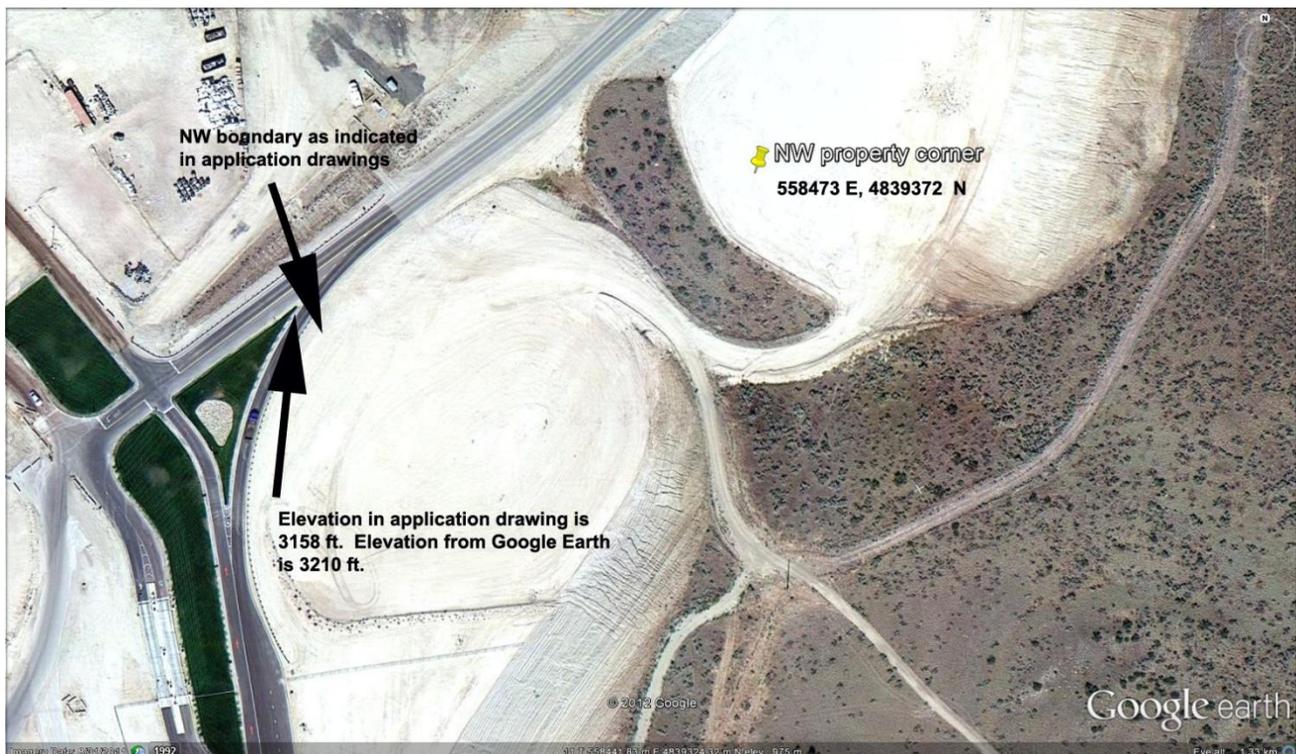


## Dynamis Energy Modeling Discussion Issues—July 3, 2012

- 1) The coordinate system used to establish elevations for receptors is not consistent with the coordinate system used for the site boundary and the base elevation. The coordinates and elevations of the facility boundary, building corners, and emissions sources must be made to match the NAD 83 datum used with the National Elevation Dataset (NED). Once this is accomplished, all modeling must be redone.

NED data are in the NAD83 datum, which is nearly identical to the WGS84 datum used with Google Earth. DEQ checked the site layout by overlaying the modeled domain with a Google Earth map. The actual location of the NW corner of property leased by Dynamis is 145 meters west southwest of where it was modeled. Therefore, the UTM coordinates of the property boundary, building corners, and emissions sources must be corrected. This observation is supported by examining the elevation of the modeled receptor closest to the NW property boundary. The elevation in the modeling file is 983.15 m (3226 ft) and the elevation of this UTM location in Google Earth is 984 m. The elevation of the NW property boundary as per the submitted drawings is 3156 ft (962 m).

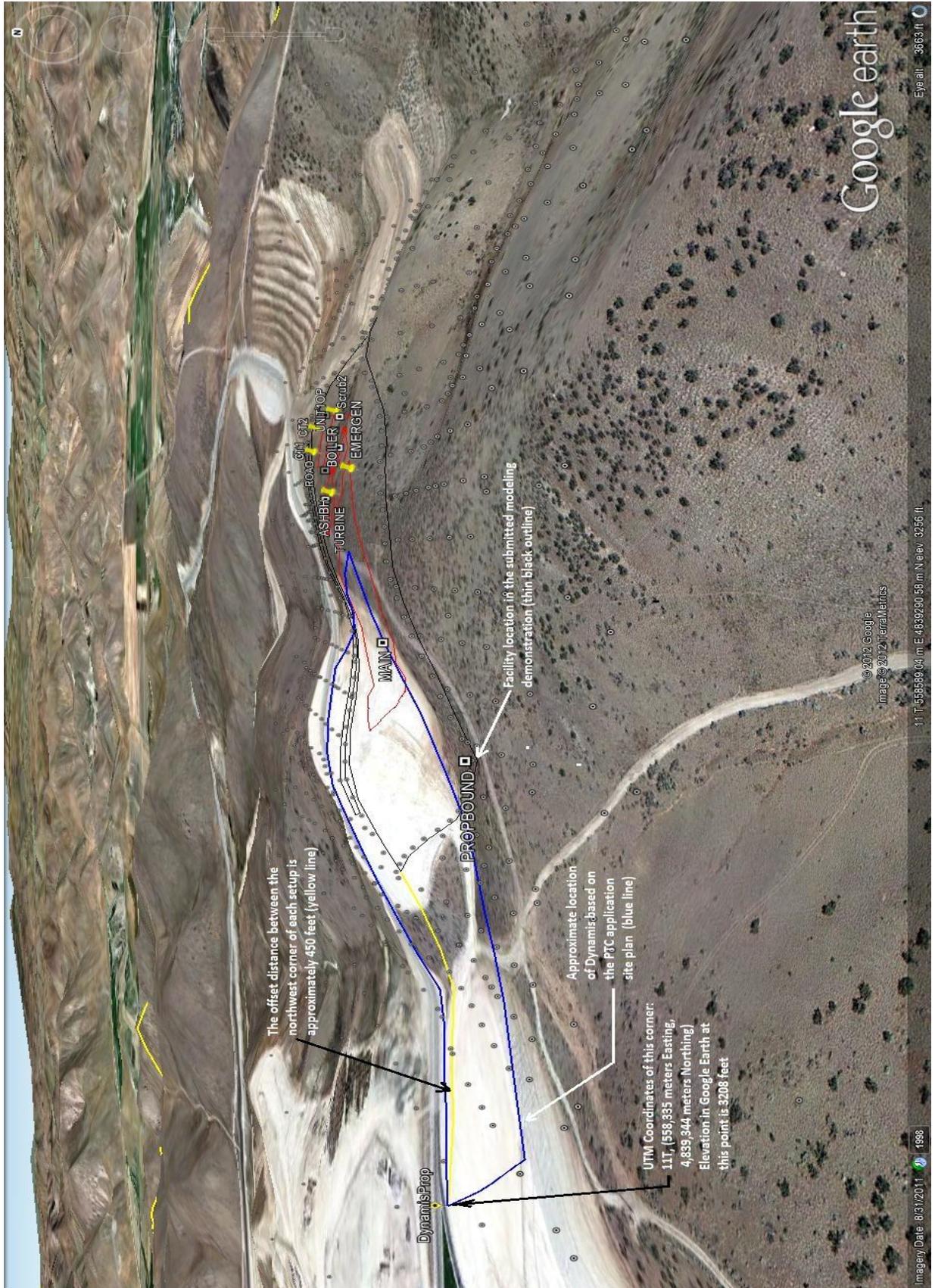
DEQ also checked the consistency of elevations of receptors, buildings, and emissions sources. The elevation of the interior of the road intersection immediately north of the NW property boundary was used to check elevations. The submitted site layout drawings indicate the elevation of this point is approximately 3158 ft, while on Google Earth the same location has an elevation of 3210 ft. This is a difference of 52 ft. This indicates that the site base elevation must be increased by 52 feet.



An approximation of the location and extents of the proposed Dynamis facility is shown below.



A 3 dimensional view of the site looking due north in Google Earth is shown below. Note that the facility will be placed on a plot of land that has been graded to 3175 feet. The following diagram is intended to show that differences in the surrounding terrain, and thus, differences in both receptor elevation and location, may alter ambient impacts.





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- 2) Nickel emission rates: UNITPEAK was modeled at 1.5E-03 lb/hr. The emissions inventory spreadsheet places UNITPEAK emissions at 1.51E-02 lb/hr.
  
- 3) Two levels of operation for the Dynamis facility were performed to support the proposed project. Average hourly operation during the peak period of 23.75 as-received tons per hour from 7 am to 11 pm and 3.5 as-received tons per hour from 11 pm to 7 am during each day. DEQ's understanding of this modeling demonstration is that the following conditions have been met and that the application that Dynamis has certified as true, accurate, and complete per Section 123 of the Idaho Air Rules incorporates the following:
  - Dynamis has modeled the maximum hourly emission rates for the project using conservative exhaust parameters for the maximum requested level of operations intended to be included in the PTC.
  - Ambient impacts under any load operations below what has been modeled and submitted to DEQ will not exceed any of the design concentrations for any air pollutant in those submitted analyses.

Additional modeling scenarios must be run if different levels of operation greater or less than already modeled are requested for the facility.

- 4) The ash baghouse was modeled with a vertical, uninterrupted flow stack with a 55 feet (ft) release height and a 1.5 ft equivalent diameter. The Donaldson Filtration Solutions documentation and drawing indicates the Model DFO 3-24 baghouse is 12.3 feet high from the base to the top of the unit. The design drawing does not depict a stack with a release height of 55 ft above grade with an equivalent diameter of 1.5 ft. Confirm that the exhaust stack for the ash baghouse will be vertically oriented and not horizontal or equipped with a raincap or downturned outlet and this stack will terminate at a height of 55 ft above grade.