

From: "Cleaves, Ronald E LtCol USAF AFMC ASC Det 1/CC"
 <Ronald.Cleaves@edwards.af.mil>
To: <fmiller@energy.state.ca.us>
CC: "Harstad, Richard D Civ USAF AFMC ASC/ENV" <Richard.Harstad@WPAFB.AF.MIL...>
Date: 5/24/2010 7:55 PM
Subject: Letter to the CEC re: Palmdale Hybrid Power Plant
Attachments: 100521 - Response to CEC re PHPP.pdf

Ms. Felicia Miller,

I have attached our response in regard to the Palmdale Hybrid Power Plant. This is an Air Force coordinated response with our leadership at Wright-Patterson AFB. We do not foresee any negative impacts to Air Force Plant 42 in regard to the construction of the Palmdale Hybrid Power Plant. We have provided comments on the Avenue M Earthen Berm, Infiltration Basins, Development Setbacks from AFP 42, Security Cameras, Electrical Transmission Lines, Visible and Thermal Plumes, and height restrictions for the Power Plant Exhaust Stacks. Please be advised that we are continuing to review the project with respect to potential flight restrictions due to the solar mirror arrays and our comments on that matter will be provided in forthcoming responses.

Note: Should any changes be made to the above issues/purposes, the subject Conceptual Site Plan, the height or location of above-ground linear infrastructure, the associated studies/reports/analysis, or the proposed mitigations, we would request the opportunity to review and comment once again.

V/R

Ron

Ronald E. Cleaves, Lt Col, USAF

Commander ASC Det 1 Air Force Plant 42

(661)272-6770 wk; (661) 816-0650 cell; 661-272-6702 fax

DOCKET	
08-AFC-9	
DATE	<u>MAY 24 2010</u>
RECD.	<u>MAY 25 2010</u>



DEPARTMENT OF THE AIR FORCE
DETACHMENT 1, AERONAUTICAL SYSTEMS CENTER (AFMC)
PRODUCTION FLIGHT TEST INSTALLATION, AF PLANT 42
2503 EAST AVE P, PALMDALE CA 93550-2196

21 May 2010

MEMORANDUM FOR: CA ENERGY COMMISSION, DOCKET NO. 08-AFC-9
ATTN: MS. FELICIA MILLER, PROJECT MANAGER
1516 NINTH STREET
SACRAMENTO, CA 95814

FROM: ASC DET 1/CC

SUBJECT: Palmdale Hybrid Power Plant – Initial Comments on AFC Conceptual Site Plan

1. We have received your request to review the subject Conceptual Site Plan, Drawing No. 2007-021-CM-500, Revision D, dated 3-11-10 (attached), and have carefully reviewed it with respect to the Avenue M Earthen Berm, the Infiltration Basins, Development Setbacks, Security Cameras, Electrical Transmission Lines, Visible/Thermal Plumes and Power Plant Exhaust Stacks. The following comments are provided for your consideration.
2. Avenue M Earthen Berm: We understand the purpose of the berm (8' min.) is to mitigate the visual impacts to the north of the site, and that the berm will be landscaped with desert vegetation. We assume that dust and debris mitigation will be required on the berm (before, during and after construction). Other than the voluntary 20 feet setback from Plant 42 property line (noted herein), we take no exception to the berm as presented, and foresee no negative impacts to Air Force Plant 42 with dust and debris mitigation.
3. Infiltration Basins: We understand the purpose of the infiltration basins is to mitigate the stormwater runoff impacts from the site, that the basins will percolate/evaporate storm water runoff from the power plant property within 48 hours, that measures will be taken to ensure that the basins do not attract migratory waterfowl, and that there will be no connection to Air Force Plant 42 property. We assume that dust, debris and migratory waterfowl mitigation, will be required for the infiltration basins (before, during and after construction). We take no exception to the infiltration basins as presented, and foresee no negative impacts to Air Force Plant 42 with dust, debris, and migratory waterfowl mitigation.
4. Development Setbacks from Plant 42: Pursuant to discussions with the City of Palmdale, and as validated on the subject site plan, the site is designed to provide a development setback of 20 feet upon the power plant along the east and south boundaries of the site, adjoining Plant 42. The primary purpose of the 20 feet setback is to maintain a security standoff distance from Plant 42 property line, and that this setback will continue in perpetuity through a deed restriction or other legal mechanism on the power plant property. Other than the noted setback perpetuation, we concur with the setback as presented, and foresee no negative impacts to Air Force Plant 42.
5. Security Cameras: The City of Palmdale recently notified us that cameras are contemplated within the site and along the perimeter as a potential security measure. We would prefer that other security measures be deployed along the south and east perimeter in-lieu of cameras, but if a camera system is deemed essential to power plant security, we request consideration of Plant 42 national security implications in the design of that system (locations, view angles, sight lines, etc.) and the opportunity to review and comment on that system prior to placement of any cameras. It should be noted that the City of

Palmdale has verbally agreed to obtain Plant 42 review and concurrence of any camera system prior to its design and deployment along or near the south and east boundaries of the power plant site.

6. Electrical Transmission Lines: We have reviewed the Preferred Electrical Transmission Line Route (Preferred Route) and the three (3) Alternative Electrical Transmission Line Routes, developed by the City of Palmdale for the application. Plant 42's Class B military airport airspace is governed by Air Force Runway Airspace and Imaginary Surfaces standards, found in Figure 3-15 of Unified Facilities Criteria (UFC) 3-26-01, which limit the maximum height of structures within military airport airspace through several different horizontal and sloped imaginary surfaces (see attached).

- a. Preferred Route: Along Avenue L, near 60th Street East, the poles are approximately 12,000 feet from the end of Plant 42 Runway 22 (Approach End - north end of Runway 04-22) within Plant 42 Accident Potential Zone II (APZ II). Pursuant to Figure 3-15 of UFC 3-26-01, these poles are within Plant 42's military airport airspace. It is our understanding that the City of Palmdale intends to restrict all poles, within Plant 42's military airport airspace, to single pole structures no greater than 120 feet in height; in any case, these poles would have to be restricted to a height of 240 feet above the runway surface elevation of 2543 MSL at the most critical locations. While there are inherent risks with any above ground structures located within airport flight paths, this preferred route poses the least risk amongst all the potential routes identified; we therefore take no exception to the pole locations and heights as presented, and foresee no negative impacts to Air Force Plant 42.
- b. Alternative Route 1: Along 10th Street West, near Avenue N, the poles are approximately 10,100 feet from the end of Plant 42 Runway 07 (Approach End - west end of Runway 07-25) within Plant 42 Accident Potential Zone II (APZ II). Pursuant to Figure 3-15 of UFC 3-26-01, these poles are within Plant 42's military airport airspace. It is our understanding that the City of Palmdale intends to restrict all poles, within Plant 42's military airport airspace, to single pole structures no greater than 120 feet in height; in any case, these poles would have to be restricted to a height of 198 feet above the runway surface elevation of 2543 MSL at the most critical locations. While there are inherent risks with any above ground structures located within airport flight paths, this alternative route poses the least risks amongst the alternative routes identified; we therefore take no exception to the pole locations and heights as presented, and foresee no negative impacts to Air Force Plant 42.
- c. Alternative Route 2: Along Division Street, near Avenue N, the poles are approximately 4,900 feet from the end of Plant 42 Runway 07 (Approach End - west end of Runway 07-25) within Plant 42 Accident Potential Zone I (APZ I). Pursuant to Figure 3-15 of UFC 3-26-01, these poles are within Plant 42's military airport airspace. It is our understanding that the City of Palmdale intends to restrict all poles, within Plant 42's military airport airspace, to single pole structures no greater than 120 feet in height, and that the system along Division Street within the military airport airspace would be undergrounded, thereby eliminating the potential conflicts to the airport; if the transmission lines are not undergrounded, these poles would have to be restricted to a height of 94 feet above the runway surface elevation of 2543 MSL at the most critical locations. While there are inherent risks with any above ground structures located within airport flight paths, this alternative route, if not undergrounded, would pose a substantially greater risk than Alternative Route 1.
- d. Alternative Route 3: Along Sierra Highway, near Avenue N, the poles are approximately 3,600 feet from Plant 42 Runway 07 Approach End (west end of Runway 07-25) within Plant 42 Accident Potential Zone I (APZ I). Pursuant to Figure 3-15 of UFC 3-26-01, these poles are within Plant 42's military airport airspace. It is our understanding that the City of Palmdale

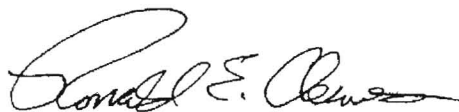
intends to restrict all poles, within Plant 42's military airport airspace, to single pole structures no greater than 120 feet in height, and that the system along Sierra Highway within the military airport airspace would be undergrounded, thereby eliminating the potential conflicts to the airport; if the transmission lines are not undergrounded, these poles would have to be restricted to a height of 68 feet above the runway elevation of 2543 MSL at the most critical locations. While there are inherent risks with any above ground structures located within airport flight paths, this alternative route, if not undergrounded, would pose a greater risk than Alternative Route 2.

7. Visible and Thermal Plumes: We understand that there will be occasional visible plumes from the cooling tower exhausts as well as continuous invisible thermal plumes from the turbine engine/heat recovery steam generator (HRSG) exhausts. We understand that standard pollutant mitigation will be provided. We take no exception to the potential plumes of either the cooling tower exhausts or the HRSG exhausts as presented in the plume analyses, and foresee no negative impacts to Air Force Plant 42.

8. Power Plant Exhaust Stacks: The nearest runway to the site is Plant 42 Runway 07-25, and it is our understanding that the exhaust stack structure nearest to that runway is one of the HSRG exhausts, which is approximately 3,200 feet to the north of the centerline of the subject runway. Based on the subject offset distance, the nearest HSRG exhaust stack is restricted to a height of 150 feet above the runway surface elevation of 2543 MSL, as it falls under the control of the Inner Horizontal Surface found in Figure 3-15 of UFC 3-260-01. It is our understanding that the City of Palmdale plans to limit the height of any stack to 140 feet above the final finished grade of the site (planned for elevation 2517 MSL).

9. Should any changes be made to the above issues/purposes, the subject Conceptual Site Plan, the height or location of above-ground linear infrastructure, the associated studies/reports/analysis, or the proposed mitigations, we would request the opportunity to review and comment once again. Please be advised that we are continuing to review the project with respect to potential flight restrictions due to the solar mirror arrays, and our comments on that matter will be provided in forthcoming responses.

10. Further questions should be directed to Mr. Tim Hughes at 661-272-6759.



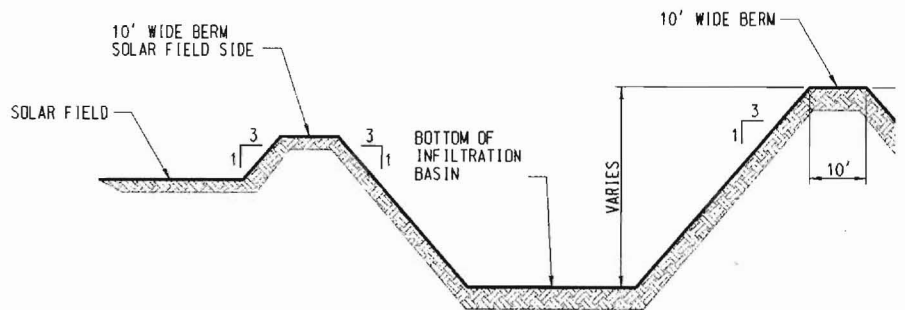
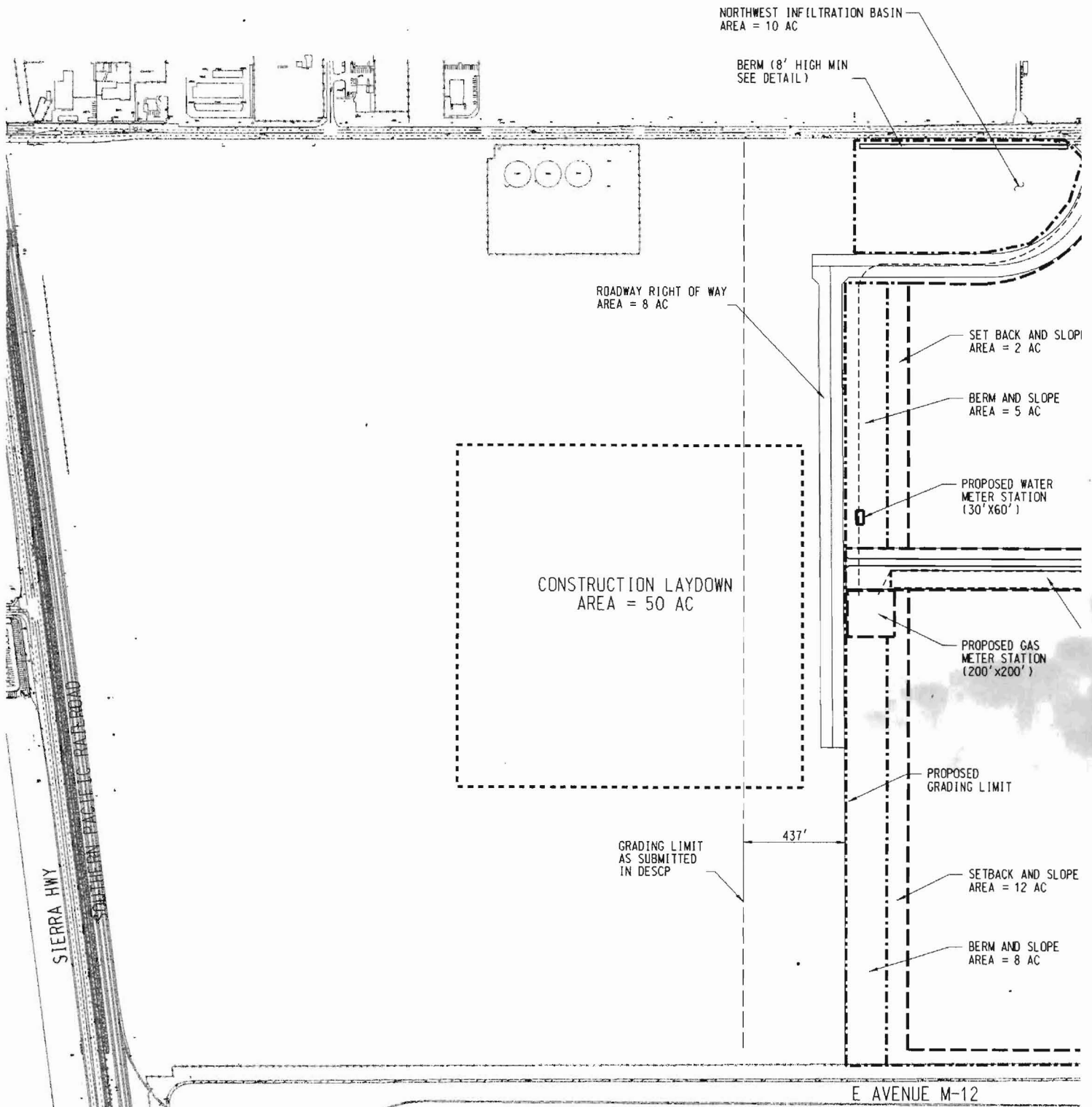
RONALD CLEAVES, Lt Col, USAF
Commander

Attachment:

Conceptual Site Plan, Drawing No. 2007-021-CM-500, Revision D, dated 3-11-10
Figure 3-15, UFC 3-260-01, page 50, 17 November 2008

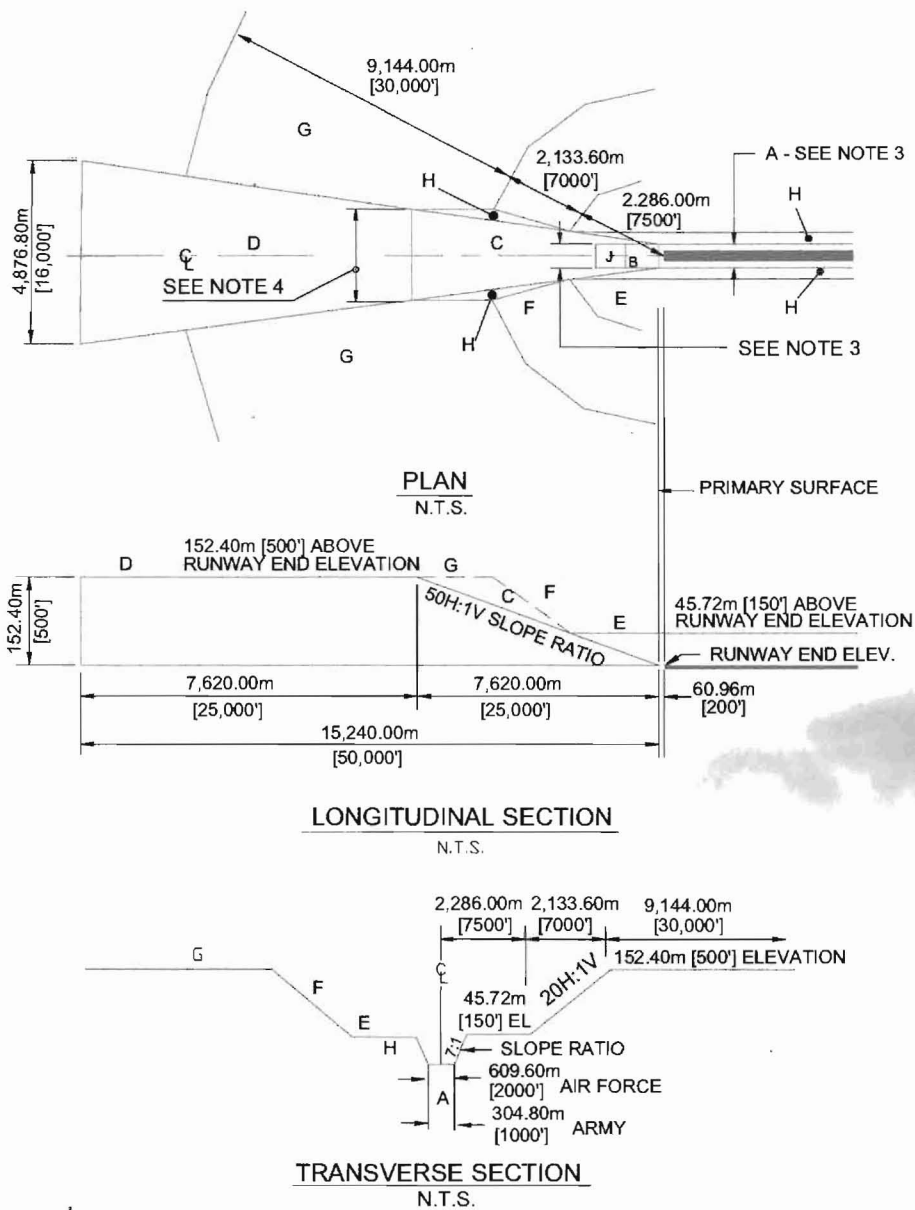
cc:

Richard Harstad, Director, 77 AESW/EE
Bill Wells, AFMCLO/JAK
Jared Scott, Chief, 77 AESW/EEP
Surendra Joshi, Chief, 77 AESW/EEP
Stephen H. Williams, City Manager, City of Palmdale
Laurie Lile, Assistant City Manager, City of Palmdale
Thomas M. Barnett, Executive Vice President, Inland Energy



SECTION X-X BERM ALONG AVENUE M AND WEST OF S
SCALE: NTS

Figure 3-15. Class B Army and Air Force Runway Airspace Plan and Profile
Runway Imaginary Surfaces



LEGEND

- A PRIMARY SURFACE
- B CLEAR ZONE SURFACE
- C APPROACH-DEPARTURE CLEARANCE SURFACE (SLOPE)
- D APPROACH-DEPARTURE CLEARANCE SURFACE (HORIZONTAL)
- E INNER HORIZONTAL SURFACE
- F CONICAL SURFACE
- G OUTER HORIZONTAL SURFACE
- H TRANSITIONAL SURFACE
- I NOT USED
- J ACCIDENT POTENTIAL ZONE (APZ)

NOTES

1. DATUM ELEVATION FOR:
 - a. SURFACES D, E, F AND G ARE THE ESTABLISHED AIRFIELD ELEVATION.
 - b. SURFACE C IS THE RUNWAY CENTERLINE ELEVATION AT THE THRESHOLD.
 - c. SURFACE H VARIES AT EACH POINT ALONG THE RUNWAY CENTERLINE. SEE TABLE 3.7.
2. THE SURFACES SHOWN ON THE PLAN ARE FOR THE CASE OF A LEVEL RUNWAY.
3. 304.8m [1,000'] FOR ARMY AND 609.6m [2,000'] FOR AIR FORCE.
4. 2,590.8m [8,500'] FOR ARMY AND 2,743.2m [9,000'] FOR AIR FORCE.