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STATE OF CALIFORNIA

ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

In the Matter of The Application for Certification for the ALAMITOS ENERGY CENTER

Rebuttal of Applicant's Opening Testimony by Joe Geever Alamitos Energy Center Final Staff Assessment Docket 13-AC-01

Prepared for Los Cerritos Wetlands Land Trust

October 26, 2016

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1. Biological Resources

a. Cumulative impacts

Without a description of the future demolition of the AGS, the assumption that Conditions of Certification will minimize the adverse impacts to less than significant are unsubstantiated. For example, demolition of a similar facility in similar surroundings in Chula Vista (South Bay Power Plant), was described as:

Power block: The power block consists of two relatively massive structures that contain the power plant's boiler and turbine generator (see Exhibit 3 – SBPP Power Block). The boiler structure is a steel framework structure about 165 feet high, and the turbine generator is within a concrete structure about 48 feet high. Dynegy would first remove any remaining hazardous materials (e.g., asbestos, petroleum projects, etc.) and the remaining equipment within these structures, such as piping, lights, controls, duct work, and tanks. Some of this equipment may be salvaged rather than demolished, and some tank bottoms will remain to be removed during the next phase of site remediation. Dynegy has already completed asbestos removal through an asbestos abatement plan pursuant to Air Pollution Control District requirements, so very little asbestos is expected to be present. 10 E-11-027 (Dynegy South Bay LLC)

Due to its heavy steel framework, the boiler structure would be demolished using implosion. This would involve placing a number of small, controlled explosive charges within the structure to bring it down quickly. To reduce the area of disturbance and the amount of dust that would be generated, Dynegy's contractor has proposed imploding the structure in phases. The contractor would first use conventional methods to demolish smaller buildings on either side of the boiler structure. Once materials are removed from those buildings, the contractor would implode the outer two boiler and generating units into the footprint of the demolished buildings. Then, once materials from those units are dismantled and removed, the two inner boiler and generating units would be imploded into the footprints of the outer two units. This weblink provides a video example of a similar power block implosion at the El Segundo Generating Station in El Segundo, California (though it shows a single implosion rather than a two-phase implosion):

http://www.youtube.com/watch?v=CXoi2KF2N9k

Once imploded, heavy equipment would be used to cut up the boilers and other materials and segregate the various components for recycling or landfill. The concrete turbine building would be dismantled using heavy equipment and jackhammers, with steel beams and rebar being removed for recycling. Most of the power block's cement foundation would be removed, with the belowgrade portions remaining for the next phase of site remediation. ¹

Applicant's conclusion is without merit that cumulative impacts to Biological Resources from construction and/or operation of the AEC will not be significant.

¹ South Bay Staff Report & Addendum at p. 11

Because the Staff Assessment fails to consider all cumulative impacts, no conclusions can be made on environmental impacts other than that because cumulative impacts are higher than measured in the Staff Assessment, the overall project impacts have been underestimated.

As noted below in the Noise, Water Resources and Hazardous Materials sections, demolition of the AGS and/or Haynes facility will cause dust, runoff and noise impacts. For example, the environmental impact assessment for demolition of the South Bay Power Plant in Chula Vista noted:

One of the project's main potential impacts to coastal waters is from potentially contaminated dust generated during demolition activities and during movement and operation of heavy equipment. The project site is relatively open and in an area where strong winds could transport dust some distance from the project activities. Large amounts of dust could adversely affect water quality and habitat values of nearby coastal waters.²

Project activities could also mobilize contaminants through surface water runoff. Although the site has a functioning stormwater management system, project-related activities could increase the types and volumes of contaminants the system may need to handle.³

These impacts, in combination with construction and/or operation of the AEC, will likely be significant.

Further, Applicant's alternatives analysis does not include alternatives that would meet the "purpose" of the proposed facility while reducing the adverse cumulative impacts to Biological Resources.

b. Affected Habitats and Species

Staff has not fully analyzed impacts to area species and habitats. The Staff assessment is inadequate in that it does not even identify all species that will be subject to harm from this project and fails to analyze all impacts -- most notably demolition of AGS and/or Haynes Units 1&2. Furthermore, impacts have been analyzed based upon wrong assumptions that impacts of this project stop at the project physical land boundary. Impacts such as light, noise, and air pollution from both the demolition of AGS and construction and operation of AEC will extend well beyond the physical boundaries with especially large impacts on the avian and marine environments. Because it is based on an inadequate and inaccurate analysis, the proposed mitigation is also inadequate.

Many protected species and habitats will be impacted by demolition and construction and operation of a new plant. AGS is in a similar habitat as was the South Bay Power Plant and Substation - less than two hours from each other, both

² South Bay Staff Report & Addendum at p. 15

³ Ibid at p. 16

sites are on the shoreline, adjunct to ocean waters, surrounded by protected wetlands.⁴ The areas share many of the same special status species such as those documented to be potentially impacted by demolition at South Bay: "These species include but are not limited to green turtle (*Chelonia mydas*), western snowy plover (*Charadrius alexandrinus nivosus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), California brown pelican (Pelecanus occidentalis californicus), light-footed clapper rail (Rallus longirostris levipes), American peregrine falcon (Falco peregrinus), California least tern (Sterna antillarum browni), elegant tern (Sterna elegans), and gull-billed tern (Gelochelidon nilotica).⁵

While the Staff assessment acknowledges presence of many special status species in and around the site, it does not accurately identify potentially impacted species and fails to account for major impacts, including those from demolition, to the many special status species in and around the project site. For example, Staff concludes that none of the many endangered tiger beetle species are onsite and that the pacific green sea turtle (Chelonia mydas), an endangered species, is "Not Likely to Occur" because "no aquatic habitat within the project site or pipeline alignment" but the turtles are "Present off-site. Pacific green sea turtles inhabit the lower San Gabriel River and vicinity and congregate near the existing AGS outfall adjacent to the project site."

In fact, as documented by the Los Cerritos Wetlands Land Trust, the area in and around the Project site is used for breeding, foraging, migrating and otherwise by imperiled Belding's Savannah Sparrow, Black Skimmer, Burrowing Owl, California Least Tern, Loggerhead Shrike, Northern Harrier, Pacific Green Sea Turtle, Salt Marsh Tiger Beetles, Salt Marsh Wandering Skipper, Yellow Breasted Chat, and many other special status species. There are also at least seven special status plants found in the area including but not limited to California Boxthorn, Coulter's Goldfields, Estuary Sea Blite, Lewis' Evening Primrose, Southern Tarplant, Southwestern Spiny Rush and Woolly Sea Blite. This project will impact green turtles that rely upon the warm water of the AGS outfall and that live in very close proximately to the project site. The Staff assessment needs a full assessment of impacts to the turtles and many other species that are wrongly dismissed as not being impacted.

As can be viewed in video of the South Bay Power Plant demolition, demolition of a gas power plant creates noise, air quality, hazardous material, and other biological impacts especially in areas of high avian and marine biodiversity as with this project site.⁷ The video documents birds being frightened and flushed, massive plumes of dust and potentially hazardous materials and particulate matter.

⁴ PUC South Bay Substation Relocation Project FEIR: TN# 214145 and 214147

⁵ PUC South Bay Substation Relocation Project FEIR at p. D.5-17.

⁶ Staff FSA at p.

⁷ TN# 214151

The Conditions of Certification do not adequately address the cumulative impacts to Biological Resources and habitat. For example, for demolition of the South Bay Power Plant, among other recommended mitigation measures, the Coastal Commission suggested:

If project construction or operations result in a spill or accidental discharge that causes adverse effects to coastal water quality, ESHA, or other coastal resources, the Permittee shall submit an application to amend this coastal development permit, unless the Executive Director determines no amendment is legally required. The amendment application shall identify proposed measures to prevent future spills or releases and **shall include a proposed restoration** plan for any coastal resources adversely affected by the spill or release.8

Before the Energy Commission certifies the AEC, the cumulative impacts from demolition of AGS and/or Haynes, in combination with the operation of the AEC, must be fully documented and mitigated, including plans for restoring water quality and habitat in the surrounding area.

2. Hazardous Materials

a. Cumulative Impacts

In contrast to Applicant's assertions, cumulative impacts from Hazardous Materials from this project will be significant. I disagree with the summary conclusions that the cumulative impacts from Hazardous Materials from demolition of AGS, in combination with construction and operation of the AEC, will not be significant. Without a description of the future demolition of the AGS, the assumptions the Conditions of Certification will minimize the adverse impacts to less than significant are not substantiated. Decontamination and demolition of the AGS will generate significant volumes of Hazardous Waste⁹, and the long-term handling and disposal of that waste after construction of the AEC is complete and the new facility is under operation has not been analyzed.

Decontamination and demolition of the AGS will generate significant volumes of Hazardous Waste.¹⁰ Handling and disposal of that waste after construction of the AEC is complete and the new facility is under operation has not been analyzed.

Demolition will be similar to the South Bay Power Plant as described by the Coastal Commission:

Demolition activities are expected to take place over about a 12-month period, starting in July 2012. Work will require up to about 30 to 40 workers on site, and will occur on weekdays between 7:00 a.m. and 7:00 p.m. To avoid potential impacts to nesting birds, the power block implosion will occur outside of nesting season only – i.e., between September 15 and March 15 of any year. Similarly,

¹⁰ See: South Bay Adopted Findings

⁸ South Bay Staff Report & Addendum at p.7 (emphasis added)

⁹ See: TN 214152

vegetation removal will be done only outside of nesting season unless a qualified biologist determines nesting birds are not present.

Work would be conducted using various types of heavy equipment, including cranes, bulldozers, backhoes and excavators, cutting torches, etc. Staging areas will be on site within payed areas adjacent to the power block. Staging activities will include bringing in equipment and supplies, installing temporary construction trailers, and installing protective sheathing around the SDG&E switchyard adjacent to the power plant. Dynegy will remove any combustible or hazardous materials within the power block or other structures before the start of demolition, though will also implement fire prevention measures, including having dust suppression water and fire extinguishers immediately available and maintaining a "fire watch" during any operations that use an open flame. Most of the known hazardous materials have been removed from the site, though Dynegy expects to generate up to about 2100 tons of hazardous materials, such as used oil, liquid wastes, ballasts, and other similar materials. Any hazardous wastes found during the project will be stored in the existing SBPP hazardous waste storage structure for no more than 90 days before being transported offsite subject to relevant waste management and transport requirements. Dynegy has already completed asbestos abatement at the plant, though a small amount is expected to be generated during demolition.

The project is expected to generate about 20,000 tons of recyclable ferrous metals (e.g., iron, steel, etc.) and about 1,000 tons of non-ferrous metals (e.g., aluminum, copper, zinc, etc.). It may also generate up to about 3400 tons of other non-hazardous waste, such as wood and plastic, which will also be recycled when feasible. These materials will be temporarily stockpiled on site for later removal. Dynegy estimates that hauling these materials offsite for recycling or to a landfill will require about 3150 truck trips, with an average of about 12 trips per day and a 3 Switchyard relocation is the subject of a separate proceeding before the California Public Utilities Commission (#A-10-06-007) and will require separate review and approval by the Coastal Commission. 12 E-11-027 (Dynegy South Bay LLC) maximum of about 30 per day (at a rate of three to four per eight hour work day). The trucks used for hauling will be standard highway rigs that can carry up to 20 tons each.

Dynegy's analysis of expected greenhouse gas emissions for the demolition project, including CO2 equivalents (CO2e), provides an estimate about 5,421 tons CO2e, with about 1,663 tons emitted from heavy equipment on site. This is below the California Air Resources Board current interim threshold for industrial projects of 10,000 tons CO2e per year. ¹¹

The Coastal Commission report went on to review alternatives to demolition by implosion:

The main advantage of implosion/demolition is the reduced time needed to complete the project.

Conventional dismantling is expected to take from seven to 15 months longer than implosion/demolition, and felling would take from three to five months

¹¹ South Bay Staff Report & Addendum at p.12-13

longer. The reduced time for implosion/demolition results in substantially fewer long-term dust and noise impacts. Further, implosion would allow the follow-up dismantling to occur closer to ground level than that associated with felling or conventional dismantling. Dismantling at greater height during felling or conventional dismantling would result in the dust and noise from those activities travelling further and being more difficult to control. The reduced time for implosion also results in fewer long-term traffic impacts, and less overall risk to water quality and sensitive habitats and species.

The reduced heavy equipment operation required with implosion also significantly reduces the project's overall greenhouse gas emissions. In sum, the short-term dust and noise impacts of implosion would result in fewer overall and ongoing impacts from noise, dust, traffic, and emissions. ¹²

The South Bay Power Plant example of the demolition project was done after the large volumes of asbestos materials was removed, and this Final Staff Assessment must include that information to adequately analyze the several foreseeable cumulative impacts such as highly hazardous and expensive asbestos removal.

While I cannot testify to precisely what hazardous materials will be handled during demolition of AGS, it will include at least some, if not all, of the hazardous chemicals found in the South Bay Power Plant as identified by the Coastal Commission's review of the demolition of the plant. Even after removal of large volumes of asbestos materials, the Coastal Commission found:

Constituents of concern identified by the California Department of Toxic Substances Control (DTSC) include metals, volatile organics, semi-volatile organics, petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), BTEX (which includes benzene, toluene, ethylbenzene, and xylenes), corrosives, and polychlorinated biphenyls (PCBs), all of which can be hazardous to human health and wildlife.¹³

Further, the Conditions of Certification do not adequately mitigate the cumulative impacts of Hazardous Waste deposition in surrounding areas once the AEC is constructed on the site. For comparison, concerning demolition of the South Bay Power Plant, Coastal Commission recommended, among other mitigation measures:

If project construction or operations result in a spill or accidental discharge that causes adverse effects to coastal water quality, ESHA, or other coastal resources, the Permittee shall submit an application to amend this coastal development permit, unless the Executive Director determines no amendment is legally required. The amendment application shall identify proposed measures to prevent future spills or releases and shall include a proposed restoration plan for any coastal resources adversely affected by the spill or release. 14

¹⁴ South Bay Staff Report & Addendum at p.7 (emphasis added)

¹² South Bay Staff Report & Addendum at p. 23

¹³ South Bay Adopted Findings at p. 9.

Before the Energy Commission certifies the AEC, the cumulative impacts from demolition of AGS and/or Haynes, in combination with the operation of the AEC, must be fully documented and mitigated, including plans for restoring water quality and habitat in the surrounding area.

3. Land Use

a. Cumulative Impacts

I disagree with the summary conclusions that the cumulative impacts from the project will be "compatible with adjacent uses." As noted in the Applicant's Testimony, the "Wetlands Mitigation Plan" includes restoration of wetlands habitat.

As noted elsewhere in this Rebuttal, foreseeable significant impacts from demolition of the AGS and/or Haynes, in combination with operation of the proposed AEC, have not been documented nor adequately mitigated to less than significant. Adverse impacts to the existing wetlands will have equally, if not greater, adverse impacts to the restored wetland habitat and wildlife resulting from the "Wetlands Mitigation Plan", and consequently those land uses are incompatible unless the AEC includes adequate mitigation measures for the cumulative impacts of the AEC operation and simultaneous demolition of the AGS and/or Haynes.

Further, the FSA and Applicant's submittals have not analyzed alternatives to the proposed AEC that would minimize the adverse impacts to the existing wetlands and restored wetlands in the "Wetlands Mitigation Plan."

4. Noise

a. Cumulative Impacts

I disagree with the summary conclusions that the cumulative impacts from Noise generated by construction and/or operation of the AEC will not be significant. The reasonably foreseeable noise from demolition of the AGS and/or Haynes and the associated traffic during demolition is likely to be significant and will be compounded by the operation noise from the AEC, as well as the Haynes re-power project.

As the Coastal Commission found in the South Bay Power Plant demolition plan: There will be two main sources of project-related noise:

- · Implosion: Implosion of the boiler structure will be done in two stages several weeks apart. Each will involve controlled explosions lasting a few seconds that are expected to generate about 120 decibels at a 50-foot distance.
- Standard demolition and associated operations: The ongoing demolition work is expected to generate sound levels in a range of about 70 to 90 decibels at a 50-foot distance from the equipment. Other associated activities, such as staging, equipment operation, transportation, etc., will result in similar sound

Further, the noise generated by demolition of the AGS will last a significantly longer period of time than the time documented in the Final Staff Assessment for only construction of the AEC, and consequently the adverse impacts of noise will be for a longer duration than analyzed.

Without a description of the future demolition of the AGS and/or Haynes and the adverse impacts from cumulative noise generated by the AEC, the assumptions that Conditions of Certification will minimize the adverse impacts to less than significant are unsubstantiated.

Further, the alternatives analysis does not include alternatives that would meet the "purpose" of the proposed facility while reducing the adverse cumulative impacts – especially excessive noise. For example, a smaller generating facility and development of more Battery Energy Storage would dramatically reduce operation noise from the proposed AEC.

Further, I disagree that the "scope and timing" of the proposed re-power of Haynes Units 1 & 2 precludes the need for a cumulative impacts analysis. The Haynes Unit 1 & 2 re-power project is reasonably foreseeable and must be analyzed for cumulative impacts from demolition of AGS, as well as construction and/or operation of the AEC.

5. Traffic and Transportation

a. Cumulative Impacts

I disagree with the summary conclusions that the cumulative impacts to Traffic and Transportation from construction and/or operation of the AEC will not be significant. As noted previously, it is reasonably foreseeable that demolition of the AGS and/or the Haynes facility, if not adequately mitigated, will cause adverse impacts to Traffic and Transportation. As found by the Coastal Commission review of the South Bay Power Plant demolition project:

Dynegy expects offsite transport of materials to require about 3200 truck trips, with an average of about 13 trucks per day. Dynegy estimates that greenhouse gas emissions expected from the project, which would be generated due to heavy equipment use, truck traffic, and worker vehicles, will total 7,264 CO2 equivalents (CO2e) over the 12 months of project activities. This is below the state and local air board current interim threshold for industrial projects of 10,000 tons CO2e per year. ¹⁶

The estimated truck trips found in the Coastal Commission analysis did not include the numerous truck trips and traffic impacts from the needed decontamination, storage and transport of significant asbestos and other hazardous materials prior to

¹⁵ South Bay Staff Report & Addendum at p. 19

¹⁶ South Bay Adopted Findings at p.12

the actual demolition activities cited in the Coastal Commission Staff Report. These significant impacts, in combination with similar impacts from the Haynes re-power proposal, are not adequately documented in the Final Staff Assessment and consequently not adequately addressed in the Applicant's Opening Testimony.

[NOTE: Similar calculations are needed for cumulative impacts to Air Quality in the Final Staff Assessment Part 2]

Without a description of the future demolition of the AGS, the assumptions about less than significant cumulative impacts are unsubstantiated.

Further, the alternatives analysis does not include alternatives that would meet the "purpose" of the proposed facility while reducing the adverse cumulative impacts by reducing the time of Traffic and Transportation impacts associated with construction of the AEC.

6. Visual Resources

a. Cumulative Impacts

The Opening Testimony seems to imply that, after demolition and removal of the AGS, there would be no significant adverse impacts to Visual Resources. This is the first and only detailed consideration of the cumulative impacts of demolition of the AGS and operation of the AEC. The cumulative impacts from demolition and operation should be considered in every aspect of the project analyses – both as a positive benefit, as is the case with Visual Resources, and as a negative aspect, as is the case in the other subject areas.

Further, the alternatives analysis must include a smaller gas-fired facility and/or additional Battery Storage, and those alternatives must be compared to the proposed facility for Visual Resources benefits.

7. Waste Management

a. Cumulative Impacts

I disagree with the summary conclusions that the cumulative impacts to Waste Management from demolition of the AGS and concurrent construction and/or operation of the AEC will not be significant. It is reasonably foreseeable that demolition of the AGS and/or the Haynes facility, if not adequately mitigated, will cause adverse impacts from Waste Management – particularly the Hazardous Wastes discussed above. These impacts, in combination with construction and/or operation of the AEC, will likely be significant. Without a description of the future demolition of the AGS, the assumption that: "Sufficient landfill capacity is available in the project area. Therefore, the added waste quantities generated by the AEC would not result in significant cumulative waste management impacts." is unsubstantiated.

 $^{^{\}rm 17}$ AES Opening Testimony at p. 80

Further, the analysis of Waste management in the South Bay Power Plant Coastal Commission staff report found that:

Any hazardous wastes found during the project will be stored in the existing SBPP hazardous waste storage structure for no more than 90 days before being transported offsite subject to relevant waste management and transport requirements.¹⁸

Further, the alternatives analysis does not include alternatives that would meet the "purpose" of the proposed facility while reducing the adverse cumulative impacts to Waste Management – including construction of a smaller gas-fired generation capacity that reduces construction and operational Waste Management.

The Conditions of Certification do not adequately address the continued concerns of Hazardous Waste handling, storage and removal once the AEC is constructed on the site. For example, for demolition of the South Bay Power Plant, among other recommended mitigation measures, the Coastal Commission suggested:

If project construction or operations result in a spill or accidental discharge that causes adverse effects to coastal water quality, ESHA, or other coastal resources, the Permittee shall submit an application to amend this coastal development permit, unless the Executive Director determines no amendment is legally required. The amendment application shall identify proposed measures to prevent future spills or releases and shall include a proposed restoration plan for any coastal resources adversely affected by the spill or release. ¹⁹

8. Water Resources

a. Cumulative Impacts

I disagree with the summary conclusions that the cumulative impacts to Water Resources from construction and/or operation of the AEC will not be significant. It is reasonably foreseeable that demolition of the AGS and/or the Haynes facility, if not adequately mitigated, will cause adverse impacts to Water Resources.

For example, the environmental impact assessment for demolition of the South Bay Power Plant noted:

One of the project's main potential impacts to coastal waters is from potentially contaminated dust generated during demolition activities and during movement and operation of heavy equipment. The project site is relatively open and in an area where strong winds could transport dust some distance from the project activities. Large amounts of dust could adversely affect water quality and habitat values of nearby coastal waters.²⁰

Project activities could also mobilize contaminants through surface water runoff. Although the site has a functioning stormwater management system,

¹⁸ South Bay Staff Report & Addendum at p. 12

¹⁹ South Bay Staff Report & Addendum at p.7 (emphasis added).

²⁰ South Bay Staff Report & Addendum at p. 15

project-related activities could increase the types and volumes of contaminants the system may need to handle.²¹

These impacts, in combination with construction and/or operation of the AEC, will likely be significant.

Without a description of the future demolition of the AGS, the assumptions that Conditions of Certification will minimize the adverse impacts to less than significant are unsubstantiated.

Further, the alternatives analysis does not include alternatives that would meet the "purpose" of the proposed facility while reducing the adverse cumulative impacts.

b. Sea Level Rise

Further, I disagree that tsunami run-up and sea level rise impacts are adequately described and/or mitigated. It seems reasonable to assume that the combination of sea level rise and tsunami run-up will require mitigation, such as seawalls or other hard protection devices. These devices, unless properly designed and constructed, can fill wetlands and other habitats.

I disagree that sea level rise and tsunami runup, over the projected life of the proposed AEC, will not require protective devices that may cause adverse impacts to wetlands habitat.

9. Alternatives

I disagree that the scope of Alternatives to the proposed facility are adequate. As mentioned in the Opening Testimony of Bill Powers, on behalf of Los Cerritos Wetlands Land Trust, feasible alternatives exist. In my opinion, those feasible alternatives would both meet the stated purposes of the proposed AEC, as well as dramatically reduce adverse impacts from the proposed project

²¹ Ibid at p. 16