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March 13, 2009

DOCKET
07-AFC-6
DATE MAR 13 2009
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VIA HAND DELIVERY AND U.S. MAIL

Mr. Mike Monasmith, Siting Project Manager
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

Re: Carlsbad Energy Center Project (07-AFC-6)
Fire Code Compliance Table, CECP Fire/Emergency Site Access Routes Diagram, and Related Correspondence to the City of Carlsbad

Dear Mr. Monasmith:

Carlsbad Energy Center LLC submits the enclosed documents sent to the City of Carlsbad on Friday, March 13, 2009. Specifically, please find correspondence to Mr. Joe Garuba and Fire Marshal James Weigand, a Fire/Emergency Site Access Routes Diagram, and a Fire Code Table demonstrating Carlsbad Energy Center Project's compliance with the California State Fire Code and the City of Carlsbad's Municipal Code related to fire protection.

Should you have questions regarding any of these documents, please do not hesitate to contact our office.

Respectfully submitted,

Stoel Rives LLP

Kimberly J. Hellwig
Senior Paralegal

Enclosure
cc: See Attached Proof of Service

Portlnd3-1659857.1 0035434-00009

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Carlsbad Energy Center LLC

March 13, 2009

Mr. Joe Garuba
Municipal Projects Manager
City of Carlsbad
1200 Carlsbad Village Drive
Carlsbad, CA 92008

Mr. James Weigand
City Fire Marshal
City of Carlsbad
1635 Faraday Avenue
Carlsbad, CA 92008

REF: Carlsbad Energy Center Project (CECP) – Fire Code Compliance

Dear Mr. Garuba and Fire Marshal Weigand:

On behalf of Carlsbad Energy Center LLC, we thank you for meeting with us on January 26, 2009 to discuss the fire and emergency response requirements for the Carlsbad Energy Center Project (CECP). We agree with the City's priority for fire protection and support that priority by designing the CECP to meet the National Uniform Fire Code, the California Fire Code, and the City Municipal Code, and by providing fire and emergency access to CECP. This letter and associated attachments are intended to address comments from our January 26th meeting and subsequent written comments from Fire Chief Kevin Crawford in his March 10th letter, which has been docketed with the California Energy Commission (CEC). While we are in the preliminary design phase commensurate and appropriate to the level of detail required within the Application for Certification (AFC) process, we will assure you that the final approved design of the CECP will be compliant with applicable fire codes through the collaborative process with the CEC's Chief Building Official (CBO) and the Carlsbad Fire Department. Furthermore, the final design submittal will provide the necessary appropriate plan view and cross-section details.

As discussed in the September 2007 AFC, CECP is a 540 MW, natural gas-fired combined-cycle generating facility that is designed and equipped with state-of-the-art fire detection and fire protection systems. The CECP fire protection system will consist of wet pipe sprinkler systems, closed head (pressurized) dry pipe deluge systems, water mist local applications, and CO_2 or FM200 fire suppression agent for total flooding applications. The fire detection elements of the fire protection systems include fuel gas leak detectors, thermal rate compensated smoke detectors, and manual pull stations. These modern devices are digital which have quick response capabilities for responding to any fire potential. The systems Fire Alarm Control Panels (FACPs)

are capable of identifying the exact location of activated detector(s), and will activate automatically following release of extinguishing agents to put out fires and simultaneously shut down affected equipment. The CECP fire protection systems are modernized and improved as compared to the existing EPS systems, even though the existing EPS also meets all engineering standards and regulatory requirements for fire protection and emergency response.

A summary of the CECP compliance with the California Fire Code and City Municipal Code as it relates to fire and emergency access requirements is included in the attached table. As discussed during our meeting, the final design of CECP will incorporate the requirements of the National Uniform Fire Code, the California Fire Code and the City's Municipal Code.
In addition, the design of CECP also includes a new fire/emergency access route in addition to the two existing emergency access routes to the Encina Power Stations. The attached figure shows these three fire/emergency access routes that will allow emergency response equipment to access the CECP. Through the CEC CBO's detailed engineering and design review, the final design of CECP will be certified as meeting all applicable fire code requirements.

We look forward to continuing to work with the City on these and other important matters regarding CECP. If you have any questions or need any additional information, please contact me at (760) 710-2144.

Respectfully submitted,

Tim E. Hemig
Vice President
Carlsbad Energy Center LLC

Attachments
Table - CECP Fire Code Compliance
Figure - CECP Fire/Emergency Access Routes to Site

cc: Mike Monasmith, California Energy Commission
Kevin Crawford, City of Carlsbad Fire Chief
John McKinsey, Stoel Rives LLP
Robert Mason, CH2M Hill
CEC Dockets Office (07-AFC-6)

CARLSBAD ENERGY CENTER PROJECT (CECP) DESIGN ADHERENCE TO
CALIFORNIA STATE FIRE CODE
AND CITY OF CARLSBAD MUNICIPAL CODE REQUIREMENTS (FIRE PROTECTION)

DESIGN ELEMENT	CALIFORNIA FIRE CODE (Amended 2007)	CITY MUNICIPAL CODE STANDARD	CECP DESIGN BASIS
ACCESS ROAD WIDTH	CA Fire Code IBC 2006 modified 20 ft per CA Fire Code, Section 503.2.1	17.04.080 Section 503.2.1.1 added to City's Municipal Code to include minimum street width for public and private streets in fire hazard zones, which is not applicable to CECP	Figure 2.2-1 from the PEAR shows the access roads to CECP. The width of CECP onsite access roads shall comply with CA Fire Code and applicable City Municipal Code. Figure 2.1-1 from the PEAR has been used as the basis to show the three points of fire and emergency response access to CECP shall be provided, as follows: 1. Access from Cannon Road via Canon Court (public access easement) to CECP via a fire access road on an existing easement across an SDG&E parcel. 2. Access from Cannon Road through the SDG&E maintenance yard entrance located immediately west of the railroad crossing. This is an existing access to the Encina Power Station. 3. Access from Carlsbad Blvd through the main entrance to the Encina Power Station.

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DESIGN ELEMENT	CALIFORNIA FIRE CODE (Amended 2007)	CITY MUNICIPAL CODE STANDARD	CECP DESIGN BASIS
ACCESS ROAD GRADE	10% per Appendix D Section D103. Can be steeper with approval of Fire Chief.	17.04.120 Section 503.2.7 amended — Grade. Section 503.2.7 of the 2007 CA Fire Code is amended to read as follows: "The gradient for a fire apparatus access roadway shall not exceed 10.0% (5.7 degrees). The grade may be increased to a maximum of 15% (8.5 degrees) for approved lengths of access roadways, when all structures served by the access road are protected by automatic fire sprinkler systems. Cross slope shall not be greater than 2% for paved access roadways. Grades exceeding 10.0% (incline or decline) shall not be permitted without mitigation. Minimal mitigation shall be the installation of fire sprinkler systems and a surface of Portland cement concrete (PCC), with a deep broom finish perpendicular to the direction of travel, or equivalent, to enhance traction. The Fire Code Official may require additional mitigation measures where he deems appropriate. The angle of departure and angle of approach of a fire access roadway shall not exceed 12% (7 degrees) or as approved by the Fire Code Official."	The gradient of the CECP access roads shall comply with CA Fire Code and applicable City Municipal Code.
ACCESS VERTICAL CLEARANCE	CA Fire Code, Section 503.2.1 - Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).	Adopted CA Fire Code	Design of CECP, including overhead clearances and transmission lines shall meet CA Fire Code and applicable City Municipal Code requirements.

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DESIGN ELEMENT	CALIFORNIA FIRE CODE (Amended 2007)	CITY MUNICIPAL CODE STANDARD	CECP DESIGN BASIS
ACCESS EXTENT FROM BLDG.	CA Fire Code, Section D105.3 - Proximity to Building. At least one of the required access routes meeting this condition shall be located within a minimum of 15 ft (4572 mm) and a maximum of 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building. Per Section 503.1.1, fire access road shall extend to within 150 ft of the facility. Exceptions may be authorized if the building is equipped with automatic sprinkler system.	Adopted CA Fire Code	Design of CECP, including building access from fire access roads and associated fire hydrants shall comply with CA Fire Code and applicable City Municipal Code requirements. Design of CECP includes automatic fire control systems shall meet National Fire Code, CA Fire Code and applicable City Municipal Code requirements.
POINTS OF ACCESS	At least three points of access per CA Fire Code Appendix D Section D104.1. Appendix D refers to individual buildings not to the actual site.	Adopted CA Fire Code	Design of CECP, shall comply with point of access requires for buildings per the CA Fire Code and applicable City Municipal Code requirements.
TURN RADIUS	Per CA Fire Code, Section 503.2.4	17.04.110 Section 503.2.4 amended — Turning Radius. Section 503.2.4 of the 2007 CA Fire Code is amended to read as follows: "The inside turning radius for an access road shall be 28 feet or greater with a 5 foot back of curb clearance for bumper overhang. The outside turning radius for an access road shall be a minimum of 46 feet. Cal-Trans 407-E template is utilized."	Design of CECP, including associated fire access road turning radii shall comply with CA Fire Code and applicable City Municipal Code requirements.

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DESIGN ELEMENT	CALIFORNIA FIRE CODE (Amended 2007)	CITY MUNICIPAL CODE STANDARD	CECP DESIGN BASIS
DEAD END LENGTH	Per CA Fire Code, Section 503.2.4 150 ft without a turn around	Adopted CA Fire Code	Design of CECP, including lengths of associated plant grade fire access roads and berm grade perimeter roads shall comply with CA Fire Code and applicable City Municipal Code requirements.
TURN AROUND DESIGN AND LENGTH	CA Fire Code, Appendix D	Adopted CA Fire Code	Design of CECP, including turn around design/length shall comply with CA Fire Code and applicable City Municipal Code requirements.
HYDRANT SPACING	CA Fire Code, Appendix C and NFPA 850 Spacing = 300 ft	Adopted CA Fire Code	Design of CECP, including hydrant spacing shall comply with CA Fire Code and applicable City Municipal Code requirements.
FIRE FLOW REQUIREMENT	CA Fire Code, Appendix B; Section 508.3; or approved method	17.04.210 Section 508.3 amended—Fire flow. Section 508.3 of the 2007 CA Fire Code is amended to read as follows: "Fire flows shall be based on Appendix B of the 2007 California Fire Code. Consideration should be given to increasing the gallons per minute set forth in Appendix B to protect structures of extremely large square footage and for such reasons as: poor access roads; grade and canyon rims; hazardous brush; and response times greater than five minutes by a recognized fire department or fire suppression company.	The existing Encina Power Station fire protection system is tested routinely, including the portion of the system that serves the tank farm, and has adequate capacity. CECP's fire protection system shall comply with the CA Fire Code and applicable City Municipal Code requirements. Hazardous fire areas as defined in Appendix B of the 2007 California Fire Code do not

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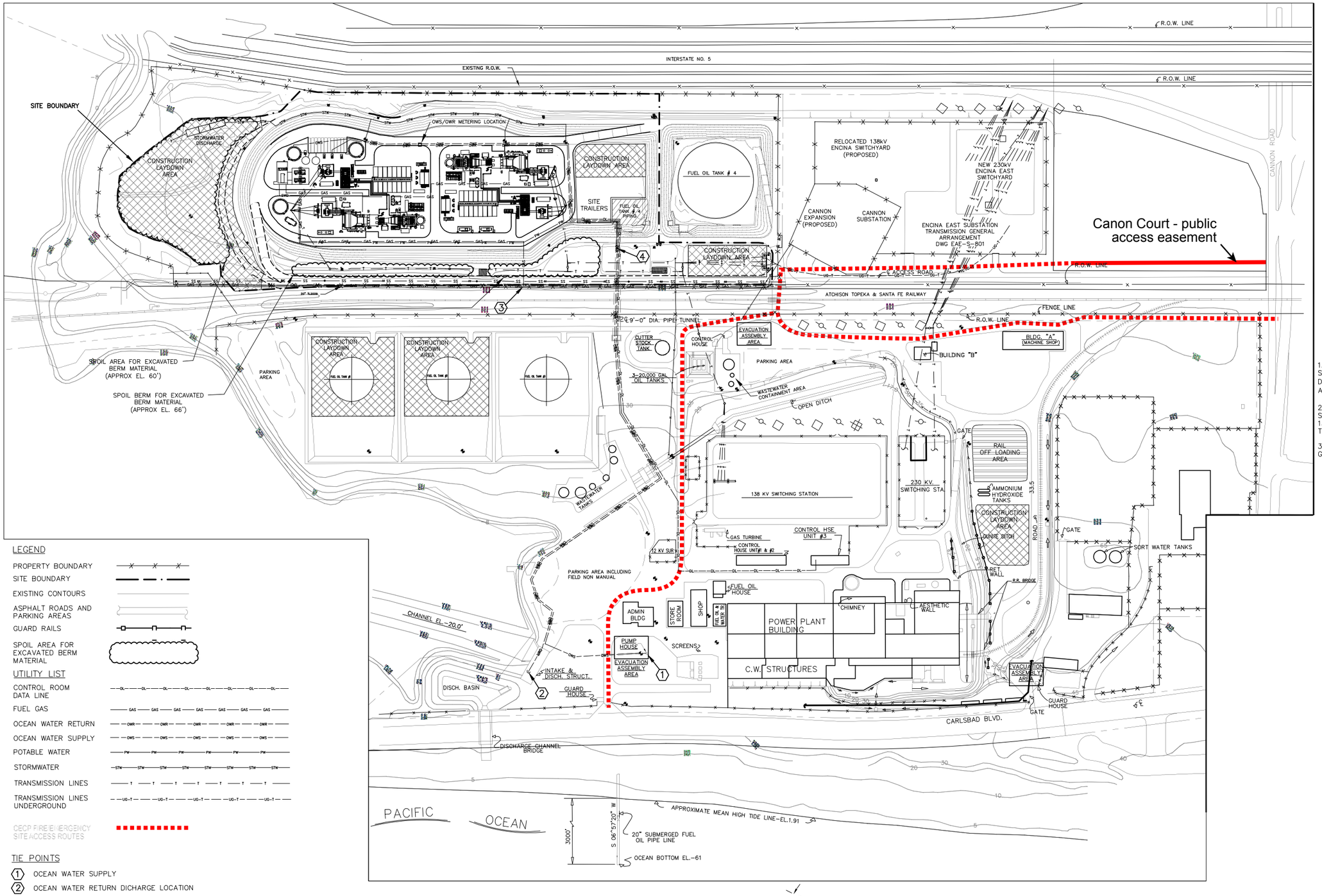
DESIGN ELEMENT	CALIFORNIA FIRE CODE (Amended 2007)	CITY MUNICIPAL CODE STANDARD	CECP DESIGN BASIS
FIRE FLOW REQUIREMENT (Continued)		In hazardous fire areas as defined in Appendix B, the main capacity for new subdivisions shall not be less than 2,500 gallons per minute, unless otherwise approved by the Fire Code Official. If fire flow increases are not feasible, the Fire Code Official may require alternative design standards such as: alternative types of construction providing a higher level of fire resistance; fuel break requirements which could include required irrigation; modified access road requirements; specified setback distances for building sites addressing canyon rim developments and hazardous brush areas; and other requirements authorized by the Carlsbad Municipal Code and as specified by the Fire Code Official."	apply as CECP is not a new subdivision and is not located in a hazardous brush area or canyon rim development.



LEGEND

- PROPERTY BOUNDARY
- SITE BOUNDARY
- EXISTING CONTOURS
- ASPHALT ROADS AND PARKING AREAS
- GUARD RAILS
- SPOIL AREA FOR EXCAVATED BERM MATERIAL

UTILITY LIST

- CONTROL ROOM DATA LINE
- FUEL GAS
- OCEAN WATER RETURN
- OCEAN WATER SUPPLY
- POTABLE WATER
- STORMWATER
- TRANSMISSION LINES
- TRANSMISSION LINES UNDERGROUND
- CECP FIRE/EMERGENCY SITE ACCESS ROUTES

TIE POINTS

1. OCEAN WATER SUPPLY
2. OCEAN WATER RETURN DICHARGE LOCATION
3. FUEL GAS
4. POTABLE WATER

NOTES

1. ELEVATIONS SHOWN ARE MEAN SEA LEVEL DATUM U.S.G.S. EQUAL ZERO DESIGN HIGHEST TIDE ELEVATIONS + 5.0'
2. REFERENCE DRAWING 1009751000-0-M-PP-001 FOR DETAILS OF THE POWER BLOCK SITE PLAN.
3. EXISTING SANITARY SEWER TIE IN RETAINED AT UNIT 4 & 5

REFERENCE DRAWINGS

1. EXISTING RECLAIM WATER PLAN SOURCE: CARLSBAD MUNICIPAL WATER DISTRICT, CMWD PROJECT NOS. (88-602) AND (92-406) SHEET 3 OF 17.
2. EXISTING CITY (POTABLE) WATER LINE SOURCE: CABRILLO POWER I LLC, PROJECT NO. 13-7292, DRAWING NO. M-661, SHEET 1 OF 1, TRACKING NO. R96B0389.DWG.
3. ENCINA EAST SUBSTATION TRANSMISSION GENERAL ARRANGEMENT DWG EXE-S-801

Source: Shaw Stone & Webster, Inc.

CECP FIRE/EMERGENCY SITE ACCESS ROUTES

CARLSBAD ENERGY CENTER PROJECT
CARLSBAD, CALIFORNIA

CH2MHILL

EY072007001SAC Fire_Access_Plan.ai 03/12/09 tdaus

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE CARLSBAD ENERGY CENTER PROJECT	**Docket No. 07-AFC-6** **PROOF OF SERVICE** **(Revised 2/18/2009)**

Carlsbad Energy Center Project – Fire Code Compliance Table, Diagram, and Related Correspondence to the City of Carlsbad

CALIFORNIA ENERGY COMMISSION
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DECLARATION OF SERVICE

I, Kimberly J. Hellwig, declare that on March 13, 2009, I deposited copies of the aforementioned document in the United State mail at 980 Ninth Street, Suite 1900, Sacramento, California 95814, with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, Title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.

Kimberly J. Hellwig