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USACE / NAVFAC / AFCEC / NASA **UFGS-02 61 23 (April 2006)**

Preparing Activity: NAVFAC **Replacing without change UFGS-13285 (August 2004)**

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated January 2021
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04/06

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SECTION 02 61 23

REMOVAL AND DISPOSAL OF PCB CONTAMINATED SOILS
04/06

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NOTE: This guide specification covers the requirements for the removal and disposal of polychlorinated biphenyls (PCBs) contaminated soils.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

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NOTE: Solid wastes containing PCB with concentrations of 50 ppm or more are regulated by EPA and require disposal at a TSCA landfill. This concentration is the concentration at the source, not what is actually measured in the soils. This guide specification is intended for use where concentrations at the source are over 50 ppm PCBs. For disposal and removal of PCBs not in soils, use Section 02 84 33 REMOVAL AND DISPOSAL OF POLYCHLORINATED BIPHENYLS (PCBS).

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PART 1 GENERAL

1.1 REFERENCES

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NOTE: This paragraph is used to list the

publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.
****

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D4397	(2016) Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 530/F-93/004	(1993; Rev O; Updates I, II, IIA, IIB, and III) Test Methods for Evaluating Solid Waste (Vol IA, IB, IC, and II) (SW-846)
EPA 560/5-86-017	(1986) Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1910.145	Specifications for Accident Prevention Signs and Tags
29 CFR 1910.1000	Air Contaminants
40 CFR 761	Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
40 CFR 761.75	Chemical Waste Landfills
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials

	Communications, Emergency Response Information, and Training Requirements
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
49 CFR 174	Carriage by Rail
49 CFR 176	Carriage by Vessel
49 CFR 177	Carriage by Public Highway
49 CFR 178	Specifications for Packagings
49 CFR 179	Specifications for Tank Cars

1.2 DEFINITIONS

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NOTE: Typical cleanup levels for soils are 1 ppm, 10 ppm, up to 25 ppm or more. Levels depend on many factors including State that work is located in, land use (residential, industrial, etc.), and proximity to surface and ground water. Limits defining contaminated water depend on disposal method. Designer should verify levels with appropriate authorities. Specifier shall research State, regional, and local laws, regulations, and statutes to determine appropriate levels and disposal requirements.

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1.2.1 PCB and PCBs (Polychlorinated Biphenyls)

40 CFR 761. PCB and PCBs means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contain such substance.

1.2.2 PCB Contaminated Soil

Soils containing concentrations greater than [1] [10] [_____] parts per million (ppm) PCBs when tested as specified herein.

1.2.3 PCB Contaminated Water

Water containing greater than [1.5] [_____] parts per billion (ppb) when tested as specified herein.

1.2.4 PCB Surface Contaminated Solids

Soils containing concentrations greater than [10] [_____] micrograms PCB per square centimeter when tested as specified herein.

1.2.5 Permissible Exposure Limits (PEL)

PEL for PCBs is 0.50 milligrams per cubic meter 3.10 E-08 pound per cubic feet on an 8-hour time weighted average basis.

1.3 DESCRIPTION OF WORK

The work includes removal and disposal of PCB contaminated soils. Perform work in accordance with 40 CFR 761, 29 CFR 1910.120, and the requirements specified herein. Excavate to the horizontal and vertical limits of the identified contaminated soil as indicated. After removing contaminated soil as indicated, sample, test, and excavate as specified until clean soil is encountered.

1.3.1 Existing Conditions

PCB contaminant levels range from [_____] ["not detected"] to [_____] ppm.

1.4 [METHOD OF MEASUREMENT

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NOTE: This paragraph is for use when unit pricing. Coordinate this section with Division 00 sections when using unit pricing. Local practices vary on how to set up unit pricing.

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For the PCB contaminated soil material, which the Contracting Officer directs to be removed from site, the unit of measurement for excavation will be the ton. Tonnage to be paid for will be the number of tons removed from the site. Quantities will be verified from the certified disposal. The requirements of Contract Clause entitled "Variation in Estimated Quantity" do not apply to payment for removal of PCB contaminated soil.

]1.5 QUALITY ASSURANCE

1.5.1 Training

Instruct employees on the dangers of PCB exposure, on respirator use, decontamination, and applicable OSHA and EPA regulations.

1.5.2 Certified Industrial Hygienist (CIH)

Obtain the services of an industrial hygienist certified by the American Board of Industrial Hygiene to certify training, and review and approve the PCB removal plan, including determination of the need for personnel protective equipment (PPE) in performing PCB removal work.

1.5.3 Regulation Documents

Maintain at the job site one readily available copy each of 29 CFR 1910.1000, 40 CFR 761, and all contractor prepared plans required under "Submittals" paragraphs.

1.5.4 Protection Plan

Prepare and submit a protection plan, prepared by the CIH, covering protection of workers and the environment from PCB hazards. Specific protection requirements shall be determined by the CIH and, as a minimum, as specified herein.

1.5.5 PCB Contaminated Soil Removal Plan

Prepare and submit, 15 calendar days prior to initiating work, plan describing methods, techniques, and phases of dealing with the contaminated soil, including: a schedule to be employed in the excavation, a sequence of operations, the method of excavation, hauling, and handling of the contaminated materials, and the proposed equipment. Define the Contractor's source for fill and method for importing the fill material. Ensure that work operations or processes involving PCB-contaminated materials are conducted in accordance with 40 CFR 761 and the applicable requirements of this section, including but not limited to:

a. Obtaining advance approval of PCB storage sites.

b. Notifying Contracting Officer prior to commencing the operation.

c. Reporting leaks and spills to the Contracting Officer.

d. Cleaning up spills.

e. Maintaining an access log of employees working in a PCB control area and providing a copy to the Contracting Officer upon completion of the operation.

f. Inspecting PCB and PCB-contaminated items and waste containers for leaks and forwarding copies of inspection reports to the Contracting Officer.

g. Maintaining a spill kit.

h. Maintaining inspection, inventory, and spill records.

1.5.6 PCB Contaminated Water Handling Plan

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NOTE: Include the bracketed items when on site treatment of contaminated water is required.

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Prepare and submit plan detailing methods and techniques for collection [and treatment] of PCB contaminated water. [For treatment system, include size and location of equipment, catalog data on all components of system, size and arrangement of filters, type and quantity of filtering material, and method of containment.]

1.5.7 Sampling and Testing Plan

Prepare and submit sampling and testing plan. Include the names of testing laboratories to be used to accomplish analysis of contaminated soil and water. Describe field and laboratory sampling procedures, testing methods, and quality control procedures. For sample reports, show sample identification for location, date, time, sample method, contamination level, name of individual sampler, identification of laboratory, and quality control procedures. [Maximum turnaround time of [_____] [4 calendar days] is required for laboratory sample analyses in accordance with the standard work week of the contract.]

1.5.8 Training Certification

Submit certificates signed and dated by the CIH and by each employee stating that the employee has received training.

1.5.9 CIH Qualifications

Submit the name, address, and telephone number of the industrial hygienist selected to perform the duties in paragraph entitled "Certified Industrial Hygienist." Submit proper documentation that the industrial hygienist is certified, including certification number and date of certification and recertification.

1.5.10 PCB Disposal Plan

Submit a PCB Disposal Plan within [45] calendar days after award of contract for Contracting Officer's approval. Comply with applicable requirements of Federal, State, and local PCB waste regulations and address:

a. Identification of PCB wastes associated with the work.

b. Estimated quantities of wastes to be generated and disposed of.

c. Names and qualifications of each Contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location and a 24-hour point of contact. Furnish two copies of [EPA] [State] [and] [local] PCB waste [permit applications] [permits] [and] [EPA identification numbers].

d. Names and qualifications (experience and training) of personnel who will be working on-site with PCB wastes.

e. List of waste handling equipment to be used in performing the work, to include cleaning, volume reduction, and transport equipment.

f. Spill prevention, containment, and cleanup contingency measures to be implemented.

g. Location of state certified weigh station.

h. Work plan and schedule for PCB waste containment, removal, and disposal. Clean up and containerize wastes daily.

1.5.11 Vehicle Decontamination Verification

Provide documentation verifying that vehicles and containers were decontaminated prior to leaving the disposal site, were properly operating, and were covered, within 24 hours after removal of waste from the site.

1.5.12 Closeout Report

Prepare closeout report containing following items: test results including readings and locations, a diagram of the limits of the excavated area with sample locations indicated (indicate reference benchmark used), chain of custody forms, certificates of disposal, truck manifests, and description of the work completed.

1.6 SUBMITTALS

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NOTE: Review Submittal Description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified those items that require Government approval, due to their complexity or criticality, with a "G". Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item if the submittal is sufficiently important or complex in context of the project.

For Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

Choose the first bracketed item for Navy, Air Force, and NASA projects, or choose the second bracketed item for Army projects.

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Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Field Screening Test

SD-07 Certificates

Protection Plan; G[, [_____]]

PCB Contaminated Soil Removal Plan; G[, [_____]]

PCB Contaminated Water Handling Plan; G[, [_____]]

Sampling and Testing Plan; G[, [_____]]

Confirmatory Grid Sampling Plan; G[, [_____]]

Training certification

CIH qualifications; G[, [_____]]

PCB Disposal Plan; G[, [_____]]

Shipping documentation

Vehicle decontamination verification

Borrow site testing

Certificate of Disposal

SD-11 Closeout Submittals

Closeout Report; G[, [_____]]

PART 2 PRODUCTS

2.1 PLASTIC SHEETING

ASTM D4397.

2.2 FIELD SCREENING TEST

Field test capable of detecting PCBs down to at least 1 ppm, with less than 5 percent false negatives, and providing on site results within 2 hours of taking sample.

PART 3 EXECUTION

3.1 PROTECTION OF WORKERS AND THE ENVIRONMENT

Protect workers and the environment from PCB hazards in accordance with the PCB protection plan and, as a minimum, as specified herein.

3.1.1 Worker Safety

Provide portable decontamination and shower rooms. Workers shall wear and use PPE, as recommended by the industrial hygienist, upon entering a PCB control area. If PPE is not required by the CIH, specify in the PCB removal work plan. Keep work footwear inside work area until completion of the job. Have available one set of PPE required for use by Contracting Officer for inspection of work. Do not carry out PCB handling operations in confined spaces. Do not delay aid to a seriously injured worker for reasons of decontamination.

3.1.2 PCB Control Area

Establish a PCB control area to prevent unauthorized entry of personnel. Rope off area and provide 29 CFR 1910.145 signs at approaches and around perimeter. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Allow only personnel briefed on the elements and trained as specified herein into the area. Do not permit food, drink, or smoking materials in the

control area. Smoking is not permitted within 15 m 50 feet of the PCB control area. Provide "No Smoking" signs as directed by the Contracting Officer.

3.1.3 Air Quality

Include provisions to ensure that airborne PCB concentrations below the PEL of air defined herein are not exceeded outside of the PCB control area or by workers inside the PCB control area. Provide air monitoring, personnel monitoring, and sampling to ensure workers safety as determined by the CIH and as specified herein. As a minimum, sample the air daily at the following locations: at locations being disturbed, within the breathing zone of workers, and at the downwind border of the control area. Measure using instrument capable of detecting airborne PCBs at concentrations below OSHA PEL, or use a direct reading total particulate meter correlated to a worst case amount of PCBs attached to the particulate. When airborne concentrations exceed PEL at the breathing zone of workers, provide respirators and additional worker protection as dictated in the Site Health and Safety Plan. If airborne concentration exceeds PEL at boundary of control area, immediately stop work and notify the Contracting Officer.

3.1.4 Special Hazards

a. Do not expose PCBs to open flames or other high temperature sources since toxic decomposition by-products may be produced.

b. Do not heat PCBs to temperatures of 55 degrees C 135 degrees F or higher without Contracting Officer's concurrence.

3.2 PCB SPILL PREVENTION

Use appropriate vehicles and operating practices to prevent spillage or leakage of contaminated materials from occurring during operations. Inspect vehicles leaving the contaminated soil removal site to ensure that no contaminated soil adheres to the wheels or undercarriage. Immediately report any spills to the Contracting Officer and provide cleanup in accordance with 40 CFR 761, Subpart G.

3.3 EXCAVATION PROCEDURES

Notify the Contracting Officer at least 48 hours prior to the start of excavation of contaminated soils. Use methods and equipment that result in minimal disturbance to remaining soil beyond the excavation limits. Remove and dispose of any material that becomes contaminated as a result of the Contractor's operation at no additional cost to the Government. Stage operations to minimize the time the contaminated soil is exposed to the weather. Provide protection measures around the area of contaminated soils to divert runoff of water from within the excavation boundaries.

3.3.1 [Underground Utilities

Location of the existing utilities indicated is approximate and other underground utilities may be present. Scan the construction site with electromagnetic and sonic equipment and mark the surface of the ground where existing underground utilities are discovered. Physically verify the location and elevation of the existing utilities indicated prior to starting construction. If utilities other than those indicated are found, stop work and contact the Contracting Officer. Protect existing utilities

from damage and intrusion of PCBs.

]3.3.2 Dust Control

Maintain strict dust control at all times to prevent dust particles with PCB attached from becoming airborne. Sprinkle or treat the soil at the site and other areas disturbed by operations with dust suppressants or water.

3.3.3 Washdown of Solid Material

Remove asphalt pavement, concrete slabs, and structures encountered above or below the ground surface within the excavation limits. Brush to remove soil materials and clean to limit defined herein for PCB surface contaminated solids by double rinsing, and place in the adjacent rubble pile. Collect and dispose of washdown water as contaminated water. Sample each type of solid material using either wipe samples or destructive samples at locations as directed by the Contracting Officer. Analyze samples for PCBs in accordance with EPA 530/F-93/004, Method 8080. Collect and test field blanks and replicates in accordance with EPA protocol. Repeat cleaning process and testing until PCBs are below the limits specified herein.

3.3.3.1 Wipe Samples

40 CFR 761. A 10 cm by 10 cm template gauze pad or glass wool of known size which has been saturated in the laboratory with hexane and stored in sealed glass vials. Wipe immediately after exposing medium to air. Place sample in precleaned glass bottle, cap, label, and place in ice chest until analyzed.

3.3.3.2 Destructive Samples

EPA 560/5-86-017. Remove sufficient sample for analysis using chisel, hole saw, drills, etc. Take samples less than one cm 3/8 inch deep and place in glass precleaned sample bottle, cap, label, and place in ice chest.

3.3.4 Excavation Limits

****
NOTE: Delete bracketed item on groundwater if groundwater is expected and a method to handle is addressed.
****

Remove contaminated soil to the horizontal and vertical limits as indicated. Verify the limits of clean soils by testing and sampling. Handle and dispose of material within this area as PCB contaminated. After excavation to the indicated limits, conduct an analysis of the excavation to determine if any remaining PCB contaminated soils exist. Collect samples and test by field screening. When field screening results show PCB concentrations below the contamination level, test using confirmation sampling and testing. [If groundwater is encountered prior to reaching the vertical limits, notify the Contracting Officer.]

3.3.4.1 Field Screening

Collect soil samples at the same interval as determined for the

confirmatory grid sampling plan along the bottom and along the sidewalls of the excavation, and test using field screening test.

3.3.4.2 Confirmation Sampling and Testing

When field screening results show PCB concentrations below the contaminated level, test using confirmation sampling and testing. Sample along the bottom and sidewalls of excavation. Use sampling grid scheme and number of samples as defined in EPA 560/5-86-017. Compositing of samples for analysis shall not be allowed. Submit and receive approval of Confirmatory Grid Sampling Plan scheme prior to starting work. Analyze samples in accordance with EPA 530/F-93/004, Method 8080 for PCBs. Determine moisture content of the sample in accordance with EPA Method 160.3. Provide quality control in accordance with EPA guidelines, and as a minimum as follows:

a. Duplicate samples - collect and analyze duplicate soil samples at the rate of 10 percent of the total number of samples (rounded to the next highest number).

b. Matrix spike and matrix spike duplicate - collect one matrix spike sample for every 20 samples collected (rounded to the next highest number). Split the matrix spike sample, and analyze both the matrix spike and the matrix spike duplicate.

3.3.5 Additional Excavations

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NOTE: Use the first bracketed item for unit pricing. Use the second bracketed item when not unit pricing.

****

If field screening results indicate the PCB contaminated soils remain, notify the Contracting Officer. Where directed, continue excavation horizontal and vertical limits as directed by the Contracting Officer. Collect and analyze additional confirmation samples in the new excavation areas. Screen and analyze after each excavation episode as required. [Payment for additional excavation will be paid for at the contract unit price. Payment for additional sampling and testing will be paid for in accordance with the Changes Clause of the contract.] [Payment for additional excavation and testing will be made in accordance with the Changes Clause of the contract.]

3.3.6 Stockpiled Material

Place soil removed from the excavation in a temporary containment area near the excavation area. Divert water from the containment area. Cover containment area with 0.75 mm 30 mil polyethylene sheeting. Place excavated soil on the impervious barrier and cover with 0.15 mm 6 mil polyethylene sheeting. Provide straw bale berm around the outer limits of the containment area and cover with polyethylene sheets. Secure edges of sheets to keep the polyethylene sheeting in place. Cover excavated contaminated soil at all times when not being worked. Maintain sheeting and replace when worn or ripped. [As an option, soil may be stockpiled in trucks suitable for carrying PCB contaminated soils as specified herein.]

3.3.6.1 Composite Testing of Stockpiled Material

Take composite samples from stockpiled material prior to removing from site. Analyze a minimum of one composite sample for every [_____] cubic meters [100] [_____] cubic yards or fraction thereof of soil to be disposed of from any one site. To develop a composite sample of the size necessary to run the required tests, take several samples from different areas along the surface and in the center of the stockpile. Combine these samples and thoroughly mix to develop the composite sample.

3.4 [CONTAMINATED WATER

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NOTE: Determine appropriate disposal method. Choose this paragraph when groundwater will not be encountered and only small amount of rinse and other contaminated water expected.

****

Collect washwater. Collect ground, surface, and rain water contaminated by operations including water collected in the open excavation pit or temporary containment. Soak up with absorbent material so that no free liquid is present. Containerize, sample, and analyze PCB absorbed material and dispose of as specified for contaminated soils.

]3.5 [COLLECTION, TREATMENT, AND DISCHARGE OF PCB-CONTAMINATED WATER

****

NOTE: Choose these paragraphs when groundwater will be encountered or when significant amount of rinse water or other contaminated water is expected, and on-site treatment is allowed. Paragraphs may need modifying to fit site specific requirements. Typical treatment system consists of carbon filtration. Location of discharge for water after it is treated must be coordinated and approved by appropriate (EPA, State, station, local, and regional) authority.

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NOTE: Another option to consider is to containerize liquid and haul to off site POTW with pretreatment capability, however this can be extremely costly for large quantities of water. Use unit pricing, assumed quantities, or some other method to give Contractor something to base bids on when water is to be taken off site. Where off site facilities are involved, verify such facilities exist, that they are permitted to accept, and that they will accept. Specification will require modifying for site specific requirements.

****

Furnish labor, materials, and equipment necessary for collecting, treating, and discharging of PCB-contaminated surface and subsurface water in excavations at the site. Conduct excavation and backfilling operations at the site in a manner that minimizes the amount of surface and subsurface water which may collect in the open excavation. Collect

standing surface water in contact with PCB contaminated material.

3.5.1 Subsurface Drainage

Remove water by pumping or other methods to prevent softening of surfaces exposed by excavation. Provide water treatment necessary to treat water to levels specified herein. Operate dewatering system continuously until construction work below existing water levels is complete. After placement of initial backfill, water level may be allowed to rise, but never above 300 mm one foot below the prevailing level of excavation or backfill. Submit performance records weekly. Measure and record performance or dewatering system at the same time each day by use of observation wells or piezometers installed in conjunction with the dewatering system.

3.5.2 Treatment System Requirements

The Contractor shall be responsible for all aspects of verifying design parameters designing, providing, installing, operating, maintaining, and removing collection, storage, and treatment facilities as required to discharge treated waters within the treatment limits required. The treatment system shall:

a. Be capable of removing PCB contaminants to below the limit defined herein for contaminated water.

b. Include effluent holding tanks designed to allow on-site testing of water quality prior to discharge.

c. Include recycle capability for retreatment of effluent not meeting the discharge requirements of this specification, as determined by on-site testing.

3.5.3 Treatment System Operations

Monitor, test, and adjust the treatment system in accordance with the work plan and Sampling and Analysis Plan, or as otherwise modified by special regulatory requirements. If there is a conflict between requirements, the more stringent requirement shall prevail. Test water in accordance with EPA Method 608.

3.5.4 Discharge of Treated Water

Do not discharge any water until tests results showing water is below PCB contaminated water limits as specified herein. Provide erosion control at outlet of piping to minimize erosion. Discharge for treated water shall be to the [_____].

3.5.5 Cleanup and Removal of Treatment System

Upon completion of work, close and remove from the site the surface water and groundwater treatment system. Restore the site to its original condition. Decontaminate equipment in accordance with the Contractor's Site Health and Safety Plan. Containerize, sample, test, and dispose of carbon, residues, cleaning aids, decontamination liquids, and waste as specified for the contaminated soils.

]3.6 TRANSPORTATION AND DISPOSAL

****

NOTE: Federal Regulations (40 CFR 761) require (with some exceptions) that generators, transporters, commercial storers, and disposers of PCB waste possess U.S. EPA identification numbers. Verify that the activity has a U.S. EPA generator identification number for use on the Uniform Hazardous Waste Manifest. If not, the activity must file and obtain an identification number with EPA prior to commencement of removal work. Where disposal will be through DRMO, modify paragraphs to meet DRMO requirements.

****

Furnish labor, materials, and equipment necessary to store, transport, and dispose of PCB contaminated material in accordance with Federal, State, and local requirements. Prepare and maintain waste shipment records and manifests required by the Resource Conservation and Recovery Act (RCRA), U.S. Federal Department of Transportation (DOT), and State transportation department.

3.6.1 Transportation

49 CFR 171, 49 CFR 172, 49 CFR 173, 49 CFR 174, 49 CFR 176, 49 CFR 177, 49 CFR 178 49 CFR 179. Transport PCB contaminated soils in vehicles designed to carry PCB contaminated soils in accordance with Federal and State requirements. Transport PCB contaminated solid material, articles, or equipment in DOT Specification 5, 5B, or 17C containers with removable heads. Store liquid PCBs in DOT Specification 17E containers. In addition to those requirements:

a. Inspect and document vehicles and containers for proper operation and covering. Repair or replace damaged containers.

b. Inspect vehicles and containers for proper markings, manifest documents, and other requirements for waste shipment.

c. Perform and document decontamination procedures prior to leaving the worksite and again before leaving the disposal site.

3.6.1.1 Weight Certification

Weigh vehicles transporting PCB contaminated materials at a State-certified weigh scale within [24] [_____] km [15] [_____] miles of the project site.

3.6.1.2 Shipping Documentation

40 CFR 761. Before transporting the PCB waste, sign and date the manifest acknowledging acceptance of the PCB waste from the Government. Return a signed copy to the Government before leaving the job site. Ensure that the manifest accompanies the PCB waste at all times. Submit transporter certification of notification to EPA of their PCB waste activities and EPA identification numbers. Within 35 days from shipment date, the transporter shall provide a copy of the manifest signed and dated by the disposer.

3.6.1.3 Payment Upon Furnishing Certificate of Disposal of PCBs

Payment will not be made until the certificate of disposal has been furnished to the Contracting Officer.

3.6.2 Disposal

Dispose of PCB contaminated soils in accordance with 40 CFR 761 at a TSCA regulated landfill meeting the requirements of 40 CFR 761.75. The disposer shall forward a copy of the manifest to the Contracting Officer within 30 days of receipt of PCBs.

3.6.2.1 Certificate of Disposal

Submit certificate of disposal to the Government within 30 calendar days of the date that the disposal of the PCB waste identified on the manifest was completed. Include:

a. The identity of the disposal facility, by name, address, and EPA identification number.

b. The identity of the PCB waste affected by the Certificate of Disposal including reference to the manifest number for the shipment.

c. A statement certifying the fact of disposal of the identified PCB waste, including the date(s) of disposal, and identifying the disposal process used.

d. A certification as defined in 40 CFR 761, Section 3.

3.7 CLEANUP

Maintain surfaces of the PCB control area free of accumulations of PCBs. Restrict the spread of dust and debris; keep waste from being distributed over work area. Do not remove the PCB control area and warning signs prior to the Contracting Officer's approval. Reclean areas showing residual PCBs.

3.7.1 Solvent Cleaning

Clean contaminated tools, containers, etc., after use by rinsing three times with an appropriate solvent or by wiping down three times with a solvent wetted rag. Suggested solvents are stoddard solvent or hexane.

3.8 REPORTS

Prepare and submit a remediation closeout report at the completion of the work.

3.9 BACKFILLING, GRADING, TOPSOILING, AND SEEDING

Commence backfilling of the excavation within 10 calendar days after receiving confirmatory test results that indicate no further PCB contamination is present. Soils brought in from off site for use as backfill shall contain less than one part per million (ppm) PCBs. Provide borrow site testing for PCBs from composite sample of material from borrow site, with at least one test from each borrow site. Material shall not be

brought on site until tests have been approved by the Contracting Officer. Provide backfill, compaction, grading, and seeding in accordance with Section 31 00 00 EARTHWORK. [Line the excavation with two plastic sheets before backfilling.]

-- End of Section --