in ATTACHMENT C and D, the future projections include the years 2011, 2016, 2021, and 2026; the commercial lane would be relocated to the east side of the city to the new ICP, and the current commercial lane land would be used to expand the six passenger lanes to ten passenger lanes. The estimated emissions from MOBILE6 are shown in Figure 5.

As shown in Figure 5, according to MOBILE6, CO continues to be the highest emitting air pollutant. CO will have a total emission of 276 tons during 2011, while VOCs were estimated at a total of 34 tons, NO_x at 12 tons. $PM_{2.5}$ did not have a significant contribution in comparison with CO, VOCs or NO_x. As mentioned in ATTACHMENT C, reductions range from 29 up to 58 percent when compared to current conditions. The most noticeable reduction was found to be CO. ATTACHEMENT C will show the AERMOD resulting dispersion modeling figures for the most noticeable air pollutants under future conditions.

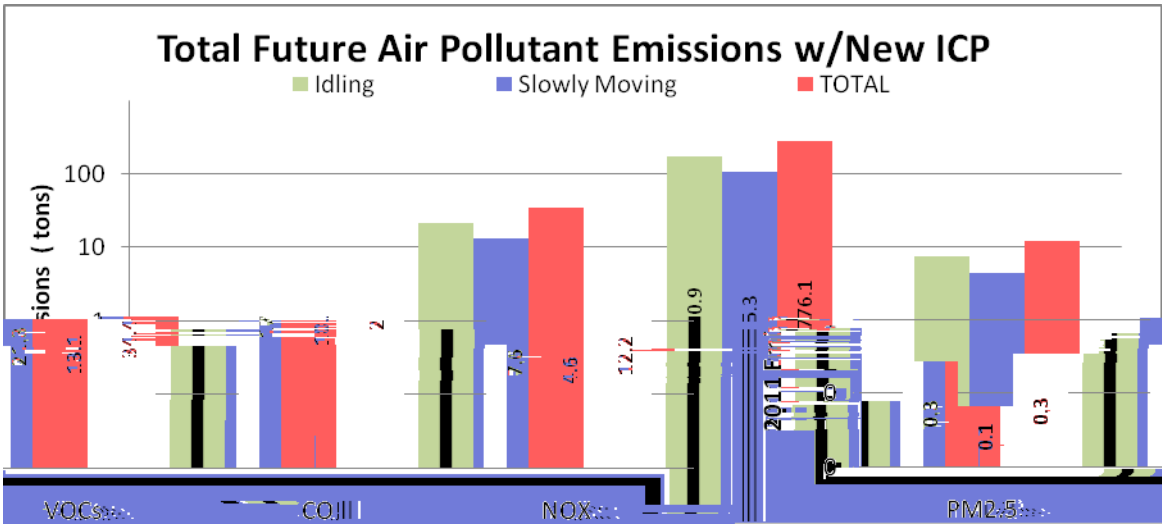


Figure 5. Proposed Future Air Pollutant emissions in U.S. tons estimated with MOBILE6.

The no action alternative, that is if the ICP is not constructed, is shown in Figure 6. CO will have a total emission of 453 tons, while VOCs were estimated at a total of 56 tons, NO_x at 19 tons. Again $PM_{2.5}$ did not have a significant contribution. As is discussed in ATACHMENT C, the "No Action" results show a slight improvement due to the fact that MOBILE6 considers new technology availability with the years to come, which is not necessarily a good representation of future technology usage in SLRC, Sonora. ATTACHEMENT C will show the AERMOD resulting dispersion modeling figures for the most noticeable air pollutants under future conditions.

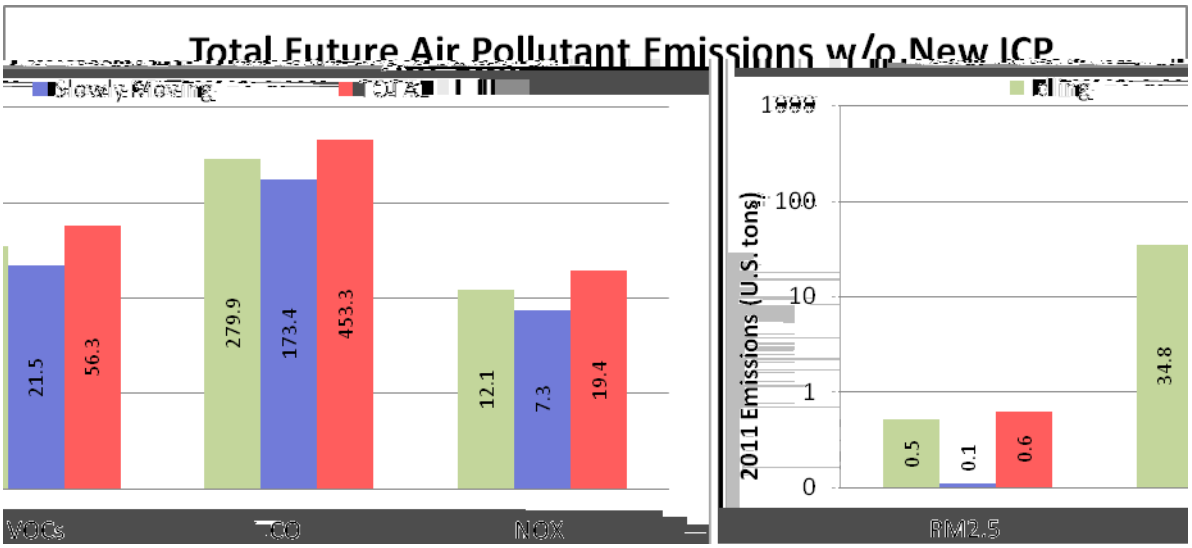


Figure 6. No Action Future Air Pollutant emissions in U.S. tons estimated with MOBILE6.

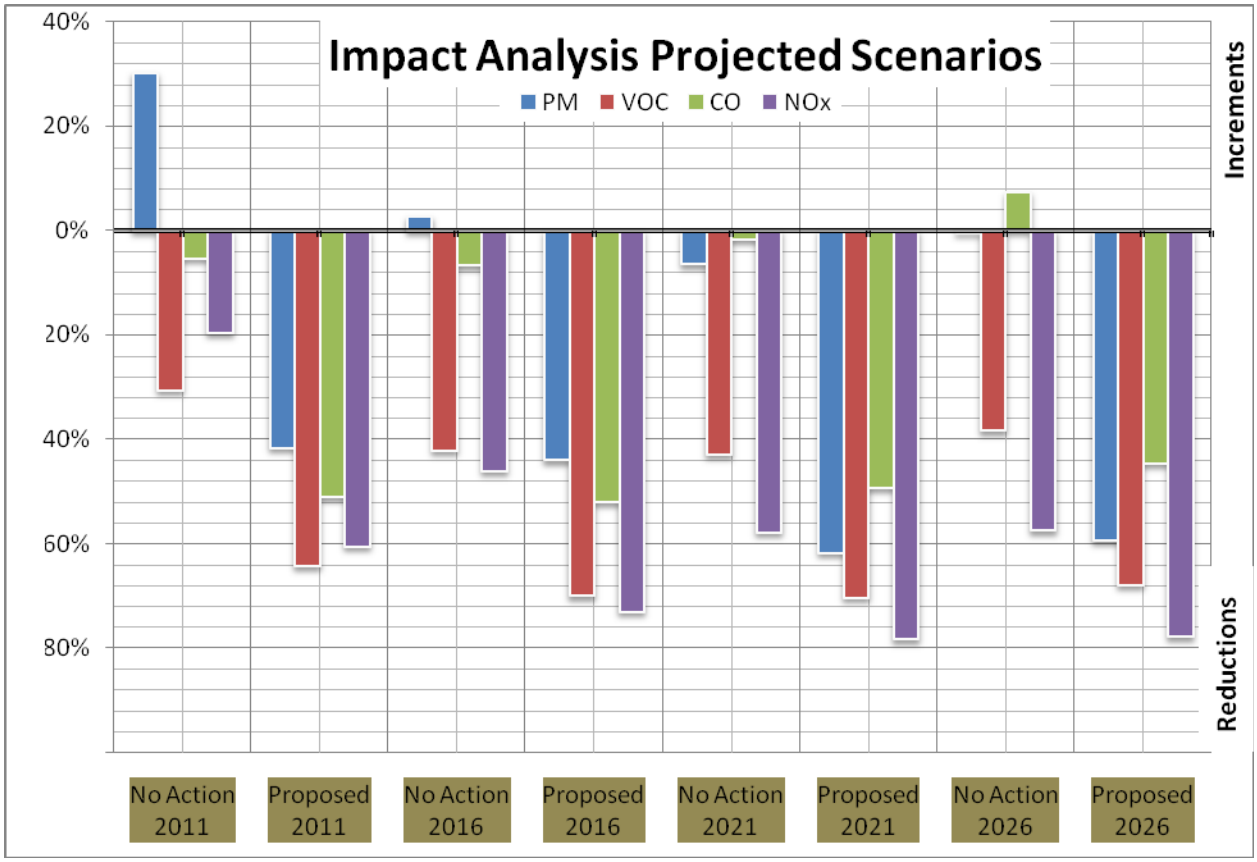


Figure 7. Current and future scenarios for different air pollutant emission reduction.

The result summary chart shown as Figure 7 (Figure 21, ATTACHMENT C), shows the different scenarios consequential from the impact analysis generated by MOBILE6, every "Proposed" alternative show a greater air quality benefit for that selected year when compared to the "No Action" alternative. One of the most significant benefits from the chart is the reduction obtained in PM when the No Action 2011 is compared to the Proposed 2011, there is a 70% differential between both, representing the clear benefit from diverting Diesel trucks to the new ICP. Additionally, the chart clearly shows how the proposed action for 2011, 2016, 2021, and 2026 has greater positive air quality benefit when compared to the No Action alternatives by reducing PM and CO pollutants from the SLRC, Sonora-San Luis, AZ air basin. It is important to mention that the graph shows some benefit for the no actions alternatives for the next 20 years, but as previously mentioned, this is due to the MOBILE6 assumption that the available technology will continue to improve on a yearly basis and thus vehicles using the port of entry will emit far less air pollutants. Refer to ATTACHEMENT C for the complete AERMOD plume dispersion results.

Benefits from Diverting Diesel Trucks

UFP are emitted from diesel-powered trucks; additionally, exposure to diesel exhaust particles (DEP) has negative health effects like inflammatory response in the airways and heart rate and blood pressure decrease. With the implementation of this project, the exposure to DEP will be reduced since the commercial trucks will be deviated outside of the city. Although there will be

DEP emissions at the new site, the exposure to humans is less than at the current bridge since the new site will be located at an Industrial Park area.

Potential short-term environmental effects

- As compared to existing conditions, noise levels may be elevated during construction.
- As compared to existing conditions, air pollution levels may be elevated during construction (earthwork operations).
- A relatively small amount of soil erosion may occur during construction.
- A small increase in the consumption of energy resources may occur during construction; and
- There may be potential traffic delays and detours during the re-construction of the roadways for the approach of the new and existing POEs.

Potential long-term environmental effects

- Increased traffic flow from new crossing to major transportation routes.
- Potential development of properties adjacent to the project may occur which could require the conversion of agricultural lands to transportation and commercial purposes.
- Area aesthetics would be modified from a general agricultural setting to a general transportation setting, with the possibility of modification over the long-term to more commercial setting.
- The pace of commercial, industrial and residential development in the area may accelerate.

Mitigation Measures

The above potential environmental effects are typical of new construction projects and are considered not to be significant, which is validated by the issuance of a Finding of No Significant Impact. Even so, the proposed ICP, through implementation of best practices and green building efforts, will be developed in a manner aimed at avoiding and minimizing any potential impact to the natural resources, public health, the cultural resources, and the social and economic features within and adjacent to the project area. When avoidance and minimization are not possible, mitigation measures have been proposed.

The Final EA provides a mitigation plan for all environmental impacts in physiography and topography, hydrology and water quality, traffic and circulation, air quality, noise, biological resources, land use, environmental justice and socioeconomics, public safety, cultural and historic resources, visual and aesthetic resources. The planned mitigation measures include, but are not limited to, the following:

Air Quality. Normal operational and emission control measures, such as following equipment manufacturers' emission control suggestions or requirements, should reduce emissions to levels that minimize any adverse effect to the ambient air quality during construction. Fugitive dust will be kept to a minimum by damping exposed areas with water at least twice a day, and this will be increased as the wind speed increases. Stockpiles will be cover, watered at least twice daily, and/or treated with non-toxic binders. The construction management will restrict traffic speeds on all unpaved surfaces to a maximum of 15 mph. Temporary affected areas will be revegetated, paved or landscaped. The equipment will be kept appropriately maintained, and idling will be kept to a minimum while equipment is not in use.

Noise. Noise from the construction site will be intermittent and its intensity will vary. Contractors will be required to comply with any County or City noise ordinances. The contractor will be required to use appropriately maintained equipment and ensure that all equipment utilizes the manufacturers' recommended noise abatement measures. Additionally, operations at Rolle Airfield, in San Luis, AZ, during the hours from 10 pm to 6 am would be limited. The area is zoned for agriculture, commercial, and industrial uses; therefore, no residential housing should be allowed within the noise contours of the proposed Airport, Highway and the POE.

Traffic. Traffic control plans will be developed, such that temporary signage will be placed around the construction site, trenches will be covered when construction is not active. The new ICP site will be fenced during construction; also perimeter lighting will be placed to illuminate the international boundary and the equipment and supplies. One road lane will remain open at all times, which will establish safe passage through the construction zone and facilitate access to any existing residential, commercial, agricultural and public facilities within and adjacent to project vicinity.

Energy Consumption. Construction equipment will be inspected regularly to ensure efficiency in order to conserve energy.

Other Green Building Efforts. Native vegetation will be used for landscaping, site paving will be maintained to the minimum necessary in order to minimize runoff and encourage percolation. Disposal of materials will include identification of recyclable materials such as excavated rock, soil and vegetation. A recycle storage bin for scrap metal will be placed on site. Stockpile materials will be managed utilizing best management practices – determining storage location and cover requirements. Backfill and earthwork will be minimized or nearby materials used as well as recycled water will be used for dust control in accordance with green building practices. No metal pipes will be used in construction and metal used in the reinforcement of structures has anti-erosion material in order to extend its life and minimize replacement.

Trans-boundary Impacts

Environmental impacts and benefits to the U.S. will be similar as the environmental impacts and benefits to Mexico given the fact that the international border shares the same air shed, and will share in the same benefits with mitigation of health risks and an improved quality of life. Residents of both sides of the border will have direct access to the existing POE without having to reroute, and the air quality will be improved through the reduction of the idling vehicle emissions and, thus, reducing the exposure to ultrafine and diesel particles off residents of the cities of San Luis Arizona and San Luis Rio Colorado, Sonora.

The importance of the Arizona-Sonora border infrastructure is a highly-regarded concern of governmental entities, transportation officials, commercial owners and residents within the border region. Ultimately, the proposed ICP, the existing POE, and related roadway improvements would enhance environmental health, safety as well as provide an organized transportation system for motorists traveling in the area.

According to the modeling done by BECC, from ATTACHMENTS A, B, C, and D, an air quality benefit will occur by reducing harmful NAAQS and SSA regulated air pollutants from the SLRC,

Sonora-San Luis, AZ air basin for the public's health benefit and the protection of the environment of both border towns.

Formal Environmental Clearance

CUCAPA was required by SEMARNAT (Letter S.G.P.A./DGIRA.DG.1367.08, April 30th, 2008) to develop an Environmental Impact Assessment (MIA, for Spanish), to achieve clearance from SEMARNAT. CUCAPA performed the MIA and presented it to SEMARNAT on June 17th, 2008. SEMARNAT has generated a Constancy Receipt Number (NRA, for Spanish): COPRT2605511, and a booking record number: 09/MG-2012/06/08. SEMARNAT issued the MIA's ruling on August 21, 2008 with letter number S.G.P.A./DGIRA.DG.2659.08.

The Mexican National Anthropology and History Institute (INAH, for Spanish) notified CUCAPA on April 27th, 2008 with letter number CIS/DIR.083/08 that no significant surface or subsurface cultural deposits were present within the site of the proposed ICP.

Based on the issuance of a FONSI, no significant adverse impacts to the environment or cultural resources were identified. The GSA Regional Administrator, Region 9, reviewed the potential direct, indirect, and cumulative environmental impacts to the immediate and adjacent areas, which could result from the implementation of the proposed action. Responses obtained from the appropriate agencies indicated no environmental concerns needing further study.

The GSA Regional Administrator, Region 9, determined that an environmental impact statement was not required and issued a FONSI on April 15, 2007.

Important issues for Certification:

The project resolves a significant human health and environmental problem.

Pending issues:

None.

3. Technical Feasibility

3.a Technical Aspects.

Project Development Requirements

The proposed ICP will be designed to accommodate 77.5 Ton (Camion T3-S2-R4) loading, and be in accordance with SCT standards and guidelines.

According to information received from the project sponsor; this project will include the following:

- Construction of an approximately 400 m (1,312 ft) long bridge that will connect the Mexican side of the new ICP to the U.S. side. The purpose of this bridge is to cross Mexican Federal Roadway No. 2, to have a steady flow of vehicles while cargo trucks access the new ICP and drive to the U.S. side.
- Construction of approximately 5,000 m^2 (53,819 ft^2) of facilities, including offices, platforms, toll booths, and control booths.
- Paving of approximately 50,000 m^2 (538,195 ft^2) of roadways for the vehicular flow control.
- Paving of approximately 5,000 m^2 (53,819 ft^2) of curbs and sidewalks.
- Construction of potable water and wastewater systems; wastewater treatment plant; electric power station; data, gamma ray, and telephone distribution systems.

As in Figure 2.2 in chapter 1, the access to the proposed ICP will be on the east side of the facilities through the roadway that intersects Mexican Federal Highway #2. The TAS staging area will be located next to the entrance to the west with 22 docking stations. An exportation inspection area, with a specially designed platform will be located at the center of the facilities. The platform will be designed to have 12 docking stations, with an overhead covering for the sun. A toll booth operated by CAPUFE, will be located on the eastside of the facilities just before the bridge shown in Figure 2.2 overpassing Federal highway #2

A second staging area with electric power will be located on the far eastside of the facilities next to the roadway connecting to the bridge. There will also be a pre-inspection module with 4 docking stations on the southwest corner of the facilities as shown in Figure 2.2. A second revision area that will have 10 docking stations with an overhead covering for the sun will be located in the center of the facilities south of the exportation inspection area. A confiscation warehouse with a confiscation courtyard and smaller enclosed warehouses will be located east of the second revision area. The exit of the proposed ICP will be on the east connected to the roadway that intersecting Federal highway #2.

The project site for the proposed project would also accommodate all necessary support facilities, including the Toll booths and offices for Mexican Federal Agencies such as CAPUFE, Tax Administration Service (SAT,), Costumes Inspection Support Unit (UAIFA), SCT and others.

Appropriate Technology

During the preliminary planning, four different alternatives, and several support facilities options were evaluated along with the “No Build” alternative. The four evaluated alternatives were

located within a project study area with a western boundary located approximately 5 to 9 miles east of the existing PEO location. Table 4 with the alternatives is presented next.

Alternatives Comparison Table

Ultimately, Alternative 3 was selected as being the most reasonable and feasible alternative primarily due to minimal environmental impacts and the most cost-effective distance relative to existing POE and to the Industrial Park.

Table 4. Alternative Comparison Table with Selected Alternative.

Subject	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Location	None	Expansion of the existing U.S. side POE	5 miles east of existing POE	9 miles east of existing POE
Bridge Length	None	Bridge not needed	Approx. 1,312 ft	Approx. 1,312 ft
Mexican Access Road Length	None	Available	Approx. 3 miles	Approx. 3 miles
Mexican Side Total Length	None	Available	Approx. 6 miles	Approx. 6 miles
Mexican Side Required Land	None	Available	74 acre, already part of the concession by SCT	74 acre, but difficult to negotiate due to undefined ownership
Construction Cost (Bridge & Roadways)	**None**	**Rejected.** Traffic congestion would be aggravated, and air pollution would be worsened.	**MX$ 132 M Selected Alternative**	**MX$ 132 M Rejected**, since it was not possible to obtain land ownership.

Land Acquisition and Rights-of-way Requirements

The SLRC International Industrial Park (PII) donated the 83.7-acres to CUCAPA where the new ICP is to be constructed. The donation was made through a donation contract awarded in a public deed on March 14, 2002. The deed is registered under number 28, volume 386; book 1, of the real estate section, in the property and commerce public register of San Luis Rio Colorado, Sonora, Mexico.

For the U.S. section, the Greater Yuma Port Authority (GYPA) provided a 339-acre site to the General Services Administration. GYPA is the project proponent on the U.S. side and will own the land and pay for the construction and operation of the facilities.

Work Tasks and Schedule

The remaining work tasks and schedule of the project is presented in Table 5 below.

Table 5. Work Tasks of the Proposed ICP.

TASKS	2007 / Month	2008/ Month	2009/ Month
US: Construction (Utilities, Drainage, Roadway,)		February-November	
Mexico: Final Design		January-July	
US: Congressional Appropriation for Construction	February - August		
US: GSA Bid for Federal Facilities	August - October		
Mexico: Initiate/Finalize Construction		August	August
US: Initiate/Finalize Construction (Federal Facilities)		February	November
US: Congressional Appropriation for Operations		October	
US and Mexico: Initiate Operations			November

CUCAPA is responsible for the final design and financing of the Mexican portion of the bridge. SCT gave the concession for bridge operation to CUCAPA, and the conceptual design plans have been completed by CUCAPA and approved by SCT. The final design is currently under development at 85% completion.

b) Management and Operations

Project Management

The President of the Board of Directors of CUCAPA, with the support of a staff engineer, will coordinate the necessary actions needed to construct the bridge. Major maintenance issues will be the responsibility of CUCAPA through specific contracts, as required.

The construction of the proposed ICP will be performed through a construction contract awarded by CUCAPA, in accordance with NADB procurement procedures and policies. CAPUFE will have the responsibility of the project administration through a contract that is being negotiated for the operation and maintenance of the bridge. CAPUFE will also be the bridge operator while CUCAPA holds the concession of the bridge.

Operation and Maintenance

Organization

CUCAPA will designate an ICP director, accounting, maintenance, and toll booth managers charged with supervising the employees accordingly to the organization chart presented below as Figure 8.

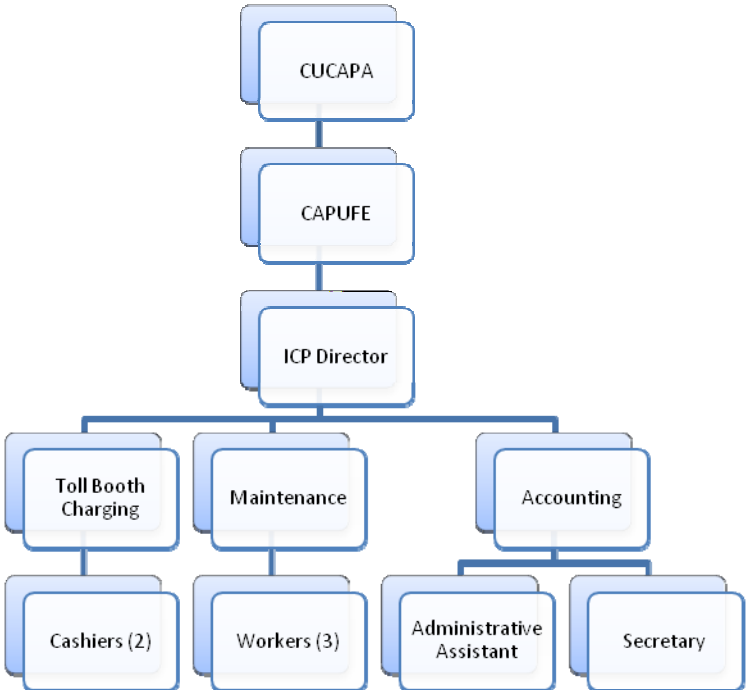


Figure 8. Organizational Chart Provided by Sponsor.

Operations and Maintenance

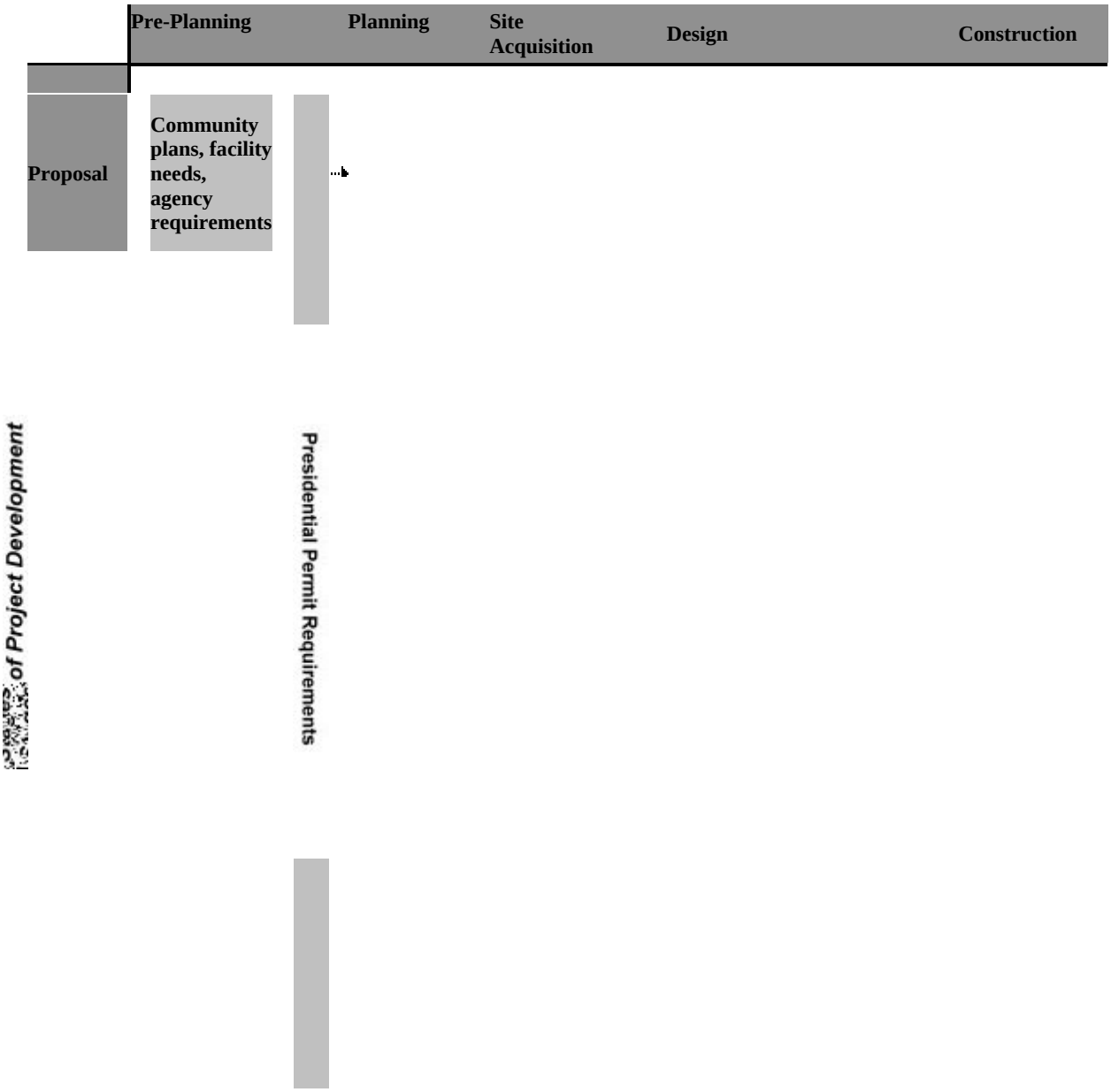
Mexican Side

CUCAPA has been awarded the contract from the SCT to operate and maintain the Project for the next 30 years. The concession granted by SCT requires that CUCAPA keeps the commercial port in excellent conditions, implementing the requirements of the operations manual. CUCAPA will contract CAPUFE to manage, operate, and maintain the facilities. Therefore, CAPUFE will be empowered to act as the operator of the proposed ICP and responsible to undertake operation and maintenance of the facility. The toll collection system will be provided with a maintenance contract including technical support from CUCAPA. CAPUFE will also be responsible for the general maintenance of the grounds, buildings and the replacement of the bulbs on the bridge. A preventive maintenance plan will be done once the facility is operational.

U.S. Side

According to the State of Arizona Border Infrastructure Project webpage, the flow chart below outlines the complex and dynamic project delivery process for public buildings including border-crossing stations as stipulated in GSA's Design and Construction Excellence Programs. It

identifies the critical stages for Arizona's port of entry projects from pre-planning to construction. The status of the project along this delivery path is indicated in the flow chart Figure 9.



Permits, Licenses and other Regulatory Requirements

The municipality of SLRC authorized the change in the use of land for the construction of the proposed ICP under the section of Document Register related to the Urban Development, Book 1, Inscription Number 9, and Volume 1, dated December 2, 1997.

For the U.S. counterpart, Arizona Governor, Janet Napolitano has vigorously worked with congressional delegation and federal agencies to secure funding for this project. As a result of these efforts, the U.S. Congress has approved $42 million in the Presidents FY 2007 budget to design and construct the San Luis, Arizona new commercial port of entry.

Important issues for Certification:

The final design will be done by CUCAPA and validated by SCT. Currently at 85%

Pending issues:

Completion of the Final Design and SCT validation.

4. Financial Feasibility and Project Management

4. a Verification of Financial Feasibility

Financial Conditions
The North American Development Bank (NADB) reviewed the financial information presented by the Project Sponsor and based on that developed the corresponding financial analysis. The financial analysis and information presented includes, among other factors, certification criteria requested by the BECC:

i) Historical financial information and pro-form;
ii) Financial structure of the project;
iii) Capital improvements plan and budget;
iv) Historical operations and management budget and pro-forma;
v) Sensitivity and Break-Even Financial Analysis; and,
vi) Economic and Demographic Information for the Project Area.

The detailed financial analysis for the project is found within the financial analysis developed by NADB, and will be presented to the Board of Directors as part of the loan proposal. The following information is presented as a summary of the analysis conducted by NADB:

Project total cost, financial structure and other capital investment plans

The total project cost for the proposed ICP is estimated at MX$164.66 million, including design costs, supervision, financing costs, and contingencies. The direct costs are estimated at MX$105.57 million and the indirect costs are MX$59.09 million.

Table 5. San Luis Rio Colorado II International Bridge Project
TOTAL COSTS (Millions of pesos)

ITEM	MX$	Percentage
Direct costs	105.57	64.12%
Indirect costs	59.09	35.88%
TOTAL	**164.66**	**100.00%**

Source: Concessionaire 2007

The Concessionaire has requested from NADB a loan for MX$138.46 million in order to complement its MX$26.20 million equity participation in the project. Table 6 presents the uses and sources of funds for the Project.

Table 6. San Luis Rio Colorado II International Bridge Project
USES AND SOURCES OF FUNDS
(Millions of pesos)

Uses of Funds	**Amount**	**Percentage**
Direct costs-Construction	105.57	64.12%
Supervisions and Development Costs	30.03	18.24%
Financial Costs	29.06	17.64%
TOTAL	**164.66**	**100.00%**
Sources of Funds	**Amount**	**Percentage**
NADB Loan	138.46	84.09%
Equity	26.20	TOTAL

y

Dedicated Revenue Source
The proposed revenue source will be set according to the parameters established by SCT in the Concession Title. The tariff model will permit fast and safe toll collection, intended to efficiently advance the flow of commercial vehicles to obtain the reduction in idling wait times proposed by the project. Also, the model will contain the necessary control device mechanisms to guarantee that the revenues collected correspond to the commercial vehicles using the proposed ICP, while at the same time generate a detail statistical report to complete further analysis of the results and performance of the crossing and the operators.

4. b Legal Considerations

The Project Sponsor has informed NADB that the necessary authorizations to access the loan resources are in progress. Upon attainment, NADB will verify the corresponding authorizations.

Important issues for Certification:
The project was analyzed and determined to be viable.

Pending issues:
None.

5. Public Participation

Private-Sector Environmental Infrastructure – Exclusive Impact

For purposes of the BECC certification process, this project falls under the category of Private - Sector Environmental Infrastructure - Exclusive Impact, because it involves improvements to privately operated facilities and because no financial contribution is needed from the community at large to support the development, implementation and operation of the project. The revenue needed to financially sustain the project will be generated through the collection of fees from the private commercial vehicles that will use the proposed International Commercial Port.

In accordance with the BECCs certification criteria, this type of project must be released for a 30-day public comment period. Accordingly, on June 20, 2008, BECC published the Project Certification Document on its website, with appropriate notice through the BECCNET listserver. During the public comment period, which concluded on July 21, 2008, comments were received from three organizations, the Arizona Department of Environmental Quality, the Greater Yuma Port Authority and by the Mexican Transport and Communications Secretariat (SCT). In the first case, additional information on the project was requested, while in the other two, strong support for the project was expressed. No negative comments on the project were received.

It is important to note that, in addition to the public comment period conducted exclusively for the BECC process, the proposed project has received ample coverage through media on both sides of the border. All aspects of the project have been broadly disseminated in recent months, especially in the community of San Luis Rio Colorado.

Important issues for Certification:

PCD 30 day publication period is completed.

Pending issues:

None

6. Sustainable Development

6. a Institutional and Human Capacity Building

As stated before, the concession of the Mexican side of the proposed ICP is vested in CUCAPA who will hold the property for the benefit of the public, taxpayers and residents of the City of San Luis Rio Colorado, Sonora. The bridge is to be constructed with three commercial lanes northbound into the U.S. and two commercial lanes southbound into Mexico, and is planned to operate 16 hours per day allowing commercial vehicles to cross the bridge, all of whom will pay a toll.

6. b Conformance with Applicable Local, State and Regional Laws and Regulations and Conservation and Development Plans

As a complement to Section 2.a, this Project conforms to State Law 254: Territorial Request and Urban Development of the State of Sonora, and this can be confirmed in the 2003 International Industrial Park development Plan, which in turn is part of the Municipal Development Plan that has been approved by the Sonoran Congress in 2000. This project is considered under Mexico's National Infrastructure Program 2007-2012.

Article 61, segment 34a; Clause a, of the SLRC Administrative Municipal Organic Law, empowers the local government to Urban Development. The sponsor representatives presented on the sponsor's behalf a preventive document to the Municipal Urban Development Administration (MUDA) seeking environmental clearance under the above law. However, MUDA could not give any environmental clearance, since according to MUDA this project should be cleared by Federal officials under SEMARNAT laws.

Under SEMARNAT, the project falls under article 5; Clause b, of the General Regulation Law of the Ecology Equilibrium and the Protection of the Environment. This Law evaluates the environmental impacts that a project can have. To comply with this law, CUCAPA prepared a preventive document and letter dated January 15, 2008, requiring environmental clearance from SEMARNAT officials.

Also, the project adheres to the U.S.-Mexico Border 2012 Environmental Program by meeting Goal 2 (Reducing Air Pollution) and Objective 2 (Define reduction strategies and air quality and exposure objectives for 2012 completion) through Priority 3 (Reduction of particulate matter via reduction from diesel sources and availability of ultra low sulfur diesel [ULSD] in the border region). One of the program's guiding principles is to reduce major risks to public health and conserving and restoring the natural environment.

6. c Natural Resource Conservation

The development of the proposed ICP will strived to avoid and minimize any potential impact to the natural and cultural resources within and adjacent to the project area. When avoidance and minimization are not possible, mitigation measures and green building efforts, as described in the Human Health and Environment chapter, are proposed. The proposed ICP, the proposed bridge, and its related facilities will be built on approximately 83 acres of land owned by CUCAPA and the design of the proposed ICP will be developed to minimize natural resource impacts.

6. d Community Development

The proposed ICP project fosters community development in the social and environmental quality of life in the following ways:

1) By contributing to solving regional environmental pollution created by traffic congestion and current waiting times at the existing POE.
2) By providing an efficient commercial crossing for long haul vehicular and commercial traffic
3) By promoting direct economic development for the area by creating support businesses for increased commerce and traffic in the area.
4) By eliminating of commercial vehicles from the existing POE with the development of a new ICP.
5) By including the FAST program at the proposed ICP.
6) By including staging areas for commercial vehicles engine stoppage at the proposed ICP on the U.S. side.
7) By extending of existing POE from six passenger vehicle inspection lanes to ten passenger vehicle inspection lanes.

Important issues for Certification:

The project meets all sustainable development principles.

Pendent issues:

None.

Available Project Documentation

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