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September 23, 2014

VIA E-FILING

Carlsbad Energy Center Project Petition to Amend (07-AFC-06C)
Mike Monasmith, Project Manager
Joe Douglas, Compliance Project Manager
Paul Kramer – Hearing Officer
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512


Re: Petition to Remove Obsolete Facilities to Support Construction and Petition to Amend
the Carlsbad Energy Center Project (07-AFC-06C)
Responses to Data Request Set 2A (Nos. 59 - 66)

Dear Mr. Monasmith and Mr. Douglas:

On August 29, 2014, California Energy Commission staff filed Data Request Set 2A (Nos. 59 - 66) (TN 203012) (the "**Data Requests**") regarding Carlsbad Energy Center LLC's ("**Project Owner**") Petition to Remove Obsolete Facilities to Support Construction of the Carlsbad Energy Center Project (07-AFC-06C) ("**CECP**") and Petition to Amend the CECP. The enclosed document contains Project Owner's thorough responses to these Data Requests except Data Request 64, the report for which will follow under separate cover.

Please contact me if you have questions or would like to discuss these responses further.

Locke Lord LLP

By: 

John A. McKinsey
Attorneys for Carlsbad Energy Center LLC

JAM: awph

Enclosure

Carlsbad Energy Center Project Petition to Amend

(07-AFC-06C)

Data Response Set 2A (Responses to Data Requests 59 to 66)

Submitted to
California Energy Commission

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Carlsbad Energy Center LLC

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September 23, 2014

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Introduction

Attached are Carlsbad Energy Center LLC's (Project Owner) responses to the California Energy Commission (CEC) Data Request, Set 2A (numbers 59 through 66) regarding Waste Management for the Carlsbad Energy Center Project (07-AFC-06C) (CECP) Petition to Amend (PTA) . Any capitalized terms not defined in this Data Response Set 2A shall have the meanings given to them in the PTA.

The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as the CEC presented them and are keyed to the Data Request numbers.

New or revised graphics or tables are numbered in reference to the applicable Data Request number. For example, the first table used in response to Data Request 1 would be numbered Table DR1-1. The first figure used in response to Data Request 1 would be Figure DR1-1, and so on. Figures or tables from the CECP PTA that have been revised have "R1" following the original number, indicating revision 1.

Additional tables, figures, or documents submitted in response to a data request (for example, supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of each discipline-specific section and are not sequentially page-numbered consistently with the remainder of the document, though they may have their own internal page-numbering system.

Waste Management (59–66)

BACKGROUND: ENCINA POWER STATION (EPS) DEMOLITION

Page 2-44 of the PTA states, “Subsurface remediation of the EPS site is not included as part of the demolition activities to occur under the PTA, but maybe conducted at a later date for future redevelopment of the site.” The Project Owner would be required to comply with applicable regulations that require that the conditions at the site not harm humans or the environment. Accordingly, the Project Owner will be required to enter into the Voluntary Assistance Program with the San Diego County Department of Environmental Health (DEH). DEH staff provides project oversight and technical or environmental report evaluation on projects pertaining to properties contaminated with hazardous substances. DEH enforces Health & Safety Code §§ 101480-101490, Administration of Public Health, Released Waste. DEH serves as the administering agency on environmental cleanup projects in the county. Both the demolition of aboveground storage tanks (ASTs) 1, 2 and 4, and the demolition of the Encina Power Station will require new applications to be filed with the Voluntary Assistance Program. Staff would require the Project Owner to pay the necessary fees and comply with the permit requirements that would otherwise be issued by DEH (if it were not for the permitting authority of the Energy Commission), to mitigate potential impacts to human health and the environment.

DATA REQUEST

59. Please provide a schedule and description of the regulatory process between the Carlsbad Energy Center Project owner and the San Diego County Department of Environmental Health.

Response: The DEH has historically provided oversight of environmental assessment and remedial activities at the EPS facility. The CAL-EPA Site Designation Process allows one agency to act as the Administering Agency (HSC, section 25260 D) with the ability to issue a Certificate of Completion (HSC, section 25264). The DEH provides the Voluntary Assistance Program (VAP) for environmental oversight and closure reporting. Under the VAP process, the DEH will provide agency consultation, technical or environmental report evaluation, work plan and final report “concurrence,” and evaluation of human health and ecological risk assessment. As the Administering Agency the DEH has ability to issue “closure” letters or Certificates of Completion.

To enroll in the VAP process, EPS will file an application and pay fees to DEH. Within five working days after receipt of complete application, DEH will assign a case file number and a DEH project manager. Once a case number has been issued, work plans and reports may be filed with DEH. Depending on the type and complexity of the filing, the DEH will review documents within 30 to 60 days and either issue comments and/or concurrence on the documents.

A typical assessment and closure process would require the following:

- Work plan for assessment: 14 to 21 days
- DEH review: 30 days
- Field assessment: 14 to 21 days
- Laboratory analysis and data validation: 30 days
- Prepare assessment report: 15 to 30 days
- DEH review of assessment report: 30 days
- Prepare work plan for risk closure or remedial activities: 30 days
- DEH review of remedial work plan: 30 to 60 days, review of risk assessment: 60 days

- If risk assessment is acceptable to DEH, then Project Owner and/or Cabrillo Power I LLC would request from DEH a closure letter or Certificate of Completion
- If remediation is required, then the scope of remediation would drive the schedule of activities.

In general, the remedial process is estimated to last six to twelve months for specified Recognized Environmental Conditions (RECs), such as an aboveground storage tank or tanks, depending on risk evaluation and potential remedial solutions recommended. Closure of a facility or a series of RECs may require additional time based on the complexity of the remediation measures and/or the potential for long term monitoring. DEH may provide no further action determinations for specified REC. For example, DEH may indicate that assessment and/or remediation activities are complete for a subset of a larger area covered under a VAP to support further development activities that may be planned in the specified area.

Note that redevelopment implies that a site is or has been previously developed for a specific land use. The EPS facility is designated for “industrial land use.” The redevelopment process will be initiated at the city planning level to determine acceptable future land uses and entitlements at the redevelopment site. This City determination must be made before redevelopment starts and will influence the assessment and/or risk evaluation results and requisite level of remediation.

DATA REQUEST

60. Please explain how the project owner would demonstrate that human health, water resources, and the environment are adequately protected once the tanks and the Encina Power Station are demolished, without a subsurface site characterization and/or soil remediation immediately following demolition of these facilities.

Response: After the ASTs are removed to grade at the facility, engineering controls will be deployed to stabilize the area in the interim period between completion of above-grade demolition and below-grade assessment and remediation. Engineering controls will consist of a temporary liner system installed as a Best Management Practice (BMP) for storm water infiltration and runoff mitigation. The BMPs will be implemented per the attached drawing (Figure DR 60-1 Typical Detail – Temporary Tank Bottom Liner). Other potential remedial areas associated with the EPS main power block and ancillary equipment will be protected by leaving ground-level foundations in place. The DEH does not allow ground disturbance prior to DEH approval and characterization. Therefore, a subsurface site characterization appropriate for the future redevelopment and land use of the EPS property will be conducted immediately prior to a subsequent landowner’s future demolition of any of the ground level foundation.

In addition to the installation of engineering controls, the Conditions of Certification (COCs) in the CEC license provide requirements for development in that the Project Owner must implement during demolition and construction. The COCs WASTE-1, WASTE-3, and WASTE-4 (included) ensure that the presence of contaminated soil does not negatively affect the public. WASTE-1 requires that DEH will oversee the post-demolition soil corrective action plan (CAP). WASTE-3 requires that an experienced California Professional Engineer or Geologist be available for consultation if contaminated soil or groundwater is encountered. WASTE-4 requires the Professional Engineer or Geologist to inspect the site, determine the necessary characterization, and report to the DEH and CPM with appropriate findings and recommended remediation actions.

BACKGROUND: ABOVEGROUND STORAGE TANKS 1, 2, AND 4 DEMOLITION

In the April 29, 2014 Petition to Remove (PTR), Sections 1.1.3 and Section 2.1, the petitioner indicates that ASTs 1, 2, and 4 will be demolished and remediated in conjunction with ASTs 5, 6 and 7 (which were previously permitted as part of the licensed CECP Final Decision). The PTR states that the Project Owner will remove the walls and roofs of ASTs 1, 2, and 4, and remove associated piping and equipment for these tanks within the bermed areas of each tank (the piping would be cut/removed and capped at the soil berm).

The PTR also states that the oily sands will be removed from beneath all three ASTs, and the berm adjacent to AST 4 will be removed. The petition does not include an explanation or description of the subsurface remediation that will take place.

DATA REQUEST

61. Please provide an explanation of how the project owner would characterize the oily sands and soils below the three ASTs (1, 2, and 4).

Response: As discussed in Data Response 59 above, the Project Owner would follow the DEH VAP process for consultation, preparing work plans, and obtaining DEH approval of Project Owner's characterization work plan for the areas beneath the tanks. The Project Owner will include ASTs 1, 2, and 4 in the VAP application that will be filed with the DEH for ASTs 5, 6, and 7. The resulting assessment work plans and resulting remedial recommendations will follow the same planning process. In general, the initial characterization process will require soil sampling and analysis to depth, to determine complete horizontal and vertical delineation of potential characterization. Characterization requires testing at a minimum following the County of San Diego Site Assessment and Mitigation Program (SAM) manual. Soil analysis will comply with the analytical methods listed in the SAM manual. The SAM manual provides the framework for site characterization to determine the extent, concentration, and mass of contamination; to assess the human health and environmental risk resulting from the contamination; and to provide recommendations for any further investigation or remedial actions. This process is delineated in COC WASTE-1 for the Licensed Project, which requires the investigation and remediation of the tank bottoms in accordance with a DEH-approved CAP.

DATA REQUEST

62. Please provide an explanation of all activities the project owner would implement to remediate the contaminated area located beneath ASTs 1, 2, and 4.

Response: Soil below the engineered tank bottoms and areas that may have experienced leaks in the past could have soil contaminated with diesel or heavy fuel oil components. Project Owner will implement all remediation activities deemed necessary based on the advice of a Registered Professional Engineer or Geologist and DEH review and concurrence with such site characterization, to the extent permitted under the CEC license. The CEC license limits methods for soil remediation to offsite disposal, as set forth in Condition of Certification AQ-SC7. "AQ-SC7 The Project Owner shall not conduct any on-site remediation of contaminated soils at the project site, other than removal and transport. Verification: The Project Owner shall provide transportation and disposition records of the contaminated soil removal and offsite remediation completion demonstrating compliance with this condition as part of the MCR until the contaminated soil removal is complete." Actions associated with excavation and offsite disposal will include the following:

- Implement Health and Safety Plan
- Establish work hours commensurate with COC NOISE-6
- Survey and delineate remedial areas
- Delineate exclusion areas
- Develop staging areas and haul route(s)
- Implement BMPs (Dust, Noise, SWPPP) for work areas and haul route(s)
- Implement excavation, transportation, and disposal process
- Conduct regular environmental monitoring

- Obtain verification samples
- Reporting excavation quantities and verification sampling results to CEC monthly, and DEH periodically.
- Provide final remedial certification report to the DEH to confirm that the excavation achieved DEH-approved remediation goals.

BACKGROUND

Any unmitigated contamination or releases of hazardous substances that pose a risk to human health or environmental receptors would be considered significant by the Energy Commission staff. As indicated in the 2007 Carlsbad Energy Center Project Application for Certification, Section 5.14.3.1.1, several locations at the 95-acre Encina Power Station site could not be assessed because samples could not be collected from beneath existing structures. These inaccessible areas are under tanks, piping, the generation building, and other buildings, and remain as potential environmental conditions that should be addressed at decommissioning. A portion of the Encina Power Station is constructed below grade and an ongoing dewatering program is required to maintain operation of the facility. The Environmental Site Assessment, Phase II, from the 2007 AFC, indicated that there is possible historical contamination in the areas related to the Petition to Remove (PTR) and Petition to Amend (PTA).

DATA REQUEST

63. Once the Encina Power Station is demolished, what procedures would be implemented to ensure that historical areas of contamination would not pose a risk to human health or the environment? Please provide detailed information on proposed mitigation methods including, but not limited to, removal and disposal, in-situ remediation, surface barriers, monitoring wells, signage, and other related environmental safeguards.

Response: Project Owner plans to demolish and remove the existing power block (Units 1 through 5) and ancillary equipment to grade, leaving all foundations at and below plant-grade in place. Any equipment that can be removed from the EPS basement or vaulted areas will be removed, leaving the basement or vault structures in place. . Below-grade utility conduits, pipe trenches, and corridors will be sealed pending final assessment and future determination of below-grade demolition and remediation plans.

The below-grade structures that may accumulate storm water or groundwater seepage will require continued management under an individual industrial NPDES waste discharge permit. Industrial NPDES discharge permits require monitoring and testing as deemed necessary by the Regional Water Quality Control Board. This site will be subject to continued observation, monitoring, and reporting under the NPDES General Permit for Stormwater Discharges Associated with Industrial Activities (NPDES No. CAS000001).

The Encina Power Station will maintain appropriate security barriers and full time security patrols to prevent unauthorized entry into the former power block areas. Appropriate signage will be posted around potentially hazardous areas, open vaults, below grade basements, and future remedial areas to warn workers of proper entry requirements.

Periodic inspections should be performed to A) ensure that BMPs and stabilized areas have not been breached, and B) report any change in conditions that would warrant interim remedial actions to eliminate potential threats to human health or environment.

DATA REQUEST

64. Please provide a preliminary demolition plan identifying what activities would be required at the Encina Power Station site.

Response: A Preliminary Demolition Plan will be submitted separately as Attachment DR64-1, by September 27, 2014.

DATA REQUEST

65. Please describe how the underground structures and dewatering program will be maintained during the period between the time the site is stabilized in accordance with the PTA and PTR and final demolition after adoption of the Encina Redevelopment Plan.

Response: For the PTR, the remaining fuel oil tanks are being removed in preparation for the power plant construction and installation. No dewatering is planned for this part of the project, and any dewatering will be incorporated into the PTA power plant construction process. The existing storm water system supporting the other tank farm areas will remain in service.

Under the PTA, the existing underground structures at the EPS that support storm water and groundwater seepage conveyance will remain in place, and will continue to be monitored in accordance with existing NPDES discharge permits. As remediation methods for the EPS facility will not be determined until immediately before the future redevelopment of that site, dewatering plans have not been developed for it.

DATA REQUEST

66. Once the city of Carlsbad provides an approved Encina Redevelopment Plan, what is NRG's schedule for below-grade site characterization and/or remediation of the Encina Power Station site.

Response: Project Owner or a related entity will subscribe to the DEH Voluntary Assistance Program process to tailor the site assessment and subsurface characterization, and generate work plans to meet the objectives of the Encina Redevelopment Plan once it is finalized. The remediation goals will be to establish Human Health and Risk Assessment criteria to allow for the future redevelopment of the property. The characterization/remediation schedule is dependent on numerous variables associated with the particular future use of the property, potential contamination characterized in the site assessment, and required remediation. Project Owner anticipates a 2- to 3-year process to achieve DEH-approved closure or certification for the Encina Power Station site, exclusive of the amended CECP site which will be addressed under a separate VAP focused on the timely repurposing of tank farm at the eastern portion of the site as defined in the amended CECP.

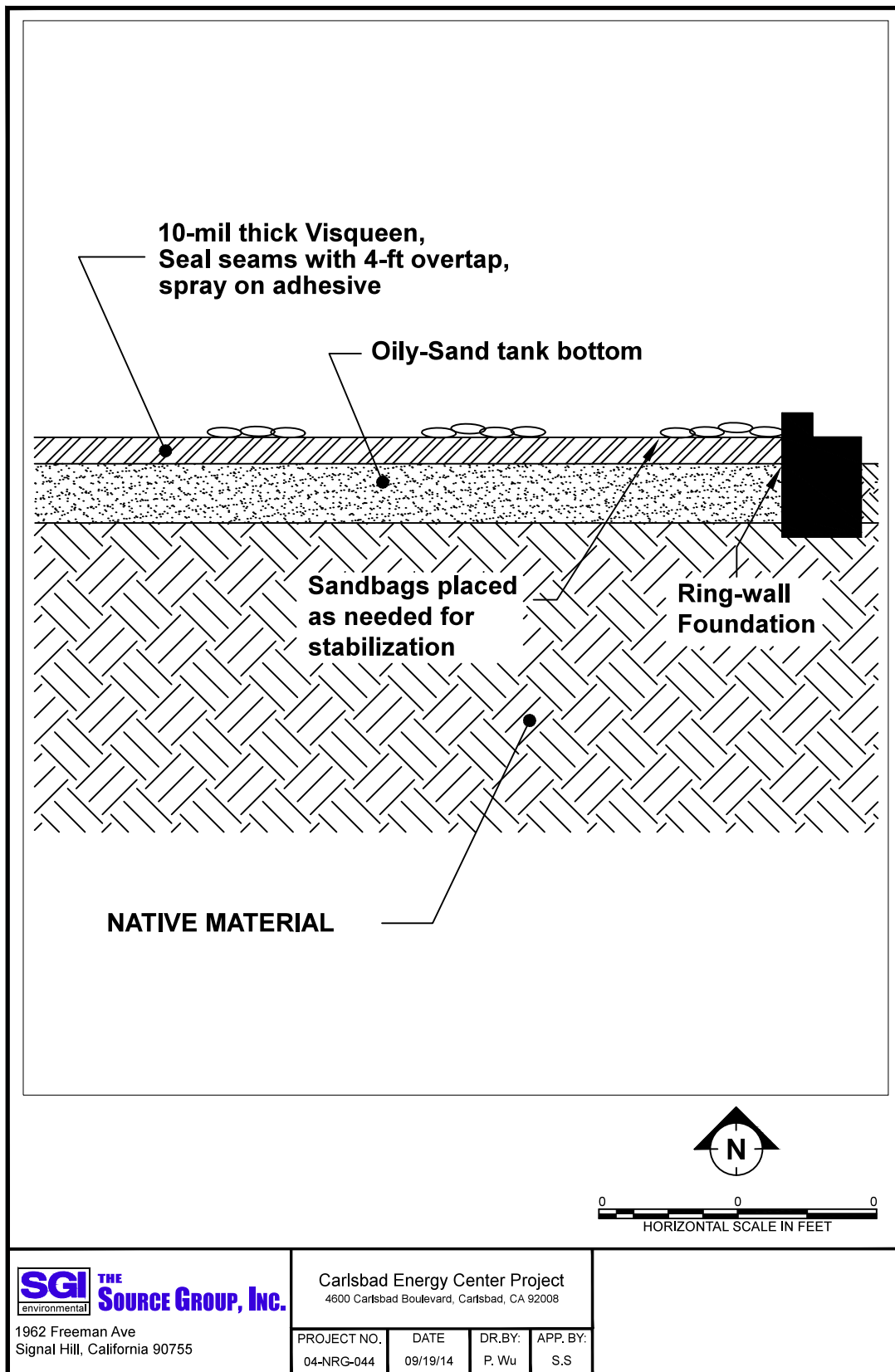


Figure DR60-1
Typical Detail – Temporary Tank Bottom Liner
 Amended Carlsbad Energy Center Project
 Carlsbad, California (07-AFC-06C)
 Petition to Amend