MORRISON-KNUDSEN ENGINEERS, INC.
A MORRISON-KNUDSEN COMPANY

WSSRA PROJECT REVIEWS AND APPROVALS

Subject: WSSRA PROJECT - CP
Specification Section 02090
Removal of Electrical Transformers

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(DOCUMENT NO.)

	Signature	Date
Prepared:	J Eanes	5-19-87
Reviewed:	KW Reppond	5-19-87

Approved, MKE:

- Site Design Engineer	KW Reppond	5-19-87
- Engineering & Design Manager	Philip R. Thurener	5-19-87
- Chief Engineer, ESC Division	J L Jordan	22 May 87

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- PMC Engineering Manager	S R Lewis	6/17/87

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SECTION 02090

REMOVAL OF ELECTRICAL TRANSFORMERS

Q.A. REVIEW
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PART 1 - GENERAL

1.1 SCOPE

A. The work required to be performed under this Subcontract consists of controlled removal and disposal of selected electrical switches, transformers and capacitors from the project site, including many which are polychlorinated biphenol (PCB) containing or contaminated.

B. The Subcontractor shall furnish all labor, supervision, materials, analysis, equipment, and transportation necessary for the complete removal and disposal of PCB contaminated fluid, three existing drums of previous PCB-contaminated sampling materials, electrical equipment with contents and subsequent contaminated materials resulting from cleanup operations. The electrical equipment consists of thirty-seven switches and transformers with capacitors located on concrete pads, mounted on poles, and one rooftop around the site. Three non-PCB containing transformers have a PCB contaminated capacitor attached. The capacitors are to be removed from the site as part of this contract. All electrical transformers, switches, and capacitors to be removed or drained are listed and located on project Drawing No. 5121E-CP-583.

1.2 CODES AND REGULATIONS

A. All work on this Subcontract shall comply with applicable codes and regulations including, but not limited to, the following:

1. Environmental Protection Agency (EPA)

   - 40 CFR 761

   - 15 USC 2601 et. seq. (TSCA)

2. U. S. Department of Labor, Occupational Safety and Health administration (OSHA)

- 29 CFR 1926

- 29 CFR 1910

B. Posting Regulations: Where required by regulations, copies of applicable EPA and OSHA regulations shall be obtained by the Subcontractor and posted at the job site.

1.3 HEALTH AND SAFETY

A. Training: All workers shall have received a forty-hour course per 29 CFR 1910.120 covering the following: health and safety regulations; environmental regulations; use and fitting of respiratory protective equipment; use of other personal protective equipment; procedures for work, spill, transport, disposal and decontamination.

B. The Subcontractor shall provide all workers with personal protective equipment accepted by regulatory standards. This equipment shall generally include: Respirator per 29 CFR 1910.134; Full Saranex-Tyvek coveralls; PCB permeation resistant gloves and boot covers; goggles or face splash shield.

1.4 SUBMITTALS

A. Work Plan:

The Subcontractor shall submit a detailed plan of the work schedule and procedures to be used in removing the electrical equipment. The plan shall include details concerning sequencing, oil draining and flushing procedure, methods for removing the carcass from mounting structure, transportation to disposal, final disposal and procedures for chain of custody confirmation. The Subcontractor shall meet with the Contractor prior to beginning work to discuss and obtain acceptance of the Plan.

PART 2 - PRODUCTS

(None)

PART 3 - EXECUTION

3.1 WORK PRACTICES

A. All PCB contaminated transformers whose volume prohibits placement in a 55-gallon DOT 17H drum, shall be drained and flushed on-site prior to shipment to an EPA-approved facility. Those transformers which can be shipped in drums may be transported undrained only if the EPA-approved facility is capable and intends to incinerate the oil, transformer and drum as a unit. If transformers are transported intact, the transformers shall be secured against overturning and a spill containment system provided.

B. PCB contaminated liquids may be transported by either Department of Transportation (DOT) bulk container or DOT approved drum containers.

C. Transformers drained on-site shall be flushed with non-PCB-contaminated Kerosene and rinsed in accordance with 40 CFR 761.60(b)(1)(i)B. During connecting and disconnection of hoses, spill collection pans shall be positioned to capture any liquid drips.

D. Preparations for Handling PCBs: Barricade area to keep out unauthorized personnel. Construct a temporary holding area for drums and empty equipment; cover the floor and spill berm with polyethylene. Protect the polyethylene floor with a protective covering such as plywood. The holding area shall be leak-proof. Protect all surfaces over which PCB will be transported with polyethylene sheeting and spill berms. Seal all floor drains. All polyethylene sheeting shall have 6 mils minimum thickness.

E. Any contaminated spill shall be immediately cleaned up in accordance with 40 CFR 761 Subpart G.

F. Subcontractor shall verify that electrical equipment is de-energized prior to proceeding with any work.

3.2 DISPOSAL

A. Transport and disposal shall be in accordance with all Federal, State and local laws and regulations.

B. PCB Containing Oil: Oil which is 50 parts per million or more PCB shall be drained from the equipment, taking care to avoid spills, drips and splashes. The thoroughly drained equipment shall be rinsed as required by 15 USC 2601 et. seq. (TSCA).

C. The drained oil and rinse solution shall be properly labeled and sent for disposal at an EPA-approved PCB incineration facility. The drained and rinsed equipment shall be placed in a leak tight package, consisting of PCB impermeable plastic and wooden crating. The crated equipment shall be properly labeled and sent for disposal at an EPA-approved PCB facility.

D. PCB-Containing Transformers: Transformers containing PCB contaminated oil shall be properly packaged and transported directly to an EPA approved PCB disposal facility.

E. Waste Tracking: The Subcontractor shall establish and maintain a waste tracking system which shall as a minimum contain the following information: equipment identification, volume of oil, PCB contamination level, drum number (if any), date filled, date transported, manifest number, transporter, vehicle, destination and date arrived at destination for disposal and a letter of destruction.

F. All PCB containing and contaminated oil and all equipment which was filled with PCB-contaminated oil shall be accompanied in transport by an EPA uniform hazardous waste manifest. If the PCB waste is being disposed of in a state which has more stringent manifesting requirements, a state manifest may be substituted.

G. Non PCB oil shall be drained, removed from site and incinerated.

H. All PCB containing and contaminated oil and all equipment which was filled with PCB containing oil shall be transported to the disposal site by a transporter licensed by the Missouri Department of Natural Resources.

END OF SECTION 02090