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Reviewed

**ADDENDUM TO  
SITE-SPECIFIC RISK MANAGEMENT PLAN  
FOR EMERYSTATION II (EMERYSTATION NORTH)  
Former Westinghouse Electric Facility  
5815 Peladeau Street  
Emeryville, California**

*Revised*  
16  
~~March 13, 2000~~

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## 1.0 INTRODUCTION

The Comprehensive Site Closure Report for the former Westinghouse Electric Corporation Facility, dated September 15, 1998, was prepared by SOMA Environmental Engineering, Inc. (SOMA) to ensure that the following elements have been adequately addressed:

1. Has the Site been adequately investigated?
2. Have all contaminant sources been removed or stabilized?
3. Is the groundwater plume stable?
4. Does the Site pose any current or future threats to public health?
5. Does the Site pose any current or future threats to the environment?
6. Does the Site pose any current or future threat to water resources?
7. Is a risk management plan in place?

Section 7.0 of the Comprehensive Site Closure Report presents the overall Site Risk Management Plan, which addresses precautions that will be taken to mitigate risks to human health and the environment from residual soil and groundwater contaminants during Site construction activities. The following Addendum presents the Site-specific Risk Management Plan for all construction activities during Phase II development of EmeryStation, also known as EmeryStation North. Precautions to be taken during construction will include the following:

- Protect construction workers who may directly contact residual contaminants in soil or groundwater (e.g., during Site preparation, grading, foundation construction, or landscape installation) through implementation of the Site Health and Safety Plan and associated Addenda (Attachment 1);
- Implement construction impact mitigation measures, including control of dust generation at the Site, decontamination of equipment, prevention of sediment from leaving the Site in storm water runoff, and management of groundwater extracted from excavations;

- Implement procedures to protect monitoring wells remaining on the Site, if any;
- Implement construction methods that minimize the potential for creating conduits to deeper groundwater zones when driving piles; and
- Establish procedures to characterize and manage Site soil;

*add* → ~~Implement~~ procedures should in unusual conditions such as strange odors or liquids are encountered - close work, immediate report to sup., notify Co., evaluate

**1.2 Description of the Emery Station II Site Development Plan**

Emery Station North will provide 170,000 square feet of office space in a five-story, Class A office building with associated above ground parking, as depicted in Figure 1. The building foundation will be constructed on production piles capped with steel reinforced concrete blocks (pile caps). Pile locations will be pre-drilled to depths between 8- and 15-feet below the ground surface (bgs) in order to facilitate driving. Excavated soil will be managed according to the procedures presented in Section 6. Each pile is 14 inches in diameter and made of pre-stressed concrete. The piles are designed as "friction piles" that generate their strength through the friction of surrounding soil against the surface of the pile. As Figure-2 shows, over 240 individual piles and 60 pile caps have been will be installed at the site. The pile driving activities were completed terminated at the end of the first week of January 2000.

**2.0 WORKER HEALTH AND SAFETY PLAN**

During the early stage of the site development, SOMA was retained by WEBCOR Builders to develop and implement the Health and Safety Plan for the Former Westinghouse Electric Corporation Facility, Emeryville, California, dated April 6, 1998. This health and safety plan addresses all aspects of construction-related activities associated with the development of the former Westinghouse Electric Corporation Facility. Development and associated construction activities will occur in a phased approach. Phase-specific health and safety issues and procedures will be incorporated into the site-wide health and safety plan through an addendum for each

particular phase of construction. For example, during the development of EmeryStation I, two 18,000-gallon underground storage tanks (USTs) were discovered during construction activities and Addendum A (Health and Safety Plan for Underground Storage Tank Activities) was prepared to protect workers during UST removal activities.

Addendum B, Excavation and Construction Activities at 5815 Peladeau Street, was prepared on February 25, 2000 to address all construction-related activities associated with PCB-contaminated soil in the area of EmeryStation North. The Site-wide Health and Safety Plan, Addendum A and Addendum B are included in Attachment 1. The following summarizes relevant worker health and safety issues and precautions for construction activities at EmeryStation North.

## 2.1 Recommendations for Site Workers

The northern portion of the EmeryStation North, which contained elevated levels of PCBs was remediated by CBS in 1996, see Figure-2. The remediation included excavation and removal of PCB-impacted soils up to 6 feet below ground surface. However, in certain areas at deeper depths elevated levels of PCBs (up to 3610 ppm) was left behind due to the lack of exposure pathways and recommendations of the human health risk assessment conducted by SOMA (1996). In the area where EmeryStation North activities will occur, current soil investigation by SOMA previous soil sampling showed PCB levels ranging from 0.1 mg/kg to 60 mg/kg between the surface and 4-feet bgs. Therefore, in the area from column lines 1 through 11 (Figure 2), residual PCBs in soil may be encountered at depths below 3-feet bgs. Most likely in one specific location (column line 1-J), residual PCBs in excess of 50 mg/kg may be encountered. Consequently, workers should be informed prior to site work of the potential hazards associated with exposure to site-related PCBs in soil. Continuous air monitoring for total suspended particulate and PCBs will establish the level of actual worker exposure to these compounds during construction/excavation

operations. If air monitoring indicates that more stringent personal protective equipment (PPE) is required, all construction/excavation operations will stop until OSHA 40-hour trained workers are available to continue construction activities. This will only occur if engineering controls cannot be feasibly or adequately implemented to the levels presented in Table-1 of the Site Health and Safety Plan and summarized below in Table-1. Additional recommendations will be made onsite, as necessary by the site safety officer.

## **2.2 Duties of the Site Safety Officer**

The Site Safety Officer (SSO) has the primary responsibility for on-site implementation of the Health and Safety Plan (HSP). Additional responsibilities include, but are not limited to:

- Verify that contractor/subcontractor personnel are aware of hazardous materials protection procedures and have been instructed in proper work practices and emergency procedures;
- Verify that appropriate PPE is available and is properly used by contractor/subcontractor personnel;
- Monitor contractor/subcontractor activities and ensure that required safe work practices are followed;
- Conduct daily safety meetings prior to commencing operations. Meetings will cover:
  1. Expected Site conditions
  2. Daily activities
  3. Safety deficiencies noted previously
  4. Changes in safety and/or emergency procedures

Mr. Philip Bumala, SOMA's certified industrial hygienist (CIH), will act as the Site Safety Officer (SSO) and will conduct air monitoring during excavation activities. The SSO will conduct a pre-construction health and safety meeting prior to commencing excavation operations, and will work with the on-site staff to implement exposure prevention measures.

## 2.3 Job Hazard Analysis

The following sections describe the potential hazards associated with construction/excavation activities at the Emery Station North Area.

### 2.3.1 Chemical Hazards

Based on the previous site characterization activities, PCBs and VOCs were detected in soil at the north end of the property. Based on the results of the Baseline Human Health Risk Assessment for the Former Westinghouse Electric Corporation (SOMA 1996), VOCs in soil and groundwater were not considered to pose a threat to human health, even under the most conservative exposure scenarios evaluated. Therefore, these compounds will not be discussed further in this section. The following presents a discussion of the potential hazards associated with PCBs and how a worker might come into contact with these contaminants.

#### Polychlorinated Biphenyls (PCBs)

PCBs are a group of synthetic organic chemicals that contain 209 individual compounds with varying health effects. PCBs were used industrially as coolants and lubricants in transformers, capacitors and other electrical equipment. Based on evidence of their accumulation in the environment and their harmful health effects, PCB manufacture was discontinued in 1977. Studies in the workplace suggest that exposure to PCBs may cause skin irritation (e.g., acne and rashes), and irritation of the nose and lungs. Lifetime studies in animals resulted in toxicity to the liver,



stomach, thyroid gland and liver cancer. Studies on workers who had long-term exposure to PCBs provided no evidence that PCBs cause cancer in humans.

The most likely routes of exposure to PCBs at the Emeryville Facility during construction/excavation activities are through dermal contact with soil and dermal contact with water during dewatering and inhalation of dust. Since these activities will be of a short duration, the most likely potential hazards are irritation of the skin, nose and throat. For those areas where PCB exposures might occur, such as the Emery Station North, appropriate PPE and air monitoring will be implemented to reduce or eliminate any possible exposures.

### **2.3.2 Physical Hazards**

The potential physical hazards associated with work at the Emery Station North Area would be those that are common to all construction/excavation projects, including noise hazards, electrical hazards and mechanical hazards. These physical hazards, along with potential hazards associated with fire causing agents, can be reduced or eliminated through implementation of safe working practices.

## **2.4 Hazard Prevention Procedures**

The following summarizes the general procedures to be followed during construction/excavation activities at the Emery Station North Area in order to minimize or mitigate potential chemical hazards, physical hazards, hypothermia, fire and biological hazards.

### **2.4.1 Chemical Hazards**

Procedures to mitigate potential chemical hazards are listed below.

**Dust Control:** Dust control measures will be implemented when necessary, through application of water over the areas where excavation, stockpiling, and loading operations are in progress. In addition, soil that will be stockpiled for an extended period of time will be covered with plastic to minimize airborne suspension of dust.

**Inhalation:** General safe work practices will be employed to minimize contact with potentially contaminated soil. If significant contamination is encountered (e.g., above the permissible exposure limits), the SSO will stop work and will require additional worker protection measures to be implemented.

**Dermal Contact:** Potential chemical absorption through the skin will be prevented by using Level D protection, as described in Section 6.0 of the Site Health and Safety Plan. If significant contamination is encountered, the SSO will require Level C or greater protection. Skin will be washed as frequently as possible, at a minimum, before eating and before leaving for the day. In the event that dermal exposure occurs, the skin must be decontaminated immediately. Should the conditions warrant, immediate medical attention would be required.

**Ingestion:** Accidental ingestion will be prevented by prohibiting eating, drinking, smoking or application of cosmetics in established work zones. Work zones will be established as described in more detail in Section 7.0 of the Site Health and Safety Plan. Recommended decontamination procedures will be established as described in more detail in Section 8.0 of the Site Health and Safety Plan.

**Injection:** Chemical exposure through accidental injection or puncturing of the skin can be prevented by use of protective clothing and gloves as necessary and by observing safe work practices.

## **2.4.2 Physical Hazards**

Procedures to mitigate potential physical hazards are listed below.

**Acoustical Hazards:** Hearing protection, such as ear muffs and ear plugs, will be worn because of potential noisy activities, such as operation of heavy equipment.

**Electrical Hazards:** If the work becomes unavoidably close to buried or overhead lines, the power will be turned off with circuit breakers locked and tagged. All electrical equipment must be properly grounded. Workers must not stand in moisture, water or rain when operating electrical equipment. Workers shall be familiar with specific operating instructions for each piece of equipment.

**Mechanical Hazards:** All surfaces that a person could reasonably contact should be free of splinters, nails or protrusions that might cause injury. All contractor/subcontractor personnel and equipment shall be kept out of traffic lanes and access ways. Workers shall not stand near excavators/loaders, trucks or other earthmoving equipment. Workers/operators shall verify that all equipment is in good condition. Workers must be mindful of on-Site equipment at all times.

## **2.4.3 Hypothermia**

When working in cold conditions, workers should:

- Wear layers of clothing made of tightly woven fibers that trap warm air against the body.

- Wear a head covering to prevent body heat from escaping into the cold air.
- Protect other areas of the body, such as fingers, toes, ears and nose.

In the event of hypothermia, warm the body gradually by wrapping in blankets or putting on dry clothing.

#### **2.4.4 Fire**

Workers and visitors should refrain from smoking and other fire-causing activities throughout the project Site.

#### **2.4.5 Biological Hazards**

Workers should refrain from sitting on or near piles of debris and vegetation that might house vermin. Workers and visitors should also refrain from approaching animals that wander onto the project Site.

### **2.5 Personal Protective Equipment**

For construction/excavation activities associated with the Emery Station North Area, it is anticipated that Level-D protection will be adequate, at this time. Based on air monitoring results, additional worker protection may be required by the SSO. The various levels of personal protection are summarized in detail in Section 6.0 of the Site Health and Safety Plan.

### **2.6 Work Zones and Site Security**

The Site work zones are security measures intended to prevent the transfer of contaminants off-Site by workers, visitors and equipment used in project operations. These measures are also designed to prevent unprotected workers, visitors and the general public from entering contaminated areas. Detailed

information on Site-specific work zones and security is presented in Section 7.0 of the Site Health and Safety Plan.

## **2.7 Decontamination Procedures**

Decontamination procedures are established to prevent transfer of potentially contaminated materials from the exclusion zone, across the contamination reduction zone (CRZ or buffer zone between "clean" and "dirty" areas) into the uncontaminated or "clean" zones. Detailed decontamination procedures can be found in Section 8.0 of the Site Health and Safety Plan. ✓

## **2.8 Training Requirements**

Employees involved in the disturbance of soil known or suspected to contain potentially hazardous chemicals received training covering the following items:

- Site safety plans
- Safe work practices
- Nature of anticipated hazards
- Handling emergencies and self-rescue
- Rules and regulations for vehicle use
- Safe use of field equipment
- Handling, storage and transportation of hazardous materials
- Employee rights and responsibilities
- Use, care and limitations of PPE ✓

## **2.9 Emergency Response and Contingency Plan**

On-Site emergencies will be indicated by a horn blast. Upon hearing this emergency signal, all workers will stop work and proceed to a designated point (established by the SSO).

In the event of an unpredicted occurrence or accident while Site personnel or visitors are on-Site, SOMA and subcontractor personnel will evaluate the incident and Site response capabilities and proceed with the appropriate emergency response actions. Four types of unpredictable events may occur that would require implementing the emergency action plan:

1. Fire
2. Physical injury
3. Chemical exposure
4. Natural catastrophe

Only in the case of minor injuries or exposures will it be considered suitable to transport the injured persons to a medical clinic or emergency room. In all other cases, an ambulance will be summoned by calling **911**.

### **2.9.1 Fire**

In the event of any fire caused by on-Site activities or in close proximity to Site activities, work will stop immediately and the Site will be evacuated. The fire Department will be summoned by calling **911**.

### **2.9.2 Physical Injuries**

For physical injuries, emergency medical assistance will be summoned by calling **911**.

### **2.9.3 Chemical Exposure**

Should unexpected chemicals be encountered that result in chemical exposure, the following procedures will be followed:

- Precautions should be taken to avoid unnecessary exposure of other individuals.

- If necessary, the victim should be transported to the nearest hospital or medical center by ambulance.
- All chemical exposure incidents must be reported to the SSO.
- The following steps will be taken to determine the identity and extent of the unknown chemical:
  1. A sample of the chemical will be taken in an air-tight bottle to a forensic testing laboratory for identification;
  2. After chemical identification, appropriate on-Site screening will be used to quickly ascertain the extent of contamination;
  3. Confirmatory samples will be collected to ensure that the spatial extent of contamination has been adequately defined;
  4. Workers will not be allowed to re-enter the area until the substance has been identified and appropriate health and safety procedures adopted.

#### 2.9.4 Summary of Emergency Resources

Nearby emergency resources and their telephone numbers are summarized in Table-2.

### 3.0 CONSTRUCTION IMPACT MITIGATION MEASURES

This section presents the general measures that will be implemented to mitigate potential impacts to human health and the environment during construction activities. Specifically, mitigation of the following potential impacts will be discussed:

- Dust generation associated with excavation and loading activities, construction or transportation equipment and wind suspension of stockpiled soil;

- Tracking of soil off-Site with construction or transportation equipment;
- Transport of Site-sediments in surface water runoff; and
- Management of groundwater extracted during construction activities (dewatering activities).

### **3.1 Dust Control**

As discussed in detail in the Site Health and Safety Plan, the generation of dust will be controlled in order to minimize 1) potential exposures of on-Site construction workers; and 2) the migration of airborne particulate off-Site. Worker exposures to PCBs adsorbed to particulates will be monitored using workspace air sampling and potential off-Site exposures to PCBs/particulates will be monitored using downwind fence-line sampling. Dust control measures will include but will not be limited to:

- use of water spray or mist during excavation and vehicle loading;
- limit maximum vehicle speed on-Site to 5 miles per hour;
- minimize drop heights during transportation vehicle loading; and
- cover stockpiled soil with plastic sheeting or tarps to prevent wind erosion.

### **3.2 Decontamination**

Construction equipment and transportation vehicles that contact Site soils containing residual contamination will be decontaminated prior to leaving the Site in order to minimize the potential for off-Site migration. Prior to loading stockpiled soil for off-Site disposal, the tractor-trailer will be driven onto a large sheet of plastic. Following loading, dirt will be removed from the vehicle exterior and wheels and captured by the plastic sheeting.



During soil and groundwater sampling on-Site, decontamination of sampling equipment will be conducted according to the Site Health and Safety Plan decontamination procedures (Section 8.0). Wash water or rinsate will be collected and managed in accordance with all applicable local and state laws and regulations.

### **3.3 Storm Water Pollution Controls**

In the event of rainfall during construction activities, storm water pollution controls will be implemented to minimize storm water runoff. Even though most construction activities will take place below grade, thereby eliminating the potential for runoff, on-Site sediment and erosion protection controls will be implemented, including:

- construction of berms or silt fences at entrances to the Site;
- placing straw bale barriers around storm drains and catch basins; and
- during heavy rainfall, covering stockpiled soil with plastic sheeting or tarps.

### **3.4 Dewatering**

As discussed previously, much of the construction will take place below grade necessitating the removal of pooled groundwater. All groundwater encountered during construction (e.g., driving piles) will be collected and stored on-Site in a Baker Tank for appropriate disposal at an off-Site facility.

## **4.0 PROTECTION OF MONITORING WELLS**

Four monitoring well locations are listed in the former service yard of the Westinghouse Facility, as shown in Figure 3. In the northeast corner of the property, monitoring wells S-6 and D-6 no longer exist. Apparently, these two wells were destroyed during previous construction activities. The exact location of these destroyed wells are unknown. Monitoring wells S-5 and D-5 are located

in the northwestern portion of the property. During construction of the EmeryStation North building and associated parking lot, monitoring wells S-5 and D-5 will be protected. These two wells are located just outside the slurry wall and asphalt cap (see Figure 3) and will remain part of the long term groundwater monitoring program overseen by EPA Region IX to evaluate the effectiveness of the slurry wall.

plus  
S-5  
D-5

## 5.0 USE OF CONSTRUCTION METHODS TO MINIMIZE THE POTENTIAL FOR CREATING CONDUITS TO DEEPER GROUNDWATER ZONES

As discussed previously, the building foundation will be constructed on production piles capped with steel reinforced concrete blocks (pile caps). Soil samples previously collected in this area between the surface and 4-feet bgs. showed levels of PCBs up to 60 mg/kg. The pile driving in EmeryStation North was initiated on November 5, 1999 and completed in the first week of January 2000. During this period over 240 piles were driven to an approximate depth of 80 feet bgs. In order to minimize or reduce the potential impact of PCB contamination in the shallow soils and groundwater on the deeper groundwater the following precautionary measures were used: Consequently, mitigation measures are required to minimize 1) the potential to drive shallow PCB contamination into deeper soils and groundwater; and 2) the potential to create conduits or preferential flow paths for the migration of shallow groundwater contaminants to deeper groundwater.

Pile locations were ~~will~~ be pre-drilled to depths ranging between 8- and 15-feet bgs in order to facilitate driving and minimize the potential for contamination of deeper zones by PCBs. After driving the piles into the bottom of the pre-drilled holes, the excavated soils were returned into the holes. In order to mark the pile locations, a concrete cap was placed at the top of each hole. The excessive soils were collected and stockpiled at the site. The stockpiled soils will be profiled and disposed of at TSCA or non-TSCA facilities following the soil characterization process. Excavated soil will be managed according to the procedures presented in

~~Section 4.0 (Construction Impact Mitigation Measures) and Section 6.0 (Soil Management).~~

The piles ~~were~~are 14 inches in diameter and made of pre-stressed concrete. The piles are designed as "friction piles" that generate their strength through the friction of surrounding soil against the surface of the pile. The friction of soil against the surface of the pile creates a seal to prevent the potential vertical leakage of impacted groundwater to the deeper layers. Otherwise, If groundwater could migrate vertically along the pile, the pile would fail as a bearing foundation.

The piles ~~were~~ will be driven to an approximate depth of 80 feet. As Figure-2 shows the construction area was divided into grided sub-areas using 18 columns (column 1 through 18, see top of Figure-2) and 12 rows (row A through row N). A cluster of piles (ranging between 2 and nine piles) arranged in squared or rectangular shaped colonies were installed in certain areas at intersection of rows and columns. By definition, each cluster of piles is also called pile cap.

—According to the Geomatrix report (30 March 1998) entitled "Conceptual Groundwater Model, Emeryville Brownfields Pilot Project, Emeryville, California" groundwater occurs at shallow and deeper sediments in Emeryville. Shallow groundwater occurs at less than 60 feet while, the deeper groundwater occurs at 200-300 feet below ground surface. According to the Geomatrix report, although the deeper groundwater may have a better quality, both water-bearing, due to the quality and quantity constraints cannot be used as a source of source drinking water (SOMA, 1996). Therefore, it appears that pile driving activities may not have a significant impact on the water quality condition of shallow water bearing zone beneath the site.

## **6.0 FURTHER SITE CHARACTERIZATION OF EXCAVATED SOILS MANAGEMENT**

According to WEBCOR construction plan, the area surrounding each pile cap will be excavated up to 13 feet depth. The excavated soils will be reused as the foundation material or disposed of in a TSCA or non-TSCA facility. However, in order to evaluate the vertical extent of PCB impacted soils beyond 3-4 feet depth, six soil borings will be drilled each with a total depth of 20 feet. Figure-2 shows the location of the soil borings. The soil borings will be drilled using a hollow stem auger. At each boring location, four soil samples at 5, 10, 15 and 20 feet depths will be collected using a brass tube. The samples will be placed in an iced chest and delivered to Curtis Thompson, a state certified laboratory.

The results of laboratory analysis on soil samples collected from different depths will assist SOMA to identify the maximum depth of PCB impacted soils and hot spots during segregation of excavated soils from pile caps for disposal purposes.

In the area of column lines 1 through 11 (Figure 2), residual PCBs in soil may be encountered at depths below 3-feet bgs. At column line location 1-J, it is anticipated that residual PCBs in excess of 50 mg/kg will be encountered. Therefore, ~~two~~ <sup>two</sup> out of six soil borings will be installed in location 1-J and 3-J in order to verify the presence of hot spots at this location. Another soil boring will be installed at the former cistern area (8-F), where elevated levels of PCB (up to 72 ppm was reported at 7 foot depth) have been reported. Borings number 4 (14-M), 5(15-G) and 6 (10-E) will be installed in areas where no information at the deeper depth is available. All samples collected from the area of column lines 12 through 18 have shown low levels of soil contaminants. Therefore, separate soil management procedures have been developed for column lines 1 through 11 and 12 through 18.

## **6.1 Excavated Soil Management for Column Lines 1 through 11**

As part of WEBCOR construction plan, Soil soils will be excavated to an average depth of 11-feet bgs from each pile cap area at column line locations 1-J, 4-A and

~~4-M area~~ (see Figure 2). The excavated soils from each location will be individually stockpiled on-Site. Composite soil samples will be collected from each pile and analyzed using a field PCB test kit. ~~in an off-Site laboratory according to the profile requirements of Altamont Landfill.~~ Depending upon the result of test kit, the piles containing less than 50 ppm PCB will be combined into a bigger pile and kept separately from the other stockpiles containing greater than 50 ppm PCB concentrations. It is our estimation that each pile cap will generate approximately 20 cubic yards of waste soil. The soils containing less than 50 ppm PCB concentration (per test kit results) from every five pile cap will be mixed and stockpiled together at 100-yard piles. A composite soil sample will be collected from each 100-yard pile soil for profiling purposes. ~~Following confirmation of the soil profiles, soil will be excavated from the remaining pile locations and loaded into trucks. Each truckload will be sampled using a field PCB test kit, which has a detection limit of 50 mg/kg. Soil with PCB concentrations below the test kit limit of detection (less than 50 mg/kg) will be transported to Altamont Landfill for disposal. Prior to leaving the Site, decontamination of the truck will follow the procedures specified in Section 3.2.~~

Any soil with PCB concentrations greater than 50 mg/kg will be separately stockpiled on-Site. A composite soil sample will be collected from this pile and analyzed by a certified off-Site laboratory. Soil piles confirmed to have PCB concentrations greater than 50 mg/kg will be transported to an approved TSCA Landfill for disposal.

*based on analytical test*

~~Soils will with a concentration less than 50 ppm can be used on site at the base of pile caps. Based on WEBCOR construction plan, after using the non-TSCA soils (soils less than 50 ppm PCB levels) they will be covered by 8 to 12 inch thick concrete slab. also be analyzed for PCBs at the base of each pile cap location using the PCB field screening test kits. It is anticipated that approximately 1500750 cubic yards of PCB-contaminated soil will be generated by this excavation activity. transported off-Site for disposal. Groundwater~~

encountered during the pile excavations will be removed to a Baker tank for testing and disposal, consistent with local, State and Federal laws.

## **6.2 Excavated Soil Management for Column Lines 12 through 18**

Soil sampling in the area of column lines 12 through 18 revealed no contamination at or above previously established action levels. Soil excavated from this area will be analyzed according to the specific requirements of the receiving landfill. Excavated soil from this area will then be handled as typical construction-site spoils.

### **6.2 Schedule of Soil Excavation Activities**

The schedule for completion of excavation activities per WEBCORE is as follows:

<u>Characterization of Stockpiled Soils</u>	<u>week of March 13, 2000</u>
<u>Drilling Permit Aquisition from Alameda County</u>	<u>week of March 13, 2000</u>
<u>Drilling exploratory soil borings</u>	<u>week of March 13, 2000</u>
<u>Soil characterization</u>	<u>week of March 20, 2000</u>
<u>Excavation of pile caps</u>	<u>week of March 20, 2000</u>
<u>Excavation and disposal activities will continue for next 6-8 weeks</u>	
<u>Final Report Due to Alameda County June 15, 2000</u>	

## **7.0 POST CONSTRUCTION RISK MANAGEMENT**

The post-construction part of the risk management plan outlines precautions that should be undertaken to mitigate any long-term potential threats to human health or the environment from residual contaminants in soil and groundwater following development of the Site.

### **7.1 Summary of Human Health Risks**

From the results of the Baseline Human Health Risk Assessment (HHRA) for the Former Westinghouse Electric Corporation Facility (SOMA 1996), carcinogenic risk and noncarcinogenic health hazards were unacceptable for the hypothetical on-Site resident, hypothetical outdoor worker and construction worker scenarios. For the construction worker, potential exposures to Site-related contaminants were minimized or eliminated through implementation of the Site Health and Safety Plan. Carcinogenic risk and noncarcinogenic hazards were almost entirely attributable to PCBs in soil, which were localized in the northeast portion of the Site, with most of the Site having non-detected levels of PCBs.

This "hot-spot" portion of the Site was excavated to meet the cleanup levels established in the HHRA. Specifically, the cleanup was accomplished within the subject area by excavation and off-Site disposal of soils having PCB concentrations greater than the residential cleanup level of 0.5 mg/kg within the top 2 feet, and greater than the utility worker cleanup level of 59 mg/kg within the depths of 2 to 4 feet, as documented in the Site Completion Report (ALTA, 1997). This is health protective, as no residential development is planned for this Site and the assumed utility worker is considered the most appropriate scenario in the future. Therefore, based on the planned commercial development of the Site, there would be no long-term risks to human health.

## **7.2 Use of Site Groundwater**

Both VOCs and low concentrations of PCBs have been reported in shallow groundwater beneath the Site. Based on the results of the HHRA, VOC emissions from groundwater do not pose a threat to human health under any exposure scenario evaluated. Further, the results of the groundwater flow modeling (SOMA 1996) indicate that groundwater beneath the Site would not support significant withdrawal rates (less than 200 gallons a day). This is largely due to the low hydraulic conductivity of the saturated sediments and the presence of the slurry wall surrounding a portion of the Site. For these reasons,

the water-bearing zone beneath the Site was not considered to be a potential source of drinking water. Therefore, shallow groundwater beneath the Site will not be used as a drinking water source or for any other purpose without approval from the RWQCB and the ACDEH. Groundwater encountered during construction/excavation activities will be addressed through the Site Health and Safety Plan.

### **7.3 Future Construction Activities**

Based on the results of the HHRA, residual contamination in soil and groundwater does not pose an unacceptable risk for the intended commercial development of the Site. However, any future construction-related activities must follow the procedures defined in the Site Health and Safety Plan and Risk Management Plan.

### **7.4 Long-Term Compliance**

The Site Risk Management Plan, including any addenda, will be on file with the RWQCB and ACDEH. As part of standard due diligence, the owner(s) of the Site will be required to disclose the risk management plan to potential buyers during future property transactions.

Procedures will be developed by the Site owner(s) and tenants to inform workers and contractors about the risk management plan, as needed, and to maintain compliance with the risk management plan.

The planned Site land use is commercial. Land use at the Site will not change significantly (e.g., the Site will not be developed for single family housing) without approval from the RWQCB and ACDEH.



# TABLES

# FIGURES