



## **Request For Proposal No. 6478**

Kern Power Plant (KPP) Remaining Demolition of Structures  
2401 Coffee Road, Bakersfield, CA

# **Ordnance Assessment and Disposal Plan**

**February 24, 2014**

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License #78547

**PROPRIETARY - COMPETITION SENSITIVE – SUBJECT TO CONFIDENTIALITY AGREEMENTS**

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# Prepared by: Silverado Contractors, Inc.

## 12.0) Ordnance Assessment Plan

The ordnance assessment consists of closely following the JSA for the boiler dismantlement. The JSA will state that extreme caution and diligence is necessary to identify any unexploded ordnance. The operators have been trained in the identification of ordnance and have prior experience in cleaning up post implosion projects where the prospect of encountering unexploded ordnance was present. Upon project startup, operator training will be renewed and documented. Before beginning debris removal, Silverado shall take the technical data sheets of each of the explosives brought to the site by the blasting contractor(s), and instruct their personnel/equipment operators to “look” for those materials continuously during the piece meal removal of debris from each of the boiler debris pile locations. For worker protection, Silverado will take the additional step of reinforcing the safety glass in the windshields of its mechanical shear equipment with ballistic glass, to help prevent injury if the sheers should contact any explosives not visible to the operator. Further still, Silverado will minimize the use of cutting torches in areas that cannot be visibly inspected for possible explosives in advance of the cutting, so as to limit accidentally exposing explosives to heat or fire. Silverado shall use water before starting debris removal and periodically, as necessary, to wash the dust off debris being approached to improve the likelihood that their equipment operators would recognize the color of the explosives products reflected in the color photos on the technical data sheets for such products.

Silverado’s operators should start at the outermost landing zone of debris from the top of the boiler and along the sides to remove easily isolated extended catwalks/peripheral materials based on what is “fully visible” to the operator. Silverado shall then wash down the dust on the next level of debris to improve visibility of possible explosives in the debris pile before its equipment operator uses a mechanical shear to segment those structural elements which the shear is capable of handling. All care shall be taken by Silverado’s operators not to disturb portions of the debris pile which are not visible to the operator during this layer-by-layer debris removal process.

In concert with PGE legal counsel and technical forensic consultants, Exponent, Silverado’s operators shall avoid disturbing the stubs of the columns coming out of foundations at grade and the fallen pieces of columns that were isolated by linear shaped explosive charges. Those sections of isolated columns are defined by cuts that are “plated with copper” from the shaped charge detonation. Once the dust has been sprayed down by Silverado laborers on a staged basis, those copper-plated cuts will become easily recognizable. Where shaped charge cuts are not perfectly clean cuts, Silverado should take care to preserve and not disturb any small pieces of column flange or web at the explosives placement points “as they lie” so that Exponent can photographically document and map the location and relative disposition of same to each of the column stubs.

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Silverado has retained Controlled Demolition, Inc. (“CDI”) of Maryland as the licensed blaster for this project, and CDI will perform any of the required assessment of the explosives if found. If any object suspected of being unexploded ordnance is found, CDI, at their election, shall provide an on-site blaster or mobilize a local licensed blasting contractor; the process for handling is as follows:

Step 1: Identification:

Based on the information available to date, there are four (4) likely types of explosives that could be found in the debris pile. They are:

1. Linear Shaped Charges
2. Extra Gelatin Dynamite
3. Detonating Cord
4. Non-Electric Detonators

A Technical Data Sheet for each of the above is attached. These data sheets will be part of the JHA, and reviewed with the workers prior to start of work. In addition, during daily tailboard safety briefings the workers will be shown photographs of the types of explosive materials used on the project by the prior blasting contractor which they are to be on the lookout for.

If anything suspected of being the above items is found, the work will be stopped, the area barricaded off and CDI immediately contacted. A specific action plan will be developed by CDI and submitted to PG&E for approval. PG&E will notify the CPUC and then, if requested, submit the plan to the CPUC for review. Upon timely review, CDI shall provide an on-site blaster or mobilize a California licensed blaster to the site and carry out the approved plan.

Step 2: Handling and Disposal:

If undetonated explosives are encountered, they fall under the California Code of Regulations, Title 8, Article 113 Explosives Materials, Section 5293 Misfires.

- If undetonated materials are found, all work in the area will stop and PG&E’s Project Manager (PM) will be notified.
- The PM and the Safety Representative will cordon off the area, and with the assistance of the Demolition Contractor, take pictures of the suspect material.
- Pictures will be emailed to a CDI representative for a determination if the suspect material(s) are indeed explosives.
- If the suspect material is identified as potentially explosive material, the determination will then be made by the on-site blasting Contractor if the explosive material can be safely removed from the debris pile.

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- If, based on the assessment of on-site blasting Contractor, the suspect material can be safely removed from the debris pile; the on-site blasting Contractor shall place the material in a certified storage magazine and transport the material off-site for disposal.
- If the material cannot be moved a specific action plan and procedure will be created and submitted for PG&E approval for detonation in place.

The On-Site Disposal (Detonation) falls under the California Code of Regulations, Title 8, Article 113 Explosives Materials, Section 5240 Disposal of Explosives Materials. The applicable portions are:

- (a) Deteriorated, damaged, frozen, contaminated, or scrap explosive materials which are unfit for use, shall be desensitized, destroyed or otherwise made safe in a safe place by a competent person(s).
- (b) Sites for destruction of explosive materials shall be located away from inhabited buildings, public highways, passenger railways, operating buildings and all other explosives. The separation shall not be less than the inhabited building distance as contained in Table Ex. 1 (attached). When possible, barricades shall be utilized between the site and inhabited buildings.
- (c) A certified storage magazine or other adequate protection shall be provided near the disposal area for emergency use.

Before any handling of ordinance, PG&E will be notified and will review, with assistance from Exponent, the exact actions recommended by CDI to render the explosives inert.