Landfill compared to other factors, including other polluting industries. Vol. 14, pp. 5809-5812, 5816.

5) If the Landfill were to have an impact on surrounding property values, that impact would have been seen when the Landfill came into existence, because once the Landfill is in place future property values reflect its presence. To figure out the impact of the Landfill, he would need data on sales before and after its existence. Vol. 14, pp. 5812-5815.

6) Dr. Holcomb does not agree with the conclusions reached in the report. Vol. 14, pp. 5816-5817.

7) Dr. Holcomb is being paid $150 an hour for his work. Vol. 14, p. 5828.

Department's Witnesses

1. Eric Johnson, Environmental Planner, Consultant

A. Mr. Johnson described his qualifications and his independent review for THE DEPARTMENT of the CIA and addendum prepared by Hicks & Co., as well as the additional socio-economic information he gathered in a 4-mile radius around the Landfill.

B.

1) Hicks and Company adequately gathered and accessed data in a reasonable manner. Vol. 9, p. 3424.

2) The additional information Mr. Johnson gathered came from the US Bureau of Census on minority representation, per capita income and median family income; he also gathered general information on other facilities in the area, including New Mexico and Texas. Vol. 9, pp. 3425-3426.

3) As to race and ethnicity, Mr. Johnson found a fairly diverse area beyond Sunland Park, which is predominantly Hispanic, Latino. Income and minority representation vary within census block groups, especially going northward. Income for Sunland Park is definitely lower than the overall 4-mile radius, but Sunland Park is probably not a colonia. Vol. 9, pp. 3426-3427.

4) Prior to the submittal of the addendum, Mr. Johnson had concluded that the original CIA was missing some information: there was no data on Texas, no information on changes in property values and insufficient public health data. The addendum provided data on Texas and on property values; the information he would like to see regarding public health would include better resolution at the Sunland Park level rather than the Doña Ana County level on the causes of illness and mortality. A public health expert or epidemiologist would have to collect this information from medical records or medical providers. The new regulations do not require this information, and it may not currently exist for Sunland Park in any repositories. Vol. 9, pp. 3430-3435.

5) The environmental matter in the CIA that he would follow up on is PM10 or general dusts because of the potential relationship with asthma; he would want more localized information for the community although the regulations do not require that. Vol. 9, pp. 3435-3436.

6) The extensive census data shows there is probably a community of concern in the Sunland Park area for environmental justice. Vol. 9, pp. 3436-3437.

7) The CIA adequately addressed traffic and noise as topics of interest to the community, and offered good mitigation measures for noise. Vol. 9, pp. 3437-3439.

8) In general, it appears there is a small positive economic impact on Sunland Park from the Landfill, and the Verde development appears to be a good development for the future. The Landfill is not irreconcilable with the City's efforts to grow. Vol. 9, pp. 3439-3444.

9) The CIA does not demonstrate that there will be a hazard to public health, welfare or the environment, or undue risk to property, in renewing the facility permit. It is important that the Landfill maintain a strong dialogue with the City, engage in ongoing public involvement, and implement the mitigation measures described in the CIA. Vol. 9, pp. 3446-3447.

10) Hicks & Co. chose an appropriate methodology for the CIA, using the NEPA procedures, Federal Highway Administration procedures and Arizona Department of Transportation's road-tested approach. They

addressed the central question of environmental justice as well as important issues to the community such as visual impact, land use and transportation. In combination with the addendum and Dr. Van Zandt's table comparing different communities to provide a trend analysis, they addressed the elements set out in the new solid waste regulations, even though the regulations are not applicable. Vol. 9, pp. 3449-3450.

11) Mr. Johnson agrees with Mr. Van Zandt that the social impact approach is not likely to lead to results helpful in answering the questions that must be answered in this hearing. The ethnographic approach, while producing interesting data on the community, does not answer the central environmental justice question of exposure pathways for contaminants and other issues identified by the community. Vol. 9, pp. 3456-3457, 3513-3514.

12) Although Mr. Johnson noted that information was lacking in the CIA on geology, soils, groundwater, surface water, vegetation and wildlife, the Application goes into great detail on these topics and was made available to the community. Vol. 9, pp. 3466-3467.

13) The presence of industry does not necessarily depress property values, and psychological principles are separate from economics; they are not necessarily connected or related in a cause and effect relationship. Before considering a psychological impact on the community, one must first look for some physical impact upon the

community -- that's the primary job in a NEPA evaluation. Vol. 9, pp. 3500, 3515-3516.

14) Mr. Johnson has a fixed contract with a ceiling of $10,000. He is paid a salary, the firm's hourly rate for his work is $70-$75. Vol. 9, p. 3531.

2. Lawrence Alires, the Department's Environmental Scientist - Air Permitting Specialist

A. Mr. Alires described his work history and the applicable air quality regulations for the air permits related to Landfill activities. Mr. Alires also described the dust control measures he had observed at the Landfill.

B.

1) A federal regulation, the New Source Performance Standard, requires landfills of a certain size to install a landfill gas collection and control system to keep landfill gases from emitting to the atmosphere. The regulation also requires enhanced monitoring, recordkeeping and reporting requirements; a startup, shutdown and malfunction plan; an annual certification of compliance and an open flare; a dust control plan and emission control requirements for VOCs (volatile organic compounds). Vol. 9, pp. 3589-3596.

2) The first Title V permit was issued to the Landfill in 2001; the permit was renewed in 2007 and must be renewed every five years. Vol. 9, p. 3597.

3) The Air Quality Bureau's Enforcement Section is responsible for inspections at the Landfill. Because the Landfill is a major source, it must be inspected every two years to verify compliance with permit requirements. Detailed semiannual monitoring reports and an annual compliance certification must also be submitted. Vol. 9, p. 3600.

4) Another air permit associated with landfill activities, a construction permit, was issued to Four Peaks Energy in 2006 to install two internal combustion engines to use landfill gas to produce electricity for positive use. Landfill gases will no longer be flared except in upset conditions or engine maintenance periods. Vol. 9, p. 3601.

5) Dust control measures put into place at the Landfill over the last five or six years have been incorporated into the dust control plan and the Title V permit. Mr. Alires has observed hydro-mulching or hydro-seeding, the application of chemical surfactants and water, and the use of straw and manure from the race track for dust control. Vol. 10, pp. 3697-3698.

3. Erik Aaboe, the Department's Air Quality Bureau Monitoring Section Supervisor

A. Mr. Aaboe described his qualifications and work history; the Bureau's current, past and planned air quality monitoring in Sunland Park; and the Landfill's contribution to the dust in the area.

B.

1) The Bureau conducts emission air quality monitoring in the Sunland Park area: carbon monoxide is not significant in Sunland Park and is not measured. Nitrogen dioxide is not significant but is measured because it is of interest for ozone formation. At one time, lead was monitored at City Hall and the race track, and sulfur dioxide was monitored at the City Yards; monitoring ended after the Asarco smelter closed. Ozone, PM 2.5 and PM10 are important pollutants for the area and are monitored. Vol. 9, pp. 3609-3614.
2) The Sunland Park area is currently in attainment for all ambient air quality standards. It was out of attainment for ozone between 1995 and 1997, when EPA changed the ozone averaging, and there have been exceedances of the PM10 standard, but they have been determined to be the result of natural windstorms. Vol. 9, pp. 3616-3620.
3) The Landfill was found to contribute an average of 24 mcg per cubic meter of PM10 to the atmosphere as the wind blows across the Landfill; the last time this particulate data was collected, however, was 2001. Vol. 9, pp. 3627-3630, Vol. 10, p. 3693.
4) The Bureau is planning additional monitoring for the Sunland Park area; they have secured funding from the EPA to purchase portable monitors to explore short-term high values of PM10 in low wind events. The PM10 monitoring done on the Landfill cannot be compared to

standards because the monitoring was conducted within the facility fence line. Vol. 9, pp. 3635-3637.

5) It is fair to say that the PM10 levels are high because southern New Mexico is primarily in a desert. The Bureau has monitored high values of PM10 throughout Doña Ana County and some of the highest events are high-wind dust storms. Vol. 10, pp. 3696, 3723.

6) It is one of the limitations of air monitoring that monitors do not identify the origin of the particulate matter sampled, only how much is collected at a particular time. There were days when the monitor on the upwind side of the Landfill actually measured higher than the monitor on the downwind side of the Landfill, but they know nothing more. Vol. 10, pp. 3699-3700.

7) The best approach to air monitoring is to monitor a representative location in the community; monitoring stations at schools gives the Bureau an estimate of what the students and the community are being exposed to. Vol. 10, p. 3706.

8) An air monitoring station costs $75,000 to install and as much as $5,000 a month afterwards to operate. Monitoring is one tool to protect public health, but it is not the only one, and the placement of additional monitors is not the ultimate solution. Vol. 10, pp. 3710-3711.

9) Sunland Park is complicated terrain. The wind goes in different directions at different locations and at different elevations. Vol. 10, p. 3728.

10) Ground cover, including vegetation, would be best at slowing down the wind at ground surface and suppressing the amount of particular matter that would get up into the air. Vol. 10, pp. 3735-3736.

11) The number of windy days in Sunland Park varies from year to year, depending upon how much soil moisture there is, but in the last couple of years there have been 15 or 20 days when the Bureau monitored values throughout the County in exceedances of the PM10 standard because of high winds. This could pose a hazard, or not, depending on what's happening at the time. Vol. 10, pp. 3739-3740.

12) In the 1997 permit, there was a requirement for the Landfill to operate a meteorological station as part of an air monitoring plan. The department operates these stations to collect data that supports dispersion modeling throughout the state. Vol. 10, p. 3741.

13) It is important for the Bureau to use its resources to do as much air monitoring as they can in areas that are most important around the state. The best available equipment is equipment approved by EPA for use as a federal reference or equivalent method; the age of the monitor does not matter, and the recent advances in air monitoring have merely enhanced communication to minimize travel for maintenance. Vol. 10, pp. 3749, 3754-3757.

14) The Bureau currently has a monitoring station in front of the school with 2 TEOMs in it to measure particulate matter, an ozone monitor, a NOX monitor, data logging equipment and a meteorological tower. At

Sunland Park City Yard, there is another shelter with a meteorological tower, a particulate monitor with a number of samplers out front and an ozone monitor. The Bureau is doing a good job monitoring the air in Sunland Park with sophisticated, federally-approved monitoring equipment already in place, collecting data that is made available immediately to the public on the Internet. Vol. 10, pp. 3758-3759.

15) If the Asarco smelter were to begin operations again, Mr. Aaboe would add monitoring for sulfur dioxide and lead. Vol. 10, p. 3760.

16) The Landfill had monitors for particular matter in 1998, but the monitors have not operated since 2001, when the Title V operating permit was put into place. Vol. 10, pp. 3768-3769.

4. Thomas Ruiz, NMED Border Air Quality Liaison, Assistant Professor

A. Mr. Ruiz described his work experience and particularly his work with the Health Department, the Department and numerous other entities on border health issues. Mr. Ruiz set out specific findings from studies conducted in Sunland Park, and his continuing work to collaborate on the control and mitigation of particulate matter.

B.

1) Mr. Ruiz has worked with six different organizations relating to environmental border issues: New Mexico Environmental Health Council, Bishop's Colonia Task Force, Environmental Health Coordinating Council, Joint Advisory Committee, a Border 2012 joint

effort with EPA, and a Border 2012 joint effort with SEMARNAT, the Mexican version of EPA. Some of this work concerned the City of Sunland Park, including a bio-monitoring project for heavy metal analysis, a blood lead level analysis in children, and a soil lead depositions study. Vol. 10, pp. 4096-4098.

2) Mr. Ruiz filed a matrix that set out some of the studies carried out in Sunland Park; there have been subsequent studies conducted there, including an analysis of low-wind exceedances for PM10. Vol. 10, pp. 4101-4102.

3) Mr. Ruiz discussed the findings from the lead deposition study of house dust and residential soils: of 63 residential properties tested, two homes in the Anapra section of Sunland Park were shown to be high in lead, exceeding the EPA action level of 500 ppm. Upon further investigation of these two homes, they found the lead likely to be human caused; one man had been a mechanic and had buried a battery on his property, and the other man had leveled his yard with soil brought from a place closer to Asarco. House dust analyses did not find high levels of lead. There were higher levels of lead in the soil on the face of Mount Cristo Rey, and subsequent studies may indicate higher levels of lead in the soil at greater depth. Vol. 10, pp. 4106-4107.

4) Blood lead level testing for children showed that of 16 samples taken at La Clinica de Familia in Sunland Park, not one showed high blood

lead level. There should be more work in this area, and Mr. Ruiz was disappointed at the low numbers for the blood screening, which can be attributed to a community group, the Get-The-Lead-Out Coalition, that actively dissuaded people from participating in the bio-monitoring. Members of the Coalition include Taylor Moore and Heather McMurray. Vol. 10, pp. 4108, 4113-4114, 4132.

5) An area that requires further investigation is the phenomenon of low wind exceedances for particular matter, especially PM10. Unpaved roads are a significant contribution to this phenomenon, but with bi-national collaboration, they can further characterize and address this problem. Mr. Ruiz is actively working on this issue. Vol. 10, pp. 4109-4111.

6) The Natural Events Action Plan ensures the community knows about dust exceedances due to high winds, and can implement measures to control dust such as dust ordinances like those put into place in Deming and Las Cruces. He has begun this dialogue in Sunland Park, and a dust ordinance is in the works. Vol. 10, pp. 4115-4118.

7) The Landfill may contribute to the dust in Sunland Park; a lot of unpaved, open areas around Sunland Park have the potential to contribute to the dust. At the Landfill he noted dust suppression techniques, including hydro mulch and road watering, so there would be less likelihood of contribution. He is working on a memorandum of

understanding that would include the Landfill in the Natural Events Action Plan. Vol. 10, pp. 4118-4120.

8) Sunland Park residents have been meaningfully involved in this permitting action. Groups dealing specifically with colonia issues have been represented in meetings and have helped prioritize several projects. Vol. 10, p. 4122.

9) He has not reviewed the Application for Camino Real, taken a position on whether the permit should be renewed or been told to come to a conclusion about the matter. Given the Landfill's compliance history and dust suppression techniques, he does not have concerns about the proximity of the Landfill to Sunland Park and El Paso. Vol. 10, pp. 4124-4125.

10) The Landfill does not pose a hazard to public health, or public welfare, or an undue risk to property. Vol. 10, p. 4127.

11) Mr. Ruiz does not see particulate matter from the Landfill in high winds as a hazard to the health of Sunland Park. Adequate monitoring is taking place throughout the town and there is additional monitoring proposed, primarily to study the problem they believe is associated with Anapra, Mexico. Vol. 10, pp. 4140-4141, 4144.

12) Following Mr. Taylor Moore's expression of concern to him about blood lead levels in Anapra children, particularly with an upcoming Asarco hearing, Mr. Ruiz was able to obtain an additional $60,000 in his

budget to address this concern, and to conduct bio-monitoring. Vol. 10, pp. 4154-4156.

13) Mr. Moore subsequently became convinced that department staff were concealing contamination in Sunland Park, and wanted to follow Mr. Ruiz when he came down to sample for the bio-monitoring project, although the precise location of the study subjects is supposed to be confidential. Mr. Moore ambushed Mr. Ruiz at the community center with a tape recorder and followed him with a paper cup until Mr. Ruiz went to the police department in order to be able to do his work in peace. Vol. 10, pp. 4158-4163.

14) It was apparent to Mr. Ruiz that Mr. Moore did not want Mr. Ruiz conducting any further tests in the community, but Mr. Ruiz did not believe Mr. Moore represented the whole community. Vol. 10, p. 4166.

5. Auralie Ashley-Marx, Chief of the Department's Solid Waste Bureau

A. Ms. Ashley-Marx related her qualifications and work history. She described the applicable solid waste regulations, provided an overview of the Bureau's review of the Application, presented a summary of the permit history, supplied information regarding the steps taken by the Bureau to afford meaningful opportunities and public participation in the process, and presented recommendations for permit conditions.

B.

1) The 1995 Solid Waste Management Regulations at 20 NMAC 9.1 apply to the Application. The Regulations set out requirements for siting, design, construction, operation, maintenance, financial assurance and post-closure care and ongoing monitoring. Unlike the dumps of the past, a Subtitled D landfill is a highly engineered system designed to isolate and encapsulate waste away from the environment to protect public health. These facilities are also designed to collect and manage leachate and to manage the methane gas generated. Vol. 11, pp. 4210-4212.
2) The Bureau's permit review process included an initial review, two requests from the Bureau for additional information from the applicant, which the applicant complied with, and the deeming of completeness on October 16, 2007. Vol. 11, pp. 4213-4214.
3) Camino Real is requesting a 10-year renewal period to continue to operate a 480-acre existing landfill; the modification requested is not a request for lateral expansion, but for the engineering design of the environmental monitoring controls and the engineering for the evapotranspiration cap. Vol. 11, pp. 4215-4216.
4) The facility was first registered as Nu-Mex in 1989. In 1992 a five year permit was issued for approximately 35 acres located in current Cell 2. In 1995 an application was submitted for the rest of Unit 2 that encompassed 12 cells. In 1997 a permit was issued to operate and

close Unit 2. In 1999 the Landfill was purchased from Nu-Mex by Camino Real. Vol. 11, pp. 4216-4217.

5) Ms. Ashley-Marx described many ways in which the Application meets general requirements and has demonstrated compliance with the solid waste regulations: there is adequate site capacity to handle projected waste volume; necessary buffer zones are included within the 480 acres; they have demonstrated compliance regarding prohibited acts, recordkeeping and annual reports; the Application was accompanied by facility plans and drawings designed and sealed by a professional engineer; the facility meets siting criteria; the Applicant has correctly plugged all boreholes and identified a water source for the facility; the Applicant has properly addressed the control and mitigation of odors, landfill equipment, plans for alternative handling when the facility is closed, the control of litter dust and noise caused by traffic, dust suppression, and other impacts from traffic to and from the facility. Vol. 11, pp. 4221-4227.

6) The Applicant does plan to divert solid waste from the waste stream and has recently applied for and was granted a five-year registration for a recycling facility with a plan to process 15 tons per day. Vol. 11, pp. 4227-4228.

7) All public notice was provided and other procedures followed as required. Vol. 11, p. 4228.

8) The required elements the Applicant must address for permit renewal include an operational requirement that the Landfill not cause a public nuisance or create a potential hazard; review of compliance history; environmental monitoring results, releases or any remediation that may have occurred during the previous 10 years; changes in information required on the disclosure forms; any other technical information as requested by the secretary; financial assurance; convictions under any state or federal environmental law since issuance of the permit; and compliance demonstrations which pertain to some of the siting requirements that could have changed in the last 10 years, including proximity to floodplains, airports and unstable areas. Vol. 11, pp. 4228-4229.

9) The Landfill is in compliance with operational requirements and inspection practices, although the Bureau does recommend that the waste screening plan be updated. Vol. 11, pp. 4230-4232.

10) The Landfill complies with gas monitoring requirements. The Bureau does concur with the applicant's request to eliminate methane monitoring using bar probes around Unit 1 because the waste in that cell is 20 years old and no longer generating gas that would reach the height that bar probes can detect, and because the Landfill has installed permanent deeper methane probes which are more effective in monitoring the gas. Vol. 11, pp. 4233-4238.

11) The Landfill complies with the requirements relating to unauthorized access and safe authorized access; the control of storm water run-on and run-off; scavenging, fire control and management of hot wastes; leachate management; and the control of litter, disease vectors and odors. Vol. 11, pp. 4238-4247.

12) The Applicant requested approval for an alternative design for the final cap and cover design. The proposed alternative cap will work in harmony with the liner as required, both the liner and cap conform to the regulations and the engineer has adequately demonstrated their equivalency to the prescribed design. Vol. 11, pp. 4248-4252.

13) The applicant has requested approval for the use of several alternate daily covers, including tarps, shredded tires, processed green material, remediated petroleum-contaminated soil, foams, auto shredder residue and selected construction and demolition debris. The Bureau recommends approval of the use of tarps, shredded tires, processed green material and the soils, subject to certain conditions. The Bureau recommends consideration of approval for the foams and auto shredder residue only following a pilot test. The Bureau recommends denial of the use of selected construction and demolition debris for alternate daily cover based on potential risk to the public, the facility's employees, and the environment, and public perception of the stockpiles that would need to be maintained for this use. Vol. 11, pp. 4253-4255.

14) Recycling operations will be confined to an area remote from the operating area of the Landfill in a manner that does not create a nuisance. The Applicant complied with environmental monitoring, and had no releases; the Applicant complied with the required corporate disclosures, including requests for additional information; and the Applicant complied with financial assurance requirements for closure and post-closure. Vol. 11, pp. 4256-4264.

15) The Applicant has made the necessary compliance demonstrations regarding floodplains, distance to airports and unstable areas. Vol. 11, pp. 4265-4267.

16) In 2006 CRLF received 606,664 tons of waste: New Mexico waste was 34,871 tons, or 5% of the waste stream; 546,165 tons, or 90% of the waste stream, came from El Paso, Texas; and 27,824 tons, or 5% of the waste stream, came from Chihuahua, Mexico. The department does not have statutory or regulatory authority to limit the amount of waste received nor the authority to limit delivery from other states. Vol. 11, pp. 4267-4268.

17) The Applicant has met all the siting and other criteria for the existing Landfill and proposed Unit 3. The cap and liner system exceed requirements, and the leachate management plan complies with requirements. The Applicant is seeking approval for two alternative leachate management alternatives. The first is to dispose of leachate at a publicly owned treatment work or wastewater treatment plant, and

the Bureau recommends denial until a specific site is identified and the leachate management plan is updated with the necessary information and approved. The second is to use diluted leachate for dust suppression activity; the Bureau recommends that the applicant be authorized to continue to place diluted leachate on the waste in lined cells, but based on concerns raised by the public, the Bureau is recommending the applicant not be granted approval to place diluted leachate on roads or in areas that will be excavated in the future. Vol. 11, pp. 4272-4274.

18) The Applicant's closure and post-closure plan complies with regulatory requirements, and all requirements relating to the acceptance of special waste have been met, as well as all requirements and permit conditions contained in the final order from the last permitting process. Vol. 11, pp. 4275-4278.

19) The Bureau met and substantially exceeded the public notice requirements for a permit renewal. In addition to publishing notice of the hearing in English and in Spanish in two newspapers, using legal ads and large display ads, the Bureau also sent 43 certified mailings to persons owning property within 100 feet of the Landfill and to all government entities located within 10 miles of the Landfill, 225 mailings via regular US mail to any person identified as an interested person, and posted notices of the hearing at five public locations in Sunland Park. Copies of the Application and the Community Impact

Assessment were translated into Spanish and provided for public review at several locations. The Bureau was advised during a community meeting that the best way to reach individuals in Sunland Park would be to place information in utility bills, and this was done, in English and in Spanish. Laminated posters in English and Spanish were posted at the Church and the Landfill. Additionally, because property records in Dona Anna County were probably stale, 70 notices in English and Spanish were hand-delivered to residences in the Valle Vista subdivision. Vol. 11, pp. 4278-4281.

20) Other actions taken by the Department to inform citizens about the permit and permitting procedure included making all relevant files available to two representatives from the Sunland Park Grassroots Environmental Group over a period of three days, with 5,000 copies provided at no charge, and numerous meetings and site visits. In addition to smaller meetings with Mr. Ardovino and Mr. Garza, large community meetings were held, which staff from many bureaus and several division directors attended. Some of the meetings were conducted by professional facilitators, and a compendium of studies regarding border health issues was compiled for distribution. Department staff and management also met with officials in El Paso, Texas to discuss the Environment Department's position regarding re-permitting and reopening of the Asarco smelter. Vol. 11, pp. 4278-4289.

21) Ms. Ashley-Marx reviewed the packet that Mr. Taylor Moore sent to Governor Richardson, and was able to locate the full reports that were referenced. A metals survey sampling report referenced shows that samples obtained at the water tank at McNutt and Racetrack in Sunland Park is the location with the highest levels of arsenic and lead found in the community. Vol. 11, pp. 4290-4294.

22) Prior to her tenure as Deputy Secretary of Environment, Cindy Padilla was instrumental in obtaining an agreement from EPA to undertake cleanup of homes and lead contamination around homes in Anapra, New Mexico. The cleanups occurred in 2007. Based on concerns raised by citizens, the lead- contaminated soil removed from Anapra homes was not disposed of in the Landfill. Vol. 11, p. 4295.

23) Also in response to concerns raised by citizens, Ms. Ashley-Marx directed her enforcement staff to undertake two unannounced inspections of maquiladora deliveries to the Landfill. She also instructed the Bureau hydrologist to undertake an independent literature review regarding potential groundwater pollution from the Landfill, and arranged for the independent review of engineering portions of the Application by a qualified professional engineer with a doctorate. Vol. 11, pp. 4296, 4408, 4414-4416.

24) The Bureau did not require the applicant to provide the CIA, and did not complete a technical review of that assessment, but Ms. Ashley-Marx reviewed it to increase her understanding of the community and

the concerns raised by residents. She was unable to find information to corroborate the perception of residents that link the Landfill to adverse environmental or health impacts in the community. Ample information in the reports and studies show the major source of contamination in Sunland Park and surrounding communities is from the past operation of the Asarco smelter in El Paso, Texas. Vol. 11, pp. 4297-4298.

25) The Bureau completed a rigorous review of the Application for completeness and compliance with the Act and applicable regulations. The Applicant has clearly demonstrated that it meets or exceeds the technical criteria for a renewal permit; they have also demonstrated they are in compliance with the Act and solid waste regulations, which are protective of public health. The Bureau's review of monitoring data, and published journals articles and health studies, found no evidence of a causal connection to negatively impact health or environment or provide evidence of any exposure pathways from the Landfill to residents in Sunland Park. Vol. 11, pp. 4298-4299.

26) The Applicant has designed, constructed and is operating the facility in a manner protective of ground and surface water, and there is no evidence to demonstrate that the facility has negatively impacted groundwater or surface water. The facility is minimizing air pollution from the site, with their Title V air-quality permit, and the construction of the landfill gas recovery system and other activities to minimize dust.

The compliance history of the facility demonstrates that it is well operated and the Applicant has demonstrated the capability to properly operate a landfill. Vol. 11, pp. 4299-4300.

27) Ms. Ashley-Marx gave a lot of thought to assessing risk and potential impact to the community as part of this process. She believed the best way for her to evaluate concerns raised by the public was to review the facts and measure them against the relevant statutes and regulations, which establish compliance requirements and numerical benchmarks for ground water, air and methane control. She reviewed the evidence to determine if there were exceedances of standards or points of non-compliance with the regulations that could pose a potential exposure pathway. Where she was in doubt she directed staff to verify information, to make additional inspections and to gather other information using literature searches. The Bureau recommends that the permit renewal and modification be approved with certain special conditions meant to address public concerns. Vol. 11, pp. 4303-4309.

28) The most recent solid waste annual report notes that in 2006, New Mexicans generated 3,851,675 tons of municipal waste, slightly higher than the national average, which may change as more waste is diverted through recycling. As waste volume has increased, the number of licensed solid waste facilities has decreased, as a result of regionalization. The existence of a modern Subtitle D landfill located

near a population center does reduce illegal dumping. Vol. 11, pp. 4417-4420, 4422.

29) The New Mexico solid waste permitting regulations provide for substantial public participation, more than in other agencies in New Mexico and in other states. Vol. 11, pp. 4431-4432.

30) Affecting an individual's economic condition would be a quality of life impact. Quality of life would be included within the public welfare portion of the solid waste regulations. Vol. 11, pp. 4433-4434.

31) The Bureau's review of the Application does involve an active review, including independent verification of information or data furnished by the Applicant; the hydrology was examined by Mr. Kulis and other professionals within the engineering field were retained to review parts of the Application. The Bureau is moving toward a more interdisciplinary team to address issues not historically examined, but Ms. Ashley-Marx does not believe the department has the statutory or regulatory authority to require an expert economic analysis or to deny a permit on that basis, and the Bureau does not have the resources to retain sociologists, a traffic person and a noise expert. If someone came forward with an economic analysis, that would be considered as part of the decision-making process. Vol. 11, pp. 4435-4439, 4444-4446.

32) The hearing in this matter was delayed so that the Bureau could hold a community meeting in Sunland Park. Further delay to a time after

Christmas was not feasible because of other hearings and the upcoming legislative session, and the staff resources needed for both. Vol. 11, pp. 4541-4543.

6. Jerzy Kulis, NMED Hydrologist for the Solid Waste Bureau

A. Mr. Kulis described his experience, and the geo-hydrology at the site. He also described the ground water monitoring system at the Landfill and potential for impact of the Landfill operations on ground water.

B.

1) In terms of geologic siting, the Landfill is located on the southeastern flank of the Mesilla Basin, which started forming approximately 25 million years ago and is filled with up to 3,000 feet of sedimentary deposits of Tertiary and Quaternary age. Vol. 11, p. 4314.
2) The Landfill satisfies regulatory requirements regarding proximity to faults, and is located more than a mile from the two nearest faults. Vol. 11, pp. 4314-4316.
3) Mr. Kulis visited and collected samples from the outcrop near the Rio Grande raised by Ms. McMurray. It is a small outcrop of igneous rocks, rocks of magmatic origin informed below ground surface; the outcrop is marked on geologic maps of the area, and its composition and origin are similar to those found on the peak of Cristo Rey. It is not an indicator of a fault, but is even older than the Mesilla Basin deposit. Vol. 11, pp. 4316-4318.

4) Groundwater under the site occurs at a depth of 140 to 400 feet below ground surface, depending on surface topography. The Landfill satisfies the regulatory requirement regarding the minimum separation distance between the bottom of the Landfill cells and the top of the uppermost aquifer. Groundwater flow direction is generally northeast toward the Rio Grande. Average ground water velocity is approximately 14 feet per year. No public water supply wells or registered private wells are within 1,000 feet of the Landfill; the only water supply well Mr. Kulis found was the Landfill's own, and the Landfill satisfies the siting criteria for distance from wells. Municipal water supply wells for the City of Sunland Park are located approximately 1.5 miles northwest of the Landfill; municipal wells for Santa Teresa are located approximately 6.5 miles northwest of the Landfill. Vol. 11, pp. 4318-4320.

5) The ground water monitoring system for the Landfill currently consists of 6 wells. With the exception of Well A, the groundwater wells at the Landfill have been designed and installed in accordance with the regulations and are properly located to provide an accurate representation of ground water quality both up gradient and down gradient of the Landfill. Monitoring Well A is an original water supply well for the Landfill and was designed as such. It nevertheless provides useful information to supplement data obtained from the other wells. An NMED- approved ground water monitoring program has

been in place since 1989 and conforms to regulations. Vol. 11, pp. 4321-4323.

6) Sporadic confirmed detections of elevated concentrations of certain compounds in the water are not indicative of groundwater contamination by the Landfill operation but are likely a manifestation of natural variations in ground water quality under the Landfill. The water beneath the Landfill is not potable because of naturally occurring events unrelated to the Landfill operations. Vol. 11, pp. 4324-4329, 4391.

7) Vadose zone hydrology at the Landfill was investigated in 1991. Based on logs of monitoring wells and soil borings, as well as down-hole geophysical logging, the consultants identified multiple clay layers within the vadose zone under the Landfill, over 10 clay-rich zones. Any potential leachate released from the Landfill will most likely travel west/southwest on the top of those clay layers, moving away from Sunland Park and other populated areas, migrating horizontally with a long travel time. The geology of the vadose zone beneath the Landfill is favorable for protection of groundwater. Vol. 11, pp. 4331-4333, 4397-4398.

8) There is no indication of negative impact to groundwater quality from the Landfill's operation and the ground water monitoring program is protective of groundwater. Vol. 11, pp. 4333-4334.

7. George "Chuck" Akeley, Solid Waste Bureau Enforcement Section Manager

A. Mr. Akeley described his qualifications and the Landfill's compliance history.

B.

1) The Landfill has been inspected by Bureau personnel 25 times since January 1997, when the current permit became effective. The inspections documented no violations of the solid waste management regulations, and there have been no notices of violation issued to the Landfill's owner or operator. Vol. 11, pp. 4338-4339.

2) Another 46 inspections of the Landfill were conducted between January 1992 and November 1996, including the period when the Landfill was known as Nu-Mex; none of the inspections resulted in a finding of regulatory violations or the issuance of enforcement documents. Vol. 11, p. 4339.

3) The Landfill accepts waste from maquiladoras, and because those wastes are industrial wastes, they are considered special wastes and additional characterization, transportation and manifesting requirements apply. Four recent separate waste screening inspections of waste received from nine separate maquiladora waste generators found no hazardous or otherwise prohibited waste delivered to the Landfill. The amount of maquiladora waste delivered to the Landfill has been decreasing over the past several years and appears likely to continue to decrease as a result of manufacturing

moving to other countries, specifically China. Vol. 11, pp. 4339-4347, 4427-4428.

4) Mr. Akeley did not note strong or objectionable odors at the Landfill during his inspection, although he did notice a faint and occasional odor consistent with sewage evaporation ponds he observed at the Santa Teresa Wastewater Treatment Lift plant on McNutt road. Generally, the only notable odor from the El Paso Disposal garbage trucks was exhaust fumes; there was one exception, a roll-off truck with a sour smell. Vol. 11, pp. 4347-4349.

5) Mr. Akeley did not see significant amounts of dust originating from the Landfill; the only dust he observed was generated in the tipping area where the solid waste was off-loaded and compacted with heavy machinery. It appears the dust control measures employed by the Landfill are working. Vol. 11, pp. 4349, 4390.

6) In August 2004 the Bureau was directed to spearhead an unannounced waste screening inspections sweep of all truckloads of solid waste being delivered to the Landfill for the purpose of disposal over a period of six days. The sweep was coordinated with the New Mexico Department of Public Safety and involved many bureaus in the Environment Department. Vol. 11, pp. 4350-4351.

7) Of 580 vehicles inspected, 16 loads were found to be problematic. The most notable enforcement action concerned infectious waste; it was clear that many of the medical facilities based in El Paso were

not effectively segregating regulated medical waste from other waste streams. The offending waste was removed prior to disposal by appropriate contractors. Notices of violation were issued to several facilities; those facilities subsequently responded to indicate changes in their procedures to ensure that noncompliance did not recur. A compliance order issued to El Paso Disposal was settled with the payment of a civil penalty and the performance of two supplemental environmental projects. No enforcement action was taken against the Landfill, which was helping the Department to ensure that prohibited waste was not improperly disposed. Vol. 11, pp. 4351-4357.

8) In April 2006, Phelps Dodge Corp. disclosed mischaracterization of industrial solid waste that was actually hazardous waste. The total amount of mischaracterized waste disposed of the Landfill was estimated to be no more than 20 cubic yards. The Solid Waste Bureau's investigation identified four hauling companies that had improperly transported at least a portion of this waste to the Landfill. Enforcement action was taken against the transportation haulers and against Phelps Dodge. Phelps Dodge subsequently provided the Bureau with a risk assessment to substantiate the minimal risks that the disposal posed. Additionally, the Landfill is a lined facility that captures and analyzes leachate, and the risk to human health or the environment from this waste would be minimal. Vol. 11, pp. 4357-4362.

9) Mr. Akeley's review of the contingency plan contained in the Application found that it generally complied with regulatory requirements, but he has three concerns: the plan should update the identity and contact information for the Landfill's emergency coordinator; the site plan should be updated to show the location of the newly registered recycling center located next to the Landfill office; the plan should be revised to describe actual coordination with emergency response agencies. Vol. 11, pp. 4362-4364.

10) Mr. Akeley is generally aware of some lack of participation or assistance by response agencies; if law enforcement agencies refuse to receive the contingency plan from the Landfill, that fact should be articulated in the contingency plan and made a matter of record. Vol. 11, pp. 4384-4385.

11) It is not uncommon for a landfill to receive a notice of violation every now and again; it is relatively uncommon for a landfill not to receive one, and CRLF has an exceptional compliance history. Considering that the Landfill does not have a history of violations, it has probably been inspected twice as often as other landfills without violations. At least some of those inspections were conducted in an attempt to be responsive to community concerns. Vol. 11, pp. 4388-4389, 4391.

8. Cindy Padilla, Former NMED Deputy Cabinet Secretary

A. Ms. Padilla described her work history and outreach efforts in Sunland Park.

B.

1) In 2004, Ms. Padilla was Chief of the Solid Waste Bureau and served as team leader for a multi-day surprise compliance inspection conducted at the Landfill. Vol. 12, pp. 4589-4590.
2) She became aware at the end of 2006 that the Landfill permit renewal was upcoming, and following a meeting during the 2007 legislative session with Senator Nava, Robert Ardovino and others, decided to travel to Sunland Park to listen to citizen concerns about the Landfill and other environmental issues. This included a meeting with the Grassroots Environmental Group in March 2007, a town hall meeting in June 2007, a meeting at the church with citizens in August 2007, and a community meeting with a professional facilitator in early October 2007 to discuss just the Landfill. Vol. 12, pp. 4590-4592.
3) Concerns raised by citizens at the meetings included historic environmental contamination from Asarco, dust, poor health, excessive truck traffic, safety of children, location of schools, nuisance issues, flies, noise, traveling behind garbage trucks, historic bad practices of the old dump, medical waste incineration, lack of information and transparency, and disregard of citizens. Vol. 12, p. 4594.

4) There is a lot of distrust of the Environment Department by the citizens, distrust of government in general, including EPA and almost anyone in authority. They tried to listen to the citizens, to understand their concerns, and to provide information to them. It was also suggested to Ms. Padilla that she meet with the Bishop to explore ways to establish trust, and she did so. It did not occur to Ms. Padilla to retain a psychologist or sociologist. Vol. 12, pp. 4595, 4606-4609.
5) The Environment Department participated in getting EPA to include New Mexico as part of the Texas cleanup to address residential areas in Sunland Park where the soil had been contaminated by the Asarco smelter. The Environment Department has actively opposed the reopening of the Asarco smelter. Vol. 12, pp. 4596-4597.
6) The Department has responded to requests for public information from the citizens and community of Sunland Park. A great deal of time was spent during the summer of responding to requests, and individuals from the citizens group came to Santa Fe to look at files. Vol. 12, p. 4598.
7) Quality of life includes all things about our lives that make it what it is: having economic opportunities, education, a place to live, clean environment, opportunity for recreation and social opportunities. Around a landfill, the regulations must be met and environmental protection must be ensured. Vol. 12, p. 4612.