

AES ALAMITOS SCR PROJECT NOP/IS RESPONSE TO COMMENTS

Comment Letter #1 CALIFORNIA DIVISION OF MINES AND GEOLOGY

- 1-1 The Los Alamitos 7½-minute Quadrangle map was submitted to the SCAQMD without an accompanying cover letter. As a result, Steve Smith, Program Supervisor of the SCAQMD's CEQA section, contacted Mr. Robert Sydnor (whose business card was attached to the map), California Division of Mines and Geology, on December 14, 2000, to obtain additional information relative to the map. Mr. Sydnor requested that the Draft EIR indicate that the project site is located in the "Official Liquefaction Zone" as shown on the attached Seismic Hazard Zones Map (dated March 25, 1999).

The SCAQMD agrees with Mr. Sydnor that, as shown on the attached Seismic Hazard Zones Map, the facility generally is located within a liquefaction zone. However, based on existing data, the liquefaction potential at the actual project site is low to moderate. The project design for the aqueous ammonia tanks takes into account and addresses this potential risk. Specifically, the ammonia tanks are founded on cast-in-drilled hole piles and mat foundations underlain by engineered fill. The proposed project has been designed sufficiently to withstand the potential for liquefaction. Therefore, the potential for liquefaction-related impacts is less than significant.

Comment Letter #2 CITY OF ANAHEIM

- 2-1 The City of Anaheim indicated that it has no information or comments to provide on the NOP/IS. Further, the City requests future notices and documents related to the proposed project, which the SCAQMD will provide.

Comment Letter #3 CITY OF LONG BEACH

- 3-1 Page 2-8 of the NOP/IS incorrectly stated that a risk management plan (RMP) would be provided as part of the Draft EIR. That reference was supposed to refer to a health risk assessment. The health risk assessment is incorporated into the Air Quality discussion (Chapter 4) of the Draft EIR.

The existing facility RMP will be updated and approved prior to ammonia delivery for the new SCR units. The City of Long Beach Department of Health and Human Services is the lead agency for implementation of the California Accidental Release Program (CalARP) RMP requirements. The existing facility RMP is publicly available and the revised RMP would be open for public comment prior to approval.

- 3-2 Although the proposed project site has been re-parcelized, this action did not alter the existing Coastal Zone boundary. Based on California Coastal

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Commission's Memorandum regarding Boundary Determination No. 36-2000 (June 14, 2000), it is clear that the proposed project is located to the north and outside of the Coastal Zone. Therefore, no further action by the California Coastal Commission is necessary.

3-3 As discussed in the NOP/IS, the proposed project will not adversely affect either biology or water quality. As indicated in the NOP/IS (see also Chapter 4 of this Draft EIR for more information) the proposed project will be carried out solely within the confines of the existing facility so there is very little likelihood that any impacts to nearby land, including the area proposed as a future restored wetlands area, will occur. With regard to water resources impacts, except for water used temporarily as a dust suppressant (a standard construction practice), the proposed project does not increase demand for additional potable water or generate substantial amounts of additional waste water. See also response 3-4 and Chapter 4 of the EIR for more information on this topic. Instead, this project will provide a beneficial impact to biological resources via the 90 percent reduction of NO_x from Units 1 through 4 at the facility.

3-4 As discussed in the NOP/IS (Section IX, Hydrology and Water Quality), the proposed SCR system is highly efficient and will not result in the generation of wastewater. Also, any accidental spills or discharges of ammonia into a storm drain that potentially could occur onsite have been addressed as part of the actual project design.

Specifically, as part of the proposed project, AES will install ammonia vapor detectors with audible and visual (light) notification in the vicinity of the SCR systems and the storage tanks. Any leak onsite will be detected quickly and signaled to the plant operators in the control room. In response to an ammonia vapor alarm, the operators will shut down the ammonia feed supply to prevent excessive ammonia from being spilled. Also, the aqueous ammonia storage tanks will be double walled and bermed.

Further, AES Alamitos Generating Station's *Hazardous Materials Release Contingency Plan* will be updated to reflect the proposed additional storage of aqueous ammonia at the facility. The purpose of the plan is to specify how station personnel would respond to any unplanned release of hazardous materials into the air, soil or surface water. This response includes notifying the proper authorities of the release, controlling and cleaning up the release and restoring the environment as required. The plan identifies sources of hazardous material, responsibilities of employees during a response, a step-by-step plan of how to respond to a release, who to contact, how to contain and remove hazardous material released, restoration of the environment, and creation of an operating record of the incident. The plan also includes maps of the locations of all hazardous materials at the facility.

In light of all the above safety precautions, no changes to the facility's existing National Pollution Discharge Elimination System permits are necessary.

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Comment Letter #4 CITY OF SEAL BEACH

- 4-1 Specific responses to each issue raised by the City of Seal Beach are provided below. It should be noted that the proposed project is less than 1 mile from Seal Beach and Leisure World.
- 4-2 Comment noted. Please refer to responses 4-21 and 4-22 for detailed responses to the issues of “Noise” and “Public Services”.
- 4-3 SCAQMD agrees that for those areas of the environment that may be significantly impacted by the proposed project a full discussion, evaluation and, if appropriate, mitigation of such impacts must be included as part of the Draft EIR and subject to public review and comment. As discussed in the NOP/IS, areas of potential impacts created by this project include “Air Quality” and “Hazards and Hazardous Materials.” The Draft EIR contains a detailed environmental evaluation of these potential impacts, along with a compilation of appropriate mitigation measures.
- 4-4 Nitrogen dioxide (NO₂) is the main component of NO_x emissions and, in turn, is the principal constituent responsible for NO_x-related health effects. NO₂ also contributes to ozone and PM₁₀ formation. A reduction in emission levels from Units 1 through 4 at the Alamitos Generating Station will result in lower NO_x and NO₂ levels in the atmosphere, resulting in improved air quality and significant health benefits, as discussed below.

Nitrogen dioxide can irritate lungs and lower resistance to respiratory infections such as influenza. Continued or frequent exposure to nitrogen dioxide to concentrations that are typically much higher than those normally found in the ambient air may cause increased incidence of acute respiratory illness in children. Nitrogen oxides are important contributors to ozone formation and may affect both land-based and water-based ecosystems. Nitrogen oxides in the air are a potentially significant contributor to a number of other environmental effects as well, such as acid rain and nutrient enrichment in coastal waters. In addition, nitrogen oxide emissions can form aerosols in the atmosphere that significantly reduce visibility. Therefore, by substantially reducing NO_x emissions from Units 1 through 4 at the Alamitos Generating Station, there will be significant health benefits and environmental benefits, especially in the long term. For additional information on health effects of criteria pollutants, please refer to Chapter 3 of the Draft EIR.

The post SCR reduction of NO_x emissions for each unit (Units 1 through 4) is approximately 92 percent, compared to historical NO_x emissions. The reduction from each unit and the total reduction can be quantified as follows:

Unit Number	Historical Annual PTE NO _x Emissions (tons per year)	Post SCR Emissions (tons per year)
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Unit 1	1513	51
Unit 2	1641	51
Unit 3	1489	188
Unit 4	1489	188
TOTAL	6132	478

Note: PTE – Potential to Emit – this is the maximum level of NO_x emissions for each boiler, based on historical continuous monitoring data from each plant.

Please refer to Sections 1.1 and 4.2.3.1 of the Draft EIR for a complete discussion of NO_x emissions reduction associated with this project

- 4-5 A screening health risk assessment (HRA) was performed to estimate the potential impacts associated with cumulative airborne emissions of ammonia due to the proposed project. The HRA utilized a U.S. Environmental Protection Agency (US EPA) accepted model that predicts the maximum ground level concentration of ammonia resulting from operation of the SCR systems on Units 1 through 4. The inputs used in the model were very conservative, in order to predict a “worst case” scenario. Since ammonia is not considered a carcinogen, an inhalation human HRA was performed.

In order to quantitatively assess the health effects of ammonia, the output from the model, i.e., the maximum ground level ammonia concentrations, were divided by the reference exposure level for ammonia (developed by the California EPA and the Office of Environmental Health Hazard Assessment (OEHHA)). This gave a chronic hazard index and an acute hazard index. A hazard index of one or greater indicates that health risk exists; a hazard index of less than one indicates that a health risk does not exist. The hazard indices for the proposed project were a factor of one hundred less than one (0.0061 and 0.0098 for acute and chronic health effects, respectively).

It is important to note that the potential health risks to sensitive populations have been taken into account in the HRA. The HRA utilizes reference exposure levels developed by the OEHHA that are designed with a “safety factor” to account for exposure to sensitive populations. By using these reference exposure levels in the HRA, the risk to sensitive populations has been taken into account. Moreover, the fact that the hazard indices were so far below the risk level of 1.0 means that there will be no risk to even a sensitive population.

Reference exposure levels (RELs) are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. RELs are designed to protect the individuals who live and work in the vicinity emissions, as well as the most sensitive individuals in the population, through the inclusion of margins of safety. They are intended to protect both individuals at low risk for chemical injury as well as identifiable sensitive

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subpopulations (highly susceptible or sensitive individuals such as the elderly, the very young, pregnant women, and those with chronic or acute illnesses) from adverse health effects in the event of exposure. Please refer to Chapter 4 of the Draft EIR for a complete discussion of ammonia slip associated with this project.

- 4-6 The maximum ground level concentration is predicted to occur at a distance of 6,300 meters (20,700 feet) from the stacks at the Alamitos Facility. The Leisure World community is located approximately 800 meters (2,600 feet) to the east of the Alamitos Facility. Therefore the maximum predicted concentration would not affect the Leisure World community.

To explain further, when a ‘puff’ of gas is released from a stack, it travels high into the air and is then dispersed and diluted by the air into which it is released. The puff, or plume of gas, then travels at height for a distance (in this case some 6,000 meters) before it is deposited at ground level. During the time the plume is airborne, it is significantly diluted and dispersed, so that the concentration of the gas deposited at ground level is orders of magnitude lower than the concentration released. The concentration of ammonia gas released in the plume from the stacks at the Alamitos Facility is very low, and will travel some 6,000 meters before reaching ground level, where the concentration will be far below levels at which human health effects occur.

- 4-7 The sentence referred to in the NOP/IS is incorrect. At the time the NOP/IS was circulated for public review, the cumulative health risk assessment was being prepared to be included in the Draft EIR, not in the NOP/IS as implied. A cumulative health risk assessment is provided in Chapter 4, “Air Quality” section, of the Draft EIR.

- 4-8 Page 2-8 of the NOP/IS incorrectly stated that a risk management plan (RMP) would be provided as part of the Draft EIR. That reference was supposed to refer to a health risk assessment. The health risk assessment is incorporated into the Air Quality discussion (Chapter 4) of the Draft EIR. See also response to comment 4-7.

The existing facility RMP will be updated and approved prior to ammonia delivery for the new SCR units. The City of Long Beach Department of Health and Human Services is the lead agency for implementation of the California Accidental Release Program (CalARP) RMP requirements. The existing facility RMP is publicly available and the revised RMP would be open for public comment prior to approval.

- 4-9 Please refer to the response to comment 4-5.

- 4-10 Please refer to Chapter 4, “Hazards” section, for a detailed “worst-case” analysis of the probability and consequences of an accidental release of ammonia, both at the facility and during transport by truck to the facility.

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- 4-11 Please refer to Chapter 4, “Hazards” section, for a detailed analysis of the probability of an accidental ammonia release and the consequences of such a release under two scenarios. Please note that the SCAQMD has modified its ammonia exposure significance threshold from 100-ppm to 200-ppm to be consistent with the Emergency Response Planning Guideline Level 2 (ERPG-2), which is used in Risk Management Plans under the California Accidental Release Prevention (CalARP) Program and the U.S. EPA Risk Management Program requirements.
- 4-12 Please refer to the responses to comments 4-10 and 4-11. Also, Figure 4-1 of the Draft EIR provides a map of the area that potentially would be impacted in the event of a complete loss of containment of ammonia based on dispersion modeling using the current 200-ppm ammonia exposure threshold level. Please note that the modeling was done for Units 1 and 2, versus Units 3 and 4, because these units would have the greatest potential to impact sensitive receptors and are closest to the generating station property boundary.
- 4-13 As indicated in Chapter 4 of the Draft EIR the City of Long Beach provides fire and emergency services within its boundaries as a municipal service. Fire and emergency services are coordinated by the Long Beach Fire Department (Fire Department). The Fire Department has 24 stations within the city limits, with the closest one located at 6340 Atherton Street, which is within one mile of the Alamitos Generating Station. Response time for an emergency at the facility therefore is anticipated to be very short.

The Fire Department is well equipped and trained for responding to and dealing with fires, paramedic rescues, and certain limited types of hazardous materials incidents. The Fire Department has been trained for aqueous ammonia incidents at the Alamitos Generating Station since 1993, when SCRs using aqueous ammonia were installed on Units 5 and 6. In the event that an incident exceeds the scope of the Fire Department’s capabilities, Long Beach typically contacts the Los Angeles County Hazardous Materials unit for emergency assistance. Backup is also provided by surrounding municipalities on the basis of reciprocal agreements.

The Fire Department also serves as the conduit for information transfer from one emergency response unit to others (e.g., fire, police, California Highway Patrol (CHP), private emergency service or equipment providers, etc.), both prior to and after an accidental release. Emergency response plans and evacuation routes are coordinated by the Fire Department, with development and review of such plans and routes supported by all of the public services involved. AES currently is working closely with the Fire Department regarding the update to the facility risk management plan and details of the proposed project.

The Long Beach Police Department (Police Department) is responsible for perimeter and entry control at the scene of a hazardous materials accident. The

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Police Department also shares responsibility with the Fire Department for security within the perimeter. In the event of a major hazardous materials incident (or any other major emergency), it is primarily the responsibility of the Police Department to implement evacuation procedures, should they be necessary.

The Police Department has a designated person that works closely with the Fire Department, especially on hazardous materials incidents. Backup support, if it should prove necessary, would be supplied by the police departments of surrounding municipalities and the Los Angeles County Sheriff's Department.

As concluded in the NOP/IS, a worst-case scenario event (one storage tank or tanker truck leaking all aqueous ammonia at one time) would require the same level of emergency response as the current spill response plan created during the installation of SCR on Units 5 and 6 (SCAQMD, 1993b). Therefore, the proposed project would not result in significant impacts to police and fire services.

A large amount of emergency calls are not anticipated for the proposed project because, based on the analysis in Chapter 4, the probability of an accidental release is extremely low, i.e., a catastrophic tank failure rate has been estimated at approximately one per 2,500 years.

- 4-14 As indicated in previous responses, a detailed risk analysis for the proposed project has been prepared and is included in Chapter 4 of the Draft EIR.
- 4-15 A description of the aqueous ammonia transport route is included in Chapter 4, "Hazards" section, of the Draft EIR.
- 4-16 A description of the aqueous ammonia transport route is included in Chapter 4, "Hazards" section, of the Draft EIR. As noted in Chapter 4, the anticipated ammonia transport route does not include using Pacific Coast Highway, Westminster Avenue, or Seal Beach Boulevard.
- 4-17 AES will contact emergency response agencies, including those of the Department of Transportation (Caltrans) and the City of Long Beach Fire Department, in accordance with applicable federal, state and local regulations.
- 4-18 Truck transport will not occur on local city streets within Seal Beach. Less than one mile of the existing and proposed 63-mile transport route occurs on Interstate highways that pass through the City of Seal Beach. The probability of a truck accident to the Alamitos Generating Station is one per 200 years. A detailed description of the aqueous ammonia transport route and potential associated risks are included in Chapter 4, "Hazards" section, of the Draft EIR.
- 4-19 Please refer to the response to comment 4-12 above.

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4-20 Please refer to response to comment 4-5, and to Chapter 4, “Air Quality” section, of the Draft EIR. As indicated in Chapter 4, exposure to ammonia can cause eye and skin irritation, as well as respiratory difficulties.

4-21 It should be noted that the NOP/IS is a public document that provides the public an opportunity to review and comment on potential impacts of the proposed project, including possible noise impacts.

As stated in the NOP/IS “Noise” discussion, AES is committed to using electric tools and welding machines (approximately 70-75 decibels) versus air or diesel tools (90-100 decibels) during installation of the SCR on Units 1 through 4. Temporary construction noise impacts will not exceed the 75 decibel significance threshold established by the City of Long Beach. The SCRs will be installed on existing equipment at an existing facility. Consequently, with the noise reduction features of the project ambient noise levels are expected to be unaffected by the project.

Similarly, the proposed design of this project incorporates the use of sound enclosures for the SCR equipment. Moreover, the SCR equipment for Units 1 and 2, which are closest to sensitive receptors and the generating station property line will be housed within a building, thus further suppressing noise levels. Beyond this, the project design incorporates noise control methods, such as external insulation for hot gas dilution blowers (four 11-hp/3,600 rpm). Thus, as noted in the NOP/IS, SCAQMD concludes that the potential noise impacts related to SCR operation will be less than significant.

4-22 Please refer to the response to comment 4-13. Further, it should be noted that costs are not a topic required for analysis under CEQA unless they result in indirect physical impacts. No such physical impacts were identified for the proposed project.

Comment Letter #5

STATE OF CALIFORNIA- BUSINESS AND TRANSPORTATION AGENCY, DEPARTMENT OF TRANSPORTATION

5-1 This comment is a statement of the description of the proposed project. No response is necessary.

5-2 The Draft EIR states that transfer of aqueous ammonia would not occur during school hours or between 6 a.m. to 9 a.m. and 4 p.m. to 6 p.m. Please refer to Section 4.3.1.4 of the Draft EIR for information regarding aqueous ammonia truck transport.

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Comment Letter #6 DEPARTMENT OF TOXIC SUBSTANCES CONTROL

6-1 The major components of the proposed project include installation of:

- Selective Catalytic Reduction (SCR) reactor units
- Control equipment
- Aqueous ammonia storage tanks.

The SCR reactor units would be incorporated in to the existing boiler footprint. The control equipment would be installed within the existing plant distribution control system. The three aqueous ammonia storage tanks and berms (595.5 square feet each) would be located on an impermeable surface. The tanks would be located immediately west of Units 1 through 4.

CH2M HILL prepared a Phase II Environmental Site Investigation of the Alamitos Generating Station for Southern California Edison Company, the former owner, in 1997. The Phase II investigation was performed in accordance with the *Sampling and Analysis Plan and Quality Assurance Project Plan, Phase II Environmental Site Assessments, SCE Generating Stations*, dated October 18, 1996, prepared by Hydro-Search, Inc., CH2M HILL, and Geraghty & Miller, Inc.

The Phase II investigation included the area around Units 1, 2, 3 and 4 (Power Block). More specifically, the Phase II investigation performed soil and groundwater sampling in the area around Units 1 and 2 and soil sampling around Units 3 and 4. Groundwater sampling was infeasible around Units 3 and 4, and due to saltwater intrusion, was not considered necessary. The samples collected were analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), and California Assessment Manual (CAM) metals.

No TPH and VOCs were detected at levels above the screening criteria set forth in the CAM. Similarly, with the possible exception of arsenic, no heavy metals were detected above the applicable screening criteria. Given the historical use of the facility as a generating station, the presence of arsenic in soil is most likely attributable to naturally occurring background soil concentrations. Finally, there is no evidence that groundwater has been impacted by TPH-diesel (D). Groundwater beneath the Alamitos Generating Station has been impacted by saltwater intrusion and is not considered to have a beneficial use. Based on this investigation it was concluded that little, if any hazardous wastes/substances were released historically at the site, and it was determined that no further investigation was necessary.

Finally, it should be noted that the proposed project will not result in any significant disturbance of soils. Therefore, human health and the environment will not be threatened by the proposed installation of surface features (i.e., ammonia tank pads) at the project site.

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- 6-2 Please refer to the response to comment 6-1.
- 6-3 As discussed in response to comment 6-1, no investigation or remediation is anticipated to be required as part of this project. However, if such investigation and remediation were required, then the government agency to provide oversight would either be the Regional Water Quality Control Board or the Los Angeles County Department of Public Works, Environmental Programs Division. In any event, the appropriate oversight agency would be contacted if remediation becomes necessary.
- 6-4 As already noted in response to comment 6-1, a site investigation already has been conducted and no contaminated soil was encountered. If contaminated soil were found during construction of the proposed project, the site would be further investigated and, if necessary, the contaminated soil would most likely be removed and disposed of in an appropriate landfill. The government agency to provide oversight would either be the Regional Water Quality Control Board or the Los Angeles County Department of Public Works, Environmental Programs Division depending on the location, source and/or extent of contamination. See also response to comment 6-3.
- 6-5 As noted in response to comment 6-1, neither a PEA nor a VCP is anticipated to be necessary.

Comment Letter #7 NATIVE AMERICAN HERITAGE COMMISSION

- 7-1 Rob Wood (Native American Heritage Commission) was contacted on December 8, 2001 by Jeremy Rowland (consultant). Mr. Wood concluded that because of the lack of ground disturbance a record search was not necessary for the proposed project.
- 7-2 Please refer to response to comment 7-1.
- 7-3 Please refer to response to comment 7-1.
- 7-4 The project does not involve excavation, nonetheless, if the existence of archeological resources is found during work on the proposed project, then all applicable laws and procedures concerning such resources will be followed.

Comment Letter #8 SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

- 8-1 This comment indicates that SCAG has determined that the proposed project is not regionally significant. The SCAQMD agrees with this conclusion.