

# **Niland Gas Turbine Plant**

## **Niland Substation - Phase II Environmental Site Assessment**

### **1.0 - PROJECT BACKGROUND**

The Imperial Irrigation District's (IID) Niland Substation (Substation) is located on the southwestern corner of the IID-owned 160-acre property (Property), is rectangular-shaped and approximately 1,000 feet wide and 1,500 feet long. The existing Substation was developed in 1954 and currently houses electrical transformers, breakers, switches and steel structures as part of a number of other appurtenances that make up the subject facility. As a part of Data Response #25, Applicant has prepared this limited Phase II scope of work to address the potential for historic contamination from old transformers, in the form of PCB-containing (polychlorinated biphenyls) oils.

The ground in the area of the Substation is primarily flat and unpaved with a gentle slope to the southwest. According to a Geotechnical Investigation completed by Geotechnics, Inc. (Geotechnics) in February 2006, the shallow subsurface soils in the general area of the Substation consist of well-graded, fine to coarse, dry to moist, very loose sand in the upper 1 foot underlain by dark yellowish brown, moist, hard, fat clay with high plasticity and trace of silt. No groundwater was reportedly encountered within 91 feet of the surface in any of the 18 exploration points conducted in the vicinity of the Project Site by Geotechnics. However, it is noted that perched groundwater could develop due to changes in site drainage, irrigation, or antecedent rainfall.

The Applicant acknowledges that the presence of electrical transformers within the Substation dating back as far as 1954 could have potentially contained PCB-containing oils. It is known that the Project tie-in to the existing Substation will likely require some amount of ground disturbance to facilitate the installation of supporting structures for electrical components. It is important to note that only one transformer is located in close proximity to the intended work. Therefore, the following scope of work is designed to evaluate these areas for the potential that PCBs may be present in shallow soils.

### **2.0 – PROPOSED SCOPE OF WORK**

Based on review of preliminary construction drawings, approximately eight supporting piers will be installed within the Substation with maximum projected foundation depths of approximately 10 to 12 feet below existing ground surface. The purpose of the piers will be to support the new transmission lines and related components that originate in the generation switchyard. A new, approximately 5-foot by 5-foot by 1-foot deep concrete pad will also be included in the proposed construction. The scope of work, as outlined below, is divided into individual tasks related to field mobilization and assessments at each of the locations where ground disturbance is projected to occur.

#### **Task 1 – Field Mobilization**

Task 1 elements include the following:

- Obtain all of the required permits (if applicable) to conduct the sampling effort
- Prepare all required health and safety plans
- Conduct underground utility locating and mapping and mark the presence of all underground utilities in and around the areas where subsurface sampling will take place.

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As part of this effort, IID personnel will be contacted to inquire about the presence of underground utility drawings to be reviewed in conjunction with other underground utility mapping and markup

### **Task 2 – Shallow Subsurface Sampling**

Subsurface sampling will be conducted at up to six locations where the pier structures are proposed to be located. Additional sampling will be conducted at up to four locations in the “footprint” area where the concrete pad is proposed.

All sampling will be performed using manual hand-auger equipment and will be limited to the upper 5 feet of subsurface soils. Although the piers may reach a depth of up to 10 to 12 feet, depending upon soil conditions, a five-foot depth for the investigation of PCBs is considered adequate due to the less mobile nature of PCB-containing oil. Samples will be collected by extracting representative materials from the tip of the hand auger. At each exploration point, samples will be obtained from within the upper 6 inches of ground surface, and at approximately 2 and 5 feet below ground, depending on conditions encountered during the exploratory excavations. Based on recent geotechnical investigations conducted by Geotechnics, it is anticipated that subsurface conditions will allow penetration of a manual hand auger to the proposed depths with relative ease and without the use of pneumatic or hydraulic drill rigs.

All samples will be collected inside 8-ounce glass jars sealed with Teflon®-coated caps, kept inside an ice chest cooled to 4° C, and transported to a state-certified analytical laboratory for analysis as specified under Task 3 below.

### **Task 3 – Sample Analysis for PCBs**

A state-certified and EPA-accredited laboratory will analyze the soil samples collected under Task 2 for PCBs by EPA Method 8082.

### **Task 4 – Report Preparation**

Upon receipt of analytical laboratory test results, the data will be tabulated and evaluated for each area of concern. A technical report will be prepared, which includes maps, figures, and tables showing the sampling locations and presenting the laboratory data. The report will include the findings, conclusions, and pertinent recommendations.

## **3.0 – PROJECT SCHEDULE**

It is anticipated that, depending on ground conditions and accessibility at the Project Site, the field portion of the proposed scope of work will be completed within a two-day period. This will include reviewing underground utility drawings that IID may provide, along with locating the underground utilities and mark-up in the areas specific to the proposed investigation.

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Laboratory testing (normal turnaround time) would be completed within approximately 10 days following receipt by the laboratory.

The ensuing data evaluations and the preparation of the report are expected to take approximately two weeks from the date the laboratory data are published.