Date: June 14, 2011

To: Bill Wycko, Environmental Review Officer, SF Planning Department

From: Rajiv Bhatia, MD, and Amy Brownell, P.E.

Subject: Implementation of Mitigation Monitoring and Reporting Program, Mitigation Measure 8A for the Hunters Point Shipyard Reuse Plan (HPS Phase I Project) Final Environmental Impact Report 2000

The purpose of this memo is to document the San Francisco Department of Public Health (SFDPH), Environmental Health Section’s (EHS) assurance of the implementation of requirements in the Hunters Point Shipyard Reuse Final Environmental Impact Report 2000 (FEIR 2000) Mitigation Measure 8A, Handling Naturally Occurring Asbestos During Construction, including post excavation stabilization and the institutional control provisions. SFDPH EHS is providing this information to the Planning Department so that it can be included in your files for the mitigation monitoring and reporting program applicable to the Hunters Point Shipyard Phase I Project.

MM8A applies to the Hunters Point Shipyard Phase I development area, sometimes also referred to as Parcel A and to areas containing serpentine fill on Parcel D-2. The remainder of the Hunters Point Shipyard and the Candlestick Point area are subject to more recently adopted mitigation measures contained in the Candlestick Point-Hunters Point Shipyard Phase II Project Final Environmental Impact Report 2010 (CP-HPS Phase II FEIR 2010). SFDPH EHS implements these provisions via Health Code Article 31 through the preparation of a Serpentine Cover Plan and a Closure Report.

The stabilization and institutional control provisions as written in FEIR 2000 MM8A are:

“Cap serpentine used as fill material with at least 1 foot (0.3 m) of clean non-serpentine fill material, and implement institutional controls to prevent future exposure from excavation activities.”

SFDPH EHS has determined that several stabilization methods are available to accomplish MM 8A’s goal of minimizing the potential for exposure to airborne asbestos. Therefore, in implementing MM 8A SFDPH EHS will allow any of the following stabilization techniques:

1) One foot of clean fill or,
2) Hardscape or,
3) Vegetative cover that holds soil in place.

These three stabilization methods conform to standards adopted by the California Air Resources Board and they provide an equal level of protection to human health and the environment. In all cases, SFDPH EHS will review each applicant’s Serpentine Cover Plan, which will contain descriptions and figures designating the different types of cover material that will be used, and in
no case will SFDPH EHS approve a cover that fails to provide adequate post-excavation protection and stabilization.

MM 8A also specifies that "institutional controls" must be implemented “to prevent future exposure from excavation activities”. The purpose of the institutional control requirement is to assure that the post-excavation stabilization measure(s) will remain in place over the long term. SFDPH EHS concludes that the institutional control requirement is satisfied by the ongoing obligation to comply with the Building Code’s Construction Dust Control and the Health Code’s Article 31 requirements.

More background information, the California Air Resources Board standards and the text of Article 31 and its implementing regulations are included in the Attachments to this memo. Should you have any questions about the contents of this memo, please contact Amy Brownell at SFDPH EHS at 415-252-3967.
ATTACHMENT A

Background Information for DPH EHS Implementation of FEIR 2000 MM8A

1.0 FEIR 2000 MM 8A

The impact identified in the FEIR 2000 that is addressed by MM 8A is the impact from exposure to airborne asbestos during construction. The FEIR 2000 states, in Section 4.8.2 on page 4-74, “Because asbestos-containing serpentinite rock occurs at HPS, construction-related excavation activities under the Proposed Reuse Plan could cause chrysotile asbestos associated with serpentinite to become airborne, creating a potentially significant impact to public health and safety.” The impact is addressed and reduced to less than significant by MM 8A.

MM 8A reads as follows:

“Handling Naturally Occurring Asbestos During Construction

Follow BAAQMD, US EPA, and Federal and Cal OSHA regulations for construction and demolition activities. Continuously wet serpentinite involved in excavation or drilling operations. Wet and cover (with a 10–millimeter thick polyethylene sheet, either weighted or tied down) stockpiled serpentinite. Do not use serpentinite as road, surfacing, or paving material. Cap serpentinite used as fill material with at least 1 foot (0.3 m) of clean non-serpentinite fill material, and implement institutional controls to prevent future exposure from excavation activities. Treat excavated waste materials containing greater than one percent asbestos by weight as hazardous waste, and transport and dispose of this material in accordance with applicable Federal and state regulations.”

Except for the sentence that starts with “Cap serpentinite…” all of the provisions focus primarily on dust control during earth moving activities, stockpile management and removal of hazardous waste. These provisions have been and continue to be implemented through the Dust Control Plan (DCP) process established by Health Code Article 31 and corresponding Implementing Regulations. In addition to the SFDPH DCP process, the Bay Area Air Quality Management District (BAAQMD) has implemented its Asbestos Dust Mitigation Plan (ADMP) process for construction activities associated with Phase 1. Together, the SFDPH and BAAQMD have monitored visible dust, verified air sampling processes and taken enforcement action when necessary. These processes have been extensively reviewed, discussed and verified by outside government agencies and are not the focus of this memo.

This memo focuses on these particular provisions of MM 8A:

“Cap serpentinite used as fill material with at least 1 foot (0.3 m) of clean non-serpentinite fill material, and implement institutional controls to prevent future exposure from excavation activities.”
2.0 Post-excavation stabilization

2.1 Development of MM 8A

MM 8A was developed in the late 1990’s during the process of writing the drafts of FEIR 2000. During this time period, regulatory agencies were looking at the issues concerning naturally occurring asbestos (NOA) and concerns that exposure to asbestos fibers from areas of NOA might be a public health concern. In particular, the authors of the FEIR 2000 were aware that the redevelopment of Parcel A, the first parcel to be transferred in 2004, would involve the excavation and grading of over a million and a half cubic yards of rock and soil that either contained or might contain NOA. In addition to the concerns about dust control during excavation, there were concerns about how the property should be stabilized once excavation was complete. At the time MM 8A was crafted, while some guidance was available from US EPA and BAAQMD for how to handle asbestos during construction or building demolition, scant detail was available as to what types of long term controls should be put in place at a site known to contain naturally occurring asbestos. In the absence of regulatory guidance, the FEIR drafters proposed a measure that addressed the concern that “…construction-related excavation activities under the Proposed Reuse Plan could cause chrysotile asbestos associated with serpentinite to become airborne, creating a potentially significant impact to public health and safety.” As mentioned above, the dust control measures during construction address this concern. After construction is completed the post-excavation stabilization requirement of MM 8A, to place a foot of clean fill at the site, is designed so that asbestos fibers at the surface are minimized which addresses the concern that asbestos fibers might become airborne. The institutional control requirement is designed to ensure that over the long-term, asbestos fibers at the site do not impact public health.

2.2 Subsequent State Regulatory Guidance

Soon after MM8A was adopted further regulatory guidance emerged. In July 2002, the California Environmental Protection Agency, Air Resources Board (CARB) adopted the Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying and Surface Mining Operations (California Code of Regulations Title 17, Section 93105) (see Attachment B). Any construction, grading, quarrying or surface mining operation conducted in an area that contains or might contain naturally occurring asbestos is subject to this requirement. There are requirements that apply to all projects and more detailed requirements that apply to projects over one acre in size. Many of the requirements in this ATCM are similar to the dust control, monitoring and mitigation measures as specified in FEIR 2000. The CP-HPS Phase II FEIR 2010 specifically required compliance with this ATCM in one of its mitigation measures, referred to as HZ15.

The provisions of this ATCM that most directly apply to this discussion are found in subsection (e)(4)(G): Requirements for Construction and Grading Operations, Asbestos Dust Mitigation Plans, Post Construction Stabilization of Disturbed Areas. This subsection specifies that, in addition to clean fill, both “paving” and “establishment of vegetative cover” can be used as effective post construction stabilization measures.
For the Hunters Point Shipyard Project, those development activities subject to the requirements of the CARB ATCM, must submit an ADMP to the BAAQMD. BAAQMD has been implementing this regulation and overseeing implementation and enforcement of the ATCM at Hunters Point Shipyard. These stabilization provisions have been included, as required, in the ADMP that was submitted and approved by BAAQMD.

3.0 SFDPH Implementation of MM 8A Post-Excavation Stabilization Requirement

MM 8A’s requirement to “cap serpentinite used as fill material with at least 1 foot (0.3 m) of clean non-serpentinite fill material” is implemented through the Article 31 process. That process requires Applicants for various permits related to construction to prepare and submit Serpentinite Cover Plans to SFDPH EHS for evaluation and verification. Please see Attachment C for the full text of the Amended Ordinance for Article 31 and Implementing Regulations. While Article 31 provides some parameters for contents of the plans, SFDPH EHS offers this additional guidance to clarify the types of covers that will generally meet MM 8A’s stabilization requirement.

SFDPH EHS, like the CARB, has determined that several stabilization methods are available to accomplish MM 8A’s goal of minimizing the potential for exposure to airborne asbestos. Therefore, in implementing MM 8A SFDPH EHS will allow these stabilization techniques:

1) One foot of clean fill or,
2) Hardscape or,
3) Vegetative cover that holds soil in place.

Although the hardscape and vegetative cover options were not specifically described in the FEIR 2000, SFDPH EHS has determined, based on subsequently available information and state agency development of standards, that these options accomplish the same goals and provide equal or greater protection to human health and the environment. Additionally, in all cases, SFDPH EHS will review each applicant’s Serpentinite Cover Plan, which will contain descriptions and figures designating the different types of cover material that will be used, and in no case will SFDPH EHS approve a cover that fails to provide adequate post-excavation protection and stabilization.

3.1 Clean Fill

The option to use clean, non-serpentinite fill material does not require that the “clean” material contain no asbestos. In fact, it is impossible to prove that fill material has no asbestos. There are generally accepted practices required by SFDPH EHS and other regulatory agencies to prove that a fill material contains asbestos below an acceptable percentage in order to prove that it is “clean” of asbestos. However, there is always the chance that there are some asbestos fibers in “clean” material.

Applicants using clean fill as a cover to provide post-excavation stabilization will have to submit information about the contents of the fill to SFDPH EHS for evaluation in the Serpentinite Cover Plan. That information will take the form of a sampling and analysis plan, verifying that on-site
fill material does not contain naturally occurring asbestos, or alternatively, imported fill may be used, subject to its meeting various importation requirements, including verification that it does not contain asbestos. In both cases, as explained above, verification that the fill “does not contain asbestos” means that the material will not contain asbestos above an acceptable percentage, according to generally accepted practices, and as approved by SFDPH EHS.

3.2 Hardscape

It is common knowledge that a building foundation or street or other durable hardscape provides a good solution for covering bare soil and cutting off exposure to asbestos or other substances in the soil. Building foundations in San Francisco, which cover the soil underneath, typically remain in place for many years and are rarely removed during that time period unless the building is demolished for new development. Similarly public streets and sidewalks remain in place except during short maintenance periods. The SFDPH EHS Site Mitigation program and other regulatory agencies have used hardscape as a “cover” solution for many years. The CARB incorporated this solution in their ATCM with the choice of paving as a stabilization option.

As further evidence of the effectiveness of hardscape in post excavation stabilization, the Regulatory Agencies who oversee the Navy’s cleanup of the Hunters Point Shipyard have selected a durable cover as part of the remedy to address residual levels of ubiquitous metals. Their stated objective of the durable cover is to reduce long term exposure to the metals. One of their definitions of a durable cover is any hardscape that meets SF Department of Building Inspection or SF Department of Public Works permitting requirements.

3.3 Vegetative Cover that holds soil in place

As listed in Section 2.0, CARB chose “establishment of vegetative cover” as one allowable method for post-construction stabilization. Our choice of “Vegetative cover that holds soil in place” will accomplish the same goal as the original mitigation measure and as the State’s requirement under their ATCM.

Like hardscape, vegetative cover that holds soil in place will cut off exposure to the bare soil and asbestos or other elements in it because the vegetation will provide an effective barrier between the soil and wind that might cause soil particles and asbestos fibers to become airborne.

The effectiveness of a vegetative cover in stabilizing soil is evident from its use, not only in asbestos dust control in the ATCM, but also in the storm water pollution prevention context. The State’s requirements in that context allow for installation of a vegetative cover to prevent soil from being eroded by storm water runoff. These state requirements have been used successfully for years for storm water pollution prevention, further demonstrating the effectiveness of such covers to stabilize soil.

4.0 Implement institutional controls to prevent future exposure from excavation activities

In addition to the MM 8A post-excavation stabilization requirement, MM 8A also specifies that "institutional controls" must be implemented “to prevent future exposure from excavation
activities”. The purpose of the institutional control requirement is to assure that the post-
excavation stabilization measure(s) will remain in place over the long term. As stated above, the
objective is not to prevent future excavation but to require maintenance or, if disturbed,
reinstallation of the cover material once excavation is complete. As described above, MM8A was
written in the late 1990’s. In December 2004, during the approval of the transfer of Parcel A
from the Navy to the City, Article 31 of the Health Code was enacted to address MM 8A and
other mitigation measures from FEIR 2000. The Article 31 process requires anyone seeking a
permit from the City that will disturb more than 50 cubic yards of soil (i.e. an Applicant) to
submit a Serpentinite Cover Plan and receive approval from the SFDPH EHS prior to
commencing their work. As a result, all Applicants will have an approved Serpentinite Cover
Plan that will explain how the area will be covered with hardscape, vegetative cover that holds
soil in place or one foot of clean fill. When the Applicants are done installing the approved
cover, they will submit a Closure Report for SFDPH EHS approval that will verify that the cover
was installed.

For land disturbing activities that disturb less than 50 cubic yards of soil and therefore are not
subject to the Article 31 process, there is another City ordinance that will apply and assure that
the area remains stabilized. Specifically, Building Code Section 106A.3.2.6, Construction Dust
Control, requires any area with the potential to create dust, whether or not the area requires a
permit, to implement the listed control measures to control visible dust. Controlling visible dust
controls naturally occurring asbestos. As a result, the Construction Dust Control requirements for
areas less than 50 cubic yards and the implementation of Article 31 process for areas over 50
cubic yards together meet the MM8A requirement for institutional controls that will “prevent
future exposure from excavation activities.”
ATTACHMENT B

California Code of Regulations Title 17, Section 93105
FINAL REGULATION ORDER

ASBESTOS AIRBORNE TOXIC CONTROL MEASURE FOR CONSTRUCTION, GRADING, QUARRYING, AND SURFACE MINING OPERATIONS

Section 93105. Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations.

(a) Effective Date.

(1) No later than 120 days after the approval of this section by the Office of Administrative Law, each air pollution control and air quality management district must:

(A) Implement and enforce the requirements of this section; or

(B) Propose their own asbestos airborne toxic control measure as provided in Health & Safety Code section 39666(d).

(2) Pre-existing Operations: The owner/operator of any project in which the construction, grading, quarrying, or surface mining operation started before the effective date of this section shall comply with this section by:

(A) The date the district begins implementing and enforcing this section as required in subsection (a)(1)(A); or

(B) The compliance date specified in the airborne toxic control measure adopted by the district as required in subsection (a)(1)(B).

(b) Applicability. Unless one of the specific exemptions specified in subsection (c) applies, this section shall apply to any construction, grading, quarrying, or surface mining operation on any property that meets any of the following criteria:

(1) Any portion of the area to be disturbed is located in a geographic ultramafic rock unit; or

(2) Any portion of the area to be disturbed has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner/operator, or the Air Pollution Control Officer (APCO); or

(3) Naturally-occurring asbestos, serpentine, or ultramafic rock is discovered by the owner/operator, a registered geologist, or the APCO in the area to be disturbed after the start of any construction, grading, quarrying, or surface mining operation.
(c) General Exemptions.

(1) Geologic Evaluation: The APCO may provide an exemption from this section for any property that meets the criterion in subsection (b)(1) if a registered geologist has conducted a geologic evaluation of the property and determined that no serpentine or ultramafic rock is likely to be found in the area to be disturbed. Before an exemption can be granted, the owner/operator must provide a copy of a report detailing the geologic evaluation to the APCO for his or her consideration.

(A) At a minimum, the geologic evaluation must include:

1. A general description of the property and the proposed use;

2. A detailed site characterization which may include:
   i. A physical site inspection;
   ii. Offsite geologic evaluation of adjacent property;
   iii. Evaluation of existing geological maps and studies of the site and surrounding area;
   iv. Development of geologic maps of the site and vicinity;
   v. Identification and description of geologic units, rock and soil types, and features that could be related to the presence of ultramafic rocks, serpentine, or asbestos mineralization; and
   vi. A subsurface investigation to evaluate the nature and extent of geologic materials in the subsurface where vertical excavation is planned; methods of subsurface investigation may include, but are not limited to borings, test pits, trenching, and geophysical surveys;

3. A classification of rock types found must conform to the nomenclature based on the International Union of Geological Science system;

4. A description of the sampling procedures used;

5. A description of the analytical procedures used, which may include mineralogical analyses, petrographic analyses, chemical analyses, or analyses for asbestos content;

6. An archive of collected rock samples for third party examination; and

7. A geologic evaluation report documenting observations, methods, data, and findings; the format and content of the report should follow the Guidelines for Engineering Geologic
Reports issued by the State Board of Registration for Geologists and Geophysicists.

(B) The district may request any additional tests or other information needed to evaluate an application for exemption.

(C) The district shall grant or deny a request for an exemption within 90 days of the receipt of a complete application.

(D) If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

(E) Expiration of the Geologic Exemption: If the owner/operator discovers any naturally-occurring asbestos, serpentine, or ultramafic rock in the area to be disturbed after the exemption is granted, then:

1. The owner/operator must comply with the requirements of this section;

2. The owner/operator must report the discovery of the naturally-occurring asbestos, serpentine, or ultramafic rock to the APCO no later than the next business day; and

3. The exemption under subsection (c)(1) shall expire and cease to be effective.

(2) If a method is developed to accurately demonstrate that property located in a geographic ultramafic rock unit has no detectable asbestos in the area to be disturbed, then the ARB Executive Officer shall propose to the Board for adoption a regulatory amendment allowing the method to be utilized, as appropriate, to obtain an exemption from the requirements specified in this section.

(3) Agriculture and Timber Harvesting: This section shall not apply to agricultural operations or timber harvesting except for construction of roads and buildings. Construction of roads is subject to the requirements of subsection (e) if the road is part of a construction or grading operation, quarry, or surface mine, and is subject to the requirements of subsection (d) if the road is not part of a construction or grading operation, quarry, or surface mine.

(4) Homeowners and Tenants: Individuals engaged in covered activities on residential property they own or occupy are exempt from subsections (e)(1) and (e)(3)(A).
(5) **Sand and Gravel Operations:** The APCO may provide an exemption for crushing, screening and conveying equipment, stockpiles, and off-site material transport at a sand and gravel operation if the operation processes only materials from an alluvial deposit.

(A) The district shall grant or deny a request for an exemption within ninety (90) days of the receipt of a complete application.

(B) If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

(d) **Requirements for Road Construction and Maintenance.** These requirements shall apply to roads that are not part of a construction or grading project, quarry, or surface mine.

(1) No person shall conduct any road construction or maintenance activities that disturb any area that meets any criterion listed in subsections (b)(1) or (b)(2) unless all of the following conditions are met.

(A) The APCO is notified in writing at least fourteen (14) days before the beginning of the activity or in accordance with a procedure approved by the district.

(B) All the following dust control measures are implemented during any road construction or maintenance activity:

1. Unpaved areas subject to vehicle traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos;

2. The speed of any vehicles and equipment traveling across unpaved areas must be no more than fifteen (15) miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust that is visible crossing the project boundaries;

3. Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept adequately wetted, treated with a chemical dust suppressant, or covered with material that contains less than 0.25 percent asbestos; and

4. Activities must be conducted so that no track-out from any road construction project is visible on any paved roadway open to the public.
(C) Equipment and operations must not cause the emission of any dust that is visible crossing the project boundaries.

(2) No person shall conduct any road construction or maintenance activity that disturbs the ground surface in an area that meets the criteria in subsection (b)(3) unless:

(A) The APCO is notified no later than the next business day of the discovery that the area meets the criteria in subsection (b)(3); and

(B) The requirements of subsections (d)(1)(B) through (d)(1)(C), are implemented within twenty-four (24) hours of the discovery.

(3) Exemptions from the Requirements for Road Construction and Maintenance. The following exemptions may apply in addition to the applicable general exemptions specified in subsection (c).

(A) Emergency Road Repairs: Subsection (d)(1)(A) shall not apply when construction of a road or firebreak, or a road repair is necessary due to a landslide, flood, or other emergency or to mitigate a condition that constitutes an imminent hazard to the public. The owner/operator shall notify the APCO no later than the next business day of the action taken and the condition establishing the applicability of this subsection.

(B) Remote locations: The APCO may provide an exemption from the requirements of subsection (d) for any activity which will occur at a remote location.

1. The district shall grant or deny a request for an exemption within ninety (90) days of the receipt of a complete application.

2. If the request for an exemption is denied, the APCO shall provide written reasons for the denial.

(e) Requirements for Construction and Grading Operations.

(1) Areas of one acre or less meeting the criteria in subsections (b)(1) or (b)(2): No person shall engage in any construction or grading operation on property where the area to be disturbed is one (1.0) acre or less unless all of the following dust mitigation measures are initiated at the start and maintained throughout the duration of the construction or grading activity:
(A) Construction vehicle speed at the work site must be limited to fifteen (15) miles per hour or less;

(B) Prior to any ground disturbance, sufficient water must be applied to the area to be disturbed to prevent visible emissions from crossing the property line;

(C) Areas to be graded or excavated must be kept adequately wetted to prevent visible emissions from crossing the property line;

(D) Storage piles must be kept adequately wetted, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile;

(E) Equipment must be washed down before moving from the property onto a paved public road; and

(F) Visible track-out on the paved public road must be cleaned using wet sweeping or a HEPA filter equipped vacuum device within twenty-four (24) hours.

(2) **Areas greater than one acre meeting the criteria in subsections (b)(1) or (b)(2):** No person shall engage in any construction or grading operation on property where the area to be disturbed is greater than one (1.0) acre unless:

(A) An Asbestos Dust Mitigation Plan for the operation has been:

1. Submitted to and approved by the district before the start of any construction or grading activity; and

2. The provisions of that dust mitigation plan are implemented at the beginning and maintained throughout the duration of the construction or grading activity; and

(B) For a project started before the effective date of this section for which an asbestos dust mitigation plan was submitted at least sixty (60) days before the effective date, and for which the district has not yet approved the asbestos dust mitigation plan:

1. The measures in subsection (e)(1) must be implemented and maintained until the district-approved asbestos dust mitigation plan is implemented; and

2. The provisions of the district-approved asbestos dust mitigation plan must be implemented within fourteen (14)
days of district approval of the plan and maintained throughout the remainder of the construction or grading activity.

(3) Property that meets the criteria in subsection (b)(3): No person shall engage in any construction or grading operation unless the following requirements are met:

(A) The owner/operator notifies the district of the discovery of naturally-occurring asbestos, serpentine, or ultramafic rock no later than the next business day;

(B) The dust mitigation measures in subsection (e)(1) are implemented within twenty-four (24) hours after determining that the property meets the criteria in subsection (b)(3); and

(C) For operations in which the area to be disturbed is one (1.0) acre or less, the dust mitigation measures in subsection (e)(1) are maintained throughout the duration of the construction or grading activity; or

(D) For operations in which the area to be disturbed is greater than one (1.0) acre, the owner/operator must:

1. Submit an asbestos dust mitigation plan to the district within fourteen (14) days of the discovery of naturally-occurring asbestos, serpentine, or ultramafic rock;

2. Maintain the dust mitigation measures in subsection (e)(1) until the provisions of the district-approved asbestos dust mitigation plan are implemented;

3. Implement the provisions of the district-approved asbestos dust mitigation plan within fourteen (14) days of district approval of the plan; and

4. Maintain the provisions of the district-approved asbestos dust mitigation plan throughout the remainder of the construction or grading activity.

(4) Asbestos Dust Mitigation Plans: An Asbestos Dust Mitigation Plan must specify dust mitigation practices which are sufficient to ensure that no equipment or operation emits dust that is visible crossing the property line, and must include one or more provisions addressing each of the following topics.
(A) Track-out prevention and control measures which shall include:

1. Removal of any visible track-out from a paved public road at any location where vehicles exit the work site; this shall be accomplished using wet sweeping or a HEPA filter equipped vacuum device at the end of the work day or at least one time per day; and

2. Installation of one or more of the following track-out prevention measures:
   i. A gravel pad designed using good engineering practices to clean the tires of exiting vehicles;
   ii. A tire shaker;
   iii. A wheel wash system;
   iv. Pavement extending for not less than fifty (50) consecutive feet from the intersection with the paved public road; or
   v. Any other measure as effective as the measures listed above.

(B) Keeping active storage piles adequately wetted or covered with tarps.

(C) Control for disturbed surface areas and storage piles that will remain inactive for more than seven (7) days, which shall include one or more of the following:

1. Keep the surface adequately wetted;

2. Establishment and maintenance of surface crusting sufficient to satisfy the test in subsection (h)(6);

3. Application of chemical dust suppressants or chemical stabilizers according to the manufacturers' recommendations;

4. Covering with tarp(s) or vegetative cover;

5. Installation of wind barriers of fifty (50) percent porosity around three (3) sides of a storage pile;

6. Installation of wind barriers across open areas; or

7. Any other measure as effective as the measures listed above.
(D) Control for traffic on on-site unpaved roads, parking lots, and staging areas which shall include:

1. A maximum vehicle speed limit of fifteen (15) miles per hour or less; and

2. One or more of the following:
   i. Watering every two hours of active operations or sufficiently often to keep the area adequately wetted;
   ii. Applying chemical dust suppressants consistent with manufacturer’s directions;
   iii. Maintaining a gravel cover with a silt content that is less than five (5) percent and asbestos content that is less than 0.25 percent, as determined using an approved asbestos bulk test method, to a depth of three (3) inches on the surface being used for travel; or
   iv. Any other measure as effective as the measures listed above.

(E) Control for earthmoving activities which shall include one or more of the following:

1. Pre-wetting the ground to the depth of anticipated cuts;

2. Suspending grading operations when wind speeds are high enough to result in dust emissions crossing the property line, despite the application of dust mitigation measures;

3. Application of water prior to any land clearing; or

4. Any other measure as effective as the measures listed above.

(F) Control for off-site transport. The owner/operator shall ensure that no trucks are allowed to transport excavated material off-site unless:

1. Trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments; and

2. Loads are adequately wetted and either:
   i. Covered with tarps; or
   ii. Loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.
(G) **Post construction stabilization of disturbed areas.** Upon completion of the project, disturbed surfaces shall be stabilized using one or more of the following methods:

1. Establishment of a vegetative cover;
2. Placement of at least three (3.0) inches of non-asbestos-containing material;
3. Paving;
4. Any other measure deemed sufficient to prevent wind speeds of ten (10) miles per hour or greater from causing visible dust emissions.

(H) **Air monitoring for asbestos (if required by the APCO).**

1. If required by the district APCO, the plan must include an air-monitoring component.

2. The air monitoring component shall specify the following:
   i. Type of air sampling device(s);
   ii. Siting of air sampling device(s);
   iii. Sampling duration and frequency; and
   iv. Analytical method.

(I) **Frequency of reporting:** The plan shall state how often the items specified in subsection (e)(5)(B), and any other items identified in the plan, will be reported to the district.

(5) **Recordkeeping and Reporting Requirements.**

(A) **Recordkeeping Requirements:** The owner/operator shall maintain all of the following records for at least seven (7) years following the completion of the construction project:

1. The results of any air monitoring conducted at the request of the APCO;
2. The documentation for any geologic evaluation conducted on the property for the purposes of obtaining an exemption, except the archive of collected samples which may be discarded at the expiration of the exemption or one (1) year after the exemption is granted whichever is less; and
3. The results of any asbestos bulk sampling that meets any of the following conditions:
   i. The asbestos bulk sampling was conducted by the owner/operator to document the applicability of or compliance with this section, or
   ii. The asbestos bulk sampling was done at the request of the district APCO.

(B) Reporting Requirements: The owner/operator of any grading or construction operation subject to this section shall submit the following to the District:

1. The results of any air monitoring conducted at the request of the APCO; and

2. The results of any asbestos bulk sampling that meets any of the following conditions:
   i. Asbestos bulk sampling conducted by the owner/operator to document applicability of or compliance with this section; or
   ii. Asbestos bulk sampling done at the request of the APCO.

(f) Requirements for Quarrying and Surface Mining Operations.

(1) No person shall engage in any quarrying or surface mining operation that meets the criteria of subsections (b)(1) or (b)(2) unless an Asbestos Dust Mitigation Plan for the operation has been submitted to and approved by the District and the fugitive dust mitigation measures specified in the Plan are implemented and maintained throughout the duration of any quarrying or surface mining operation except,

(A) Pre-existing Operations: The owner or operator of any quarrying or surface mining operation that was in operation before the date this section is implemented as determined pursuant to subsection (a) that has not obtained district approval of the asbestos dust mitigation plan may continue operating if all the following conditions are met:

1. The owner/operator has submitted an asbestos dust mitigation plan to the district at least sixty (60) days prior to the date specified in subsection (a);

2. The owner/operator implements all of the dust mitigation measures specified in subsections (f)(2)(B) and (f)(2)(C) by the effective date specified in subsection (a) and maintains
them until the provisions of an approved asbestos dust mitigation plan are implemented; and

3. The owner/operator implements the provisions of the asbestos dust mitigation plan within fourteen (14) days following district approval of the plan.

**(B) Mineral exploration activities:** Mineral exploration activities as defined in the California Public Resources Code section 2714(d) in an area meeting any of the conditions of subsection (b) are not required to submit an asbestos dust mitigation plan but shall instead implement and maintain the following measures throughout the duration of the activity:

1. Limit vehicle speeds on the site to fifteen (15) miles per hour or less;

2. Apply sufficient water during any ground disturbance to prevent visible dust from crossing the property line;

3. Keep disturbed areas and storage piles adequately wetted until they are permanently stabilized;

4. Install a track-out prevention device designed to prevent track-out onto any paved public road;

5. Clean up any visible track-out at the end of the workday or at a minimum within twenty-four (24) hours; and

6. Cover, treat with a chemical dust suppressant, or otherwise stabilize any disturbed areas when operations cease for more than seven (7) days.

**(2) The owner/operator of any quarry or surface mine that meets any of the criteria in subsection (b)(3) shall:**

**(A) Notify the APCO no later than the next business day of the discovery.**

**(B) Implement all the following measures within twenty-four (24) hours following the discovery:**

1. Keep stock and working piles adequately wetted during the addition and removal of material;
2. Keep on-site unpaved roads, parking lots, and staging areas stabilized using one of the following measures:
   i. Adequately wetted; or
   ii. Controlled using dust palliatives or suppressants; or
   iii. Paving; or
   iv. Covered to a depth of three (3) inches with gravel that contains less than 0.25 percent asbestos as determined using an approved asbestos bulk test method;

3. Keep exposed areas and inactive stockpiles that are prone to mechanical or wind disturbances:
   i. Adequately wetted; or
   ii. Controlled using dust palliatives or suppressants, paving, wind berms or breaks; or
   iii. Covered with tarps or material that contains less than 0.25 percent asbestos as determined using an approved asbestos bulk test method;

4. Ensure that materials to be quarried, excavated, or graded are adequately wetted;

5. Ensure that all loads are adequately wetted before and during truck loading operations;

6. Ensure that all trucks transporting materials off-site meet the conditions of either paragraph i or paragraph ii at the time the truck leaves the site:
   i. Loads are adequately wetted and covered with tarps; or
   ii. Loads are adequately wetted and the material does not touch the front back or sides of the cargo compartment at any point less than six (6) inches from the top and no point of the load extends above the top of the cargo compartment; and

7. Limit vehicle speeds within the quarry or surface mining operation to fifteen (15) miles per hour or less.

(C) Implement all of the following measures within fourteen (14) days of the determination that the operation meets any of the criteria in subsection (b)(3).

1. Measures to ensure that material being excavated, crushed, screened, loaded, transferred or conveyed does not result in any dust that is visible crossing the property line.
2. Measures to ensure that no grinding mill, screening operation, or transfer point on a belt conveyor discharges into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour which are:
   i. Fifty percent as dark or darker in shade as that designated as number one on the Ringlemann Chart, as published by the United States Bureau of Mines; or
   ii. Of such opacity as to obscure an observers view to a degree equal to or greater than smoke as described in subsection (f)(2)(C)2.i. or ten (10) percent opacity.

3. Measures to ensure that no crusher discharges into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour which are:
   i. Seventy-five percent as dark or darker in shade as that designated as number one on the Ringlemann Chart, as published by the United States Bureau of Mines; or
   ii. Of such opacity as to obscure an observers view to a degree equal to or greater than smoke as described in subsection (f)(3)(C)3.i. or fifteen (15) percent opacity.

4. Measures for material handling sufficient to meet the requirements of subsections (f)(2)(C)1. through (f)(2)(C)3. Such measures may include the following:
   i. Installation and operation of spraybars on all conveyors; and
   ii. Installation of shrouds at all drop points.

5. Track-out control and prevention measures which shall include:
   i. Installation of a gravel pad, grizzly, tire washing system, or paving at least fifty (50) feet of the access road, and
   ii. Cleaning any visible track-out off the paved public road using wet sweeping or a HEPA filter equipped vacuum device at the end of each workday.

6. Stabilization of all on-site roads, parking lots, and staging areas open to the public by one of the following methods:
   i. Pave with asphalt or concrete, or
   ii. Treat with a chemical dust suppressant applied according to manufacturers directions, or
   iii. Maintain a gravel cover that has a depth of at least three (3) inches and contains less than 0.25 percent asbestos
as determined using an approved asbestos bulk test method.

(D) Submit an Asbestos Dust Mitigation Plan to the District within fourteen (14) days and maintain the measures specified in subsections (f)(2)(B) and (f)(2)(C) until the asbestos dust mitigation measures in the district-approved Asbestos Dust Mitigation Plan are implemented.

(3) An Asbestos Dust Mitigation Plan required by subsections (f)(1) and (f)(2)(D) must include sections which address each of the following topics.

(A) A Fugitive Dust Mitigation Component which shall, at a minimum, include the measures specified in subsections (f)(2)(B) and (f)(2)(C), unless the APCO determines that it is appropriate to add, omit, or modify these measures depending on site-specific parameters. The plan shall also require that:

1. Equipment and operations do not emit dust that is visible crossing the property line;

2. Crushers do not discharge into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour, which is:
   i. Seventy-five percent as dark or darker in shade as that designated as number one on the Ringlemann Chart, as published by the United States Bureau of Mines; or
   ii. Of such opacity as to obscure an observer’s view to a degree equal to or greater than smoke as described in subsection (f)(3)(A)2.i. or fifteen (15) percent opacity; and

3. Grinding mills, screening operations, and transfer points on belt conveyors do not discharge into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour, which is:
   i. Fifty percent as dark or darker in shade as that designated as number one on the Ringlemann Chart, as published by the United States Bureau of Mines; or
   ii. Of such opacity as to obscure an observer’s view to a degree equal to or greater than smoke as described in subsection (f)(3)(A)3.i. or ten (10) percent opacity.
(B) **Air monitoring for asbestos (if required by the APCO).**

1. If required by the district APCO, the plan must include an air monitoring component.

2. The air monitoring component shall specify the following:
   i. Type of air sampling device(s);
   ii. Siting of air sampling device(s);
   iii. Sampling duration and frequency; and
   iv. Analytical method.

(C) **Frequency of reporting.** The plan shall state how often the items specified in subsection (f)(5)(B), and any other items identified in the plan, will be reported to the district.

(4) Upon petition by the owner/operator the APCO may approve the use of requirements or restrictions established under other regulatory programs to meet the requirements of subsection (f) under the following conditions:

   (A) The requirements or restrictions are equivalent to or more stringent than the requirements of subsection (f); and

   (B) The requirements or restrictions are enforceable by the APCO.

(5) **Recordkeeping and Reporting Requirements:** The owner/operator of a surface mining or quarrying operation subject to this section must comply with the following recordkeeping and reporting requirements.

   (A) **Recordkeeping Requirements:** The owner/operator shall maintain all of the following records for at least seven (7) years:

      1. The results of any air monitoring conducted at the request of the APCO;

      2. The documentation for any geologic evaluation conducted on the property for the purpose of obtaining an exemption except, the archive of collected rock samples which may be discarded at the expiration of the exemption or one (1) year after the district granted or denied the exemption, whichever comes first; and

      3. The results of any asbestos bulk sampling that meets any of the following conditions:
i. The asbestos bulk sampling was conducted by the owner/operator to document the applicability of, or compliance with this section; or
ii. The asbestos bulk sampling was done at the request of the district APCO.

(B) Reporting Requirements: The owner/operator shall submit the following to the District:

1. The results of any air monitoring conducted at the request of the APCO;

2. The documentation of any geologic evaluation conducted on the property in question; and

3. The results of any asbestos bulk sampling that meets any of the following conditions:
   i. Asbestos bulk sampling conducted by the owner/operator to document applicability of or compliance with this section; or
   ii. Asbestos bulk sampling done at the request of the district APCO.

(g) Air Monitoring for Asbestos. Pursuant to the requirements of Health and Safety Code section 41511:

(1) Air monitoring may be required by the district APCO.

(2) The APCO may revise the asbestos dust mitigation plan on the basis of the results of the air monitoring.

(h) Test Methods.

(1) Ultramafic Rock: The ultramafic rock composition of any material shall be determined using standard analysis techniques including, but not limited to, color index assessment, microscopic examination, petrographic analysis or rock thin sections, or chemical analysis techniques, such as X-ray fluorescence spectrometry or inductively coupled plasma analysis.

(2) Bulk Sampling Methods: ARB Test Method 435, or an alternative asbestos bulk test method approved in writing by the Executive Officer of the California Air Resources Board, shall be used to determine the asbestos content of a bulk sample. For the purposes of determining compliance with this section, references in ARB Test Method 435 to "serpentine aggregate" shall mean "gravel" or other "bulk materials" to be tested for asbestos content.
(3) **Analysis of Air Samples:** Analysis of all air samples shall follow the analytical method specified by the United States Environmental Protection Agency, Asbestos Hazard Emergency Response Act (AHERA) criteria for asbestos (40 CFR, Part 763 Subpart E, Appendix A, adopted October 30, 1987), with the following exceptions:

(A) The analytical sensitivity shall be 0.001 structures per cubic centimeter (0.001 s/cc); and

(B) All asbestos structures with an aspect ratio greater than three to one (3 to1) shall be counted irrespective of length.

(4) The results of the analysis of air samples shall be reported as transmission electron microscopy (TEM) asbestos structures per cubic centimeter (s/cc).

(5) **Adequately Wetted:** Field determination of “adequately wetted” shall be as follows:

(A) If the district-approved asbestos dust mitigation plan has specified a percent moisture content for specific materials the determination shall be as specified in the district-approved asbestos dust mitigation plan; or

(B) If no moisture threshold is specified in a district-approved asbestos dust mitigation plan, a sample of at least one (1) quart in volume shall be taken from the top three (3) inches of a road, or bare area or from the surface of a stockpile. The sample shall be poured out from a height of four (4) feet onto a clean hard surface. The material shall be considered to be adequately wetted if there is no observable dust emitted when the material is dropped.

(6) **Surface Crusting:** “Measurement of the stability of surface crusting on horizontal surfaces” shall be as follows:

(A) Where a visible crust exists, drop a steel ball with a diameter of 15.9 millimeters (0.625 inches) and a mass ranging from 16 to 17 grams from a distance of 30 centimeters (one foot) directly above (at a 90 degree angle perpendicular to) the ground surface. If blowsand (thin deposits of loose grains covering less than 50 percent of the surface that have not originated from the surface being tested) is present, clear the blowsand from the surfaces to be tested before dropping the steel ball.
(B) A sufficient crust is determined to exist if, when the ball is dropped according to subsection (h)(6)(A), the ball does not sink into the surface so that it is partially or fully surrounded by loose grains and, upon removing the ball, the surface on which it was dropped has not been pulverized so that loose grains are visible.

(C) Drop the ball three times each in three representative test areas within a survey area measuring 1 foot by 1 foot that represents a random portion of the surface being evaluated. The test area shall be deemed to have passed if at least two of the three times the ball was dropped, the results met the criteria in subsection (h)(6)(B). If all three test areas pass, the area shall be deemed to be “sufficiently crusted”.

(i) Definitions. For the purposes of this section, the following definitions shall apply:

(1) "Access road" means any road extending from a public thoroughfare onto the property of a construction project, quarry, or surface mining operation.

(2) "Adequately wetted" means sufficiently moistened with water to minimize the release of particulate matter into the ambient air as determined by the test method(s) in subsection (h)(5).

(3) "Agricultural operation" means activities necessary for the growing and harvesting of crops or raising of fowl or animals.

(4) "APCO" means the executive officer, air pollution control officer, or the designee of the executive officer or air pollution control officer of any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code.

(5) "Approved asbestos bulk test method" means ARB Test Method 435 or an alternative asbestos bulk test method approved in writing by the Executive Officer of the California Air Resources Board.

(6) "ARB" means the California Air Resources Board.

(7) "ARB Test Method 435" means the test method specified in title 17, California Code of Regulations, section 94147.

(8) "Asbestos" means asbestiforms of the following minerals: chrysotile (fibrous serpentine), crocidolite (fibrous riebeckite), amosite (fibrous cummingtonite--grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthophyllite.
(9) "Asbestos-containing material" means any material that has an asbestos content of 0.25 percent or greater.

(10) "Asbestos Dust Mitigation Plan" means a detailed written document specifying measures that would be implemented to minimize the emissions of asbestos-laden dust.

(11) "Carry-out" or "track-out" means any bulk material that adheres to and agglomerates on the exterior surfaces of motor vehicles, haul trucks, and/or equipment, including tires, and that has fallen or been deposited onto a paved public roadway.

(12) "Construction," "grading," "construction or grading operation" and "construction or grading activity" mean any surface disturbance conducted with powered equipment or any related activity, including, but not limited to, all surface and subsurface cuts and fills, excavation, trenching, stockpiling, bulldozing, and landfills.

(13) "District" means any air pollution control or air quality management district created or continued in existence pursuant to Part 3 (commencing with section 40000), Division 26, Health and Safety Code.

(14) "Geographic ultramafic rock unit" means a geographic area that is designated as an ultramafic rock unit or ultrabasic rock unit, including the unit boundary line, on any of the maps referenced in Appendix A.

(15) "Geologic evaluation" means an evaluation of a property to determine the presence of various types of rocks, including ultramafic rock, serpentinite, or other metamorphic derivatives of ultramafic rock.

(16) "Gravel pad" means a layer of gravel, rock, or crushed rock which is at least one inch or larger in diameter and less than five (5) percent silt content, maintained at the point of intersection of a paved public roadway and a work site entrance to dislodge mud, dirt, and debris from tires of motor vehicles and haul trucks prior to leaving a worksite.

(17) "Grizzly" means a device used to dislodge mud, dirt, and debris from the tires and undercarriage of motor vehicles and haul trucks prior to leaving the work site.

(18) "HEPA filter" means a High Efficiency Particulate Air filter used to remove particles less than one (1) micron in aerodynamic diameter and operates at removal efficiencies of 99.9 percent or greater.
"Naturally-occurring asbestos" means asbestos that has not been processed in an asbestos mill.

"Owner/operator" or "person" includes, but is not limited to:

(A) An individual, trust, firm, joint stock company, business concern, partnership, limited liability company, association, or corporation including, but not limited to, a government corporation;

(B) Any city, county, district, commission, the state or any department, agency, or political subdivision thereof, any interstate body, and the federal government or any department or agency thereof to the extent permitted by law; or

(C) A project proponent and any of its contractors or subcontractors.

"Paving" means creating a cover consisting of portland cement, asphalt concrete, or chip seal.

"Project Boundaries" means the right-of-way and any construction easements adjacent to and necessary for the purposes of a specific road construction project or maintenance activity.

"Property" means any real property including, but not limited to, any contiguous parcel or parcels of land and anything attached to, or erected on it.

"Quarrying" means the act of obtaining stone from the earth by means of cutting, digging, excavating, or blasting and includes processes used to convert the excavated material into commercial products.

"Registered geologist" means an individual that is currently licensed as a geologist with the State of California, Department of Consumer Affairs, Board of Geology and Geophysicists.

"Remote location" means any location that is at least one (1.0) mile from the location of a receptor. "Receptor" includes, but is not limited to, any hospital, school, day care center, work site, business, residence, and permanent campground. The distance to the nearest receptor is to be measured from the outermost limit of the area to be disturbed or road surface, whichever is closer.

"Road Construction and Maintenance" means the activities undertaken to build roads, highways, railroads, bridges, culverts, drains and other works incidental to road or highway construction, and maintenance activities that involve grading or excavation. Road Construction and Maintenance does
not include the construction of rest stops, maintenance buildings, or parking lots. These excluded activities are subject to the requirements of subsection (e).

(28) "Road surface" means the traveled way of a road and any shoulder which may extend up ten (10) feet from the edge of the traveled way.

(29) "Sand and Gravel Operation" means any facility operating in alluvial deposits.

(30) "Serpentine" means any form of the following hydrous magnesium silicate minerals: antigorite, lizardite, and chrysotile.

(31) "Serpentinite" means a rock consisting almost entirely of serpentine, although small amounts of other minerals such as magnetite, chromite, talc, brucite, and tremolite-actinolite may also be present. "Serpentinite" is a metamorphic derivative of the ultramafic rocks, peridotite, pyroxenite, or dunite.

(32) "Surface mining" means all, or any part of, the process involved in the mining of minerals on mined lands by removing overburden and mining directly from the mineral deposit, open-pit mining of minerals naturally exposed, mining by the auger method, dredging and quarrying, or surface work incident to an underground mine. "Surface mining" includes, but is not limited to, in place distillation or retorting or leaching, the production and disposal of mining waste, prospecting and exploratory activities or any activity subject to regulation under the Surface Mining and Reclamation Act of 1975, Public Resources Code section 2700 et seq.

(33) "Ultrabasic rock" means ultramafic rock.

(34) "Ultramafic rock" means an igneous rock composed of 90 percent or greater of one or a combination of the following iron/magnesium-rich, dark-colored silicate minerals: olivine, pyroxene, or more rarely amphibole. For the purposes of this section, "ultramafic rock" includes the following rock types: dunite, pyroxenite, and peridotite; and their metamorphic derivatives.

(35) "Visible emissions" means any particulate matter that is visually detectable without the aid of instruments other than corrective lenses.

APPENDIX A

California Department of Conservation
Division of Mines and Geology

AVAILABLE GEOLOGIC MAPS FOR CALIFORNIA

GEOLOGIC ATLASES OF CALIFORNIA Scale 1:250,000

GEOLOGIC ATLAS OF CALIFORNIA: ALTURAS
Compiled by Gay, T.E. and others, 1958

GEOLOGIC ATLAS OF CALIFORNIA: BAKERSFIELD
Compiled by Smith, A.R., 1964 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: DEATH VALLEY
Compiled by Streitz, R.L. and Stinson, M.C., 1974 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: FRESNO
Compiled by Matthews, R.A. and Burnett, J.L., 1965 (reprinted 1991)

GEOLOGIC ATLAS OF CALIFORNIA: KINGMAN
Compiled by Jennings, C.W., 1961

GEOLOGIC ATLAS OF CALIFORNIA: LONG BEACH
Compiled by Jennings, C.W., 1962 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: LOS ANGELES

GEOLOGIC ATLAS OF CALIFORNIA: MARIPOSA

GEOLOGIC ATLAS OF CALIFORNIA: NEEDLES
Compiled by Bishop, C.C., 1963 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: REDDING
Compiled by Strand, R.G., 1962

GEOLOGIC ATLAS OF CALIFORNIA: SALTON SEA
Compiled by Jennings, C.W., 1967 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SAN LUIS OBISPO
Compiled by Jennings, C.W., 1958 (reprinted 1992)
GEOLOGIC ATLAS OF CALIFORNIA: SAN DIEGO - EL CENTRO

GEOLOGIC ATLAS OF CALIFORNIA: SANTA ANA
Compiled by Rogers, T.H., (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: SANTA CRUZ

GEOLOGIC ATLAS OF CALIFORNIA: SANTA MARIA
Compiled by Jennings, C.W., 1959 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: TRONA
Compiled by Jennings, C.W., 1962

GEOLOGIC ATLAS OF CALIFORNIA: UKIAH

GEOLOGIC ATLAS OF CALIFORNIA: WALKER LAKE
Compiled by Koenig, J.B., 1963 (reprinted 1992)

GEOLOGIC ATLAS OF CALIFORNIA: WESTWOOD
Compiled by Lyndon, P.A. and others, 1960

REGIONAL GEOLOGIC MAP SERIES  Scale 1:250,000

GEOLOGIC MAP OF THE CHICO QUADRANGLE
(set of five sheets)
By Saucedo, G.J. and Wagner, D.L., 1992

GEOLOGIC MAP OF THE SACRAMENTO QUADRANGLE
(set of four sheets)
Compiled by Wagner, D.L. and others, 1981

GEOLOGIC MAP OF THE SANTA ROSA QUADRANGLE
(set of five sheets)
Compiled by Wagner, D.L. and Bortugno, E.J. (reprinted 1999)

GEOLOGIC MAP OF THE SAN BERNARDINO QUADRANGLE
(set of five sheets)
Compiled by Bortugno, E.J. and Spittler, T.E. (reprinted 1998)

GEOLOGIC MAP OF THE WEED QUADRANGLE
(set of four sheets)
By Wagner, D.L. and Saucedo, G.J., 1987
GEOLOGIC MAP OF THE SAN FRANCISCO-SAN JOSE QUADRANGLE
(set of five sheets)
Color-coded faults

LOCAL GEOLOGIC MAPS

AREAS MORE LIKELY TO CONTAIN NATURALLY-OCCURRING ASBESTOS
IN WESTERN EL DORADO COUNTY, CALIFORNIA
By Ron Churchill, March 2000
Scale 1:100,000

SERPINTINITE SURVEY OF LAKE COUNTY, CALIFORNIA – MAP A,
ULTRAMAFIC, ULTRABASIC, AND SERPENTINE ROCK AND SOILS OF LAKE
COUNTY,
Adopted: March 2, 1992
Scale: 1:100,000
ATTACHMENT C

2010 ORDINANCE AMENDING HEALTH CODE ARTICLE 31
and
2010 AMENDMENTS TO ARTICLE 31 IMPLEMENTING REGULATIONS
[Hunters Point Shipyards - Health Code Amendment]

Ordinance amending Article 31 of the Health Code to extend, to the entire Hunters Point Shipyards area, the special permit processing requirements that now apply to Hunters Point Shipyards Parcel A to address potential residual contamination, and imposing fees to administer this Article; amending Sections 804 and 1227 of the Health Code to make conforming amendments; and making environmental findings.

Note: Additions are single-underline italics Times New Roman; deletions are strikethrough italics Times New Roman. Board amendment additions are double underlined. Board amendment deletions are strikethrough normal.

Be it ordained by the People of the City and County of San Francisco:

Section 1. Findings.

A. In conjunction with Ordinances [PWC] 205-10 and [DBI] 206-10 on file with the Clerk of the Board of Supervisors in File Nos. 100576 and 100577, this Ordinance amends Chapter 31 of the Health Code to extend to the entire Hunters Point Shipyards area the special permit processing requirements that now apply at Hunters Point Shipyards Parcel A to address potential contamination.

B. In accordance with the actions contemplated herein, this Board adopted Resolution No. 347-10, concerning findings pursuant to the California Environmental Quality Act (California Public Resources Code sections 21000 et seq.). Said Resolution is on file with the Clerk of the Board of Supervisors in File No. 100572 and is incorporated herein by reference.

Mayor Newsom, Supervisor Maxwell
BOARD OF SUPERVISORS
Section 2. San Francisco Health Code is amended by amending Article 31 to read as follows:

SEC. 3100. - HUNTERS POINT SHIPYARD.

Findings. The Board of Supervisors of the City and County of San Francisco hereby finds and declares as follows:

A. This ordinance is designed to protect human health and safety and the environment at the former Hunters Point Shipyard during and after development and to facilitate redevelopment as envisioned in the Hunters Point Shipyard Redevelopment Plan, which the Board of Supervisors adopted in 1997 and amended in 2010, and its Environmental Impact Reports.

B. The United States designated Hunters Point Shipyard as a U.S. Naval Shipyard in 1945. The United States Environmental Protection Agency (EPA) placed the Hunters Point Shipyard on the National Priorities List pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in 1989. The U.S. Navy ("Navy") has divided the site into six parcels designated Parcels A–F for purposes of remediation.

C. The U.S. Navy issued a CERCLA Record of Decision (ROD) for Parcel A which was approved by the EPA, the California Department of Toxic Substances Control (DTSC), and the San Francisco Bay Region Regional Water Quality Control Board (RWQCB) in November 1995. The ROD concluded that "no action" was needed to clean up Parcel A. Effective April 5, 1999, EPA removed Parcel A from the National Priorities List after EPA and the State of California found that all appropriate responses under CERCLA had been implemented, that no further cleanup is appropriate for Parcel A and that the remedial actions conducted on Parcel A remain protective of public health, welfare, and the environment.
D. On September 1, 2004, the Navy issued a draft final Finding of Suitability to Transfer (FOST) for Parcel A. On September 30th and October 6th and 7th 2004, respectively, the EPA, DTSC and the RWQCB concurred with the Navy's FOST. The Navy signed the FOST on October 14, 2004. The FOST for Parcel A contains requirements for certain notices, restrictions and covenants to be included in the deed for Parcel A. These notices, restrictions and covenants are also referred to as "institutional controls" and are binding on all successive owners of any portion of Parcel A.

E. On December 3, 2004, the Navy transferred portions of Parcel A to the San Francisco Redevelopment Agency.


G. In addition to Parcel A, which the Navy already transferred to the San Francisco Redevelopment Agency ("Agency"), it is anticipated that the Navy will offer the remaining parcels for transfer to the Agency in accordance with a Conveyance Agreement between the Agency and the Navy. Prior to transfer of any parcel, the Navy will issue a draft final FOST or a draft final Finding of
Suitability for Early Transfer (FOSET) for the parcel. If the Navy issues a FOST, the Conveyance Agreement requires the Navy to obtain the concurrence of the EPA, DTSC, and RWQCB in the final FOST before it offers the parcel to the Agency. If the Navy issues a FOSET, CERCLA requires the Navy to obtain the approval of EPA and the concurrence of the Governor of California which will be based on input from DTSC and the RWQCB. A FOST or FOSET may require the deeds for the property to include certain environmental notices, restrictions or covenants, also referred to as “institutional controls” that will be binding on all successive owners of the transferred property to which such notices, restrictions or covenants apply. The Navy also is expected to enter into a Covenant to Restrict Use of Property (CRUP) with DTSC, which will be binding on subsequent owners and will provide for DTSC enforcement of the covenants, restrictions or conditions to which the property is subject. A Land Use Control Remedial Design (LUC RD) for each parcel will lay out the inspection and reporting requirements for the institutional controls and activity and land use restrictions. For property that transfers via a FOSET, the EPA and the Agency and possibly subsequent private developers, will be required to enter into an Administrative Order on Consent (AOC), also approved by state environmental regulatory agencies, which will detail the required corrective or cleanup actions and restricted activities associated with the property covered by the AOC and provide for EPA enforcement of its terms. Additionally, for property that transfers via a FOSET, the Navy and the Agency will enter into an Early Transfer Cooperative Agreement (ETCA), which will provide for the Agency to cause to be performed certain environmental remediation activities to facilitate redevelopment in exchange for funding of such activities by the Navy.

H. The Board of Supervisors by Resolution 347-10 adopted CEQA findings, including a mitigation monitoring and reporting program ("MMRP") for the Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project ("Project"), for which the Agency and Planning Commissions certified a Final Environmental Impact Report ("FEIR") in

Mayor Newsom
BOARD OF SUPERVISORS
June 3, 2010. The Project contains all of the property in the Hunters Point Shipyard
except the property designated as Parcel A by the Navy. The MMRP contains mitigation measures
that address potential hazardous materials impacts associated with the Project. It is the intent of the
Board to create a process for the Department of Public Health to enforce in the Hunters Point Shipyard
portion of the Project certain hazardous materials mitigation measures identified in the FEIR through
this Article 31.

SEC. 3101. - DEFINITIONS.

In addition to the general definitions applicable to this Code, whenever used in this
Article, the following terms shall have the meanings set forth below:

(a) "Applicant" means a person applying for any of the following authorizations for
subsurface activities on portions of the Hunters Point Shipyard subject to this Ordinance:
(1) For property determined by the applicable ROD to be suitable for unrestricted residential
use (i) any building or grading permit that involves the disturbance of at least 50 cubic yards
(38.23m3) of soil; (ii) any permit pursuant to the Public Works Code that involves the
disturbance of at least 50 cubic yards (38.23m3) of soil; (iii) any improvement plan pursuant to
Division 3 of the Subdivision Code that involves the disturbance of at least 50 cubic yards
(38.23m3) of soil; (iv) any permit to operate or approval to close an underground tank,
pursuant to Sections 1120 and 1120.1 of the Health Code that involves the disturbance of at
least 50 cubic yards (38.23m3) of soil; (v) any well construction, modification, operation or
maintenance permit pursuant to Article 12B of the Health Code; or (vi) any permit that involves
demolition of structures with lead-based paint.

(2) For property which is subject to a deed restriction or covenant containing an environmental
restriction requiring a durable cover or engineered cap (i) any building or grading permit that involves
the disturbance of soil; (ii) any permit pursuant to the Public Works Code that involves the disturbance

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of soil; (iii) any improvement plan pursuant to Division 3 of the Subdivision Code that involves the
disturbance of soil; (iv) any permit to operate or approval to close an underground tank, pursuant to
Sections 1120 and 1120.1 of the Health Code that involves the disturbance of soil; or (v) any well
construction or destruction permit pursuant to Article 12B of the Health Code.

(3) Notwithstanding the preceding subdivisions, an Applicant does not include a person
applying for a permit for the sole purpose of conducting environmental characterization.

(b) "Director" means the Director of the San Francisco Department of Public Health or
the Director's designee.

(c) "GIS" is a geographic information system, for the Hunters Point Shipyard. The GIS is a
computer-based system containing site-specific environmental information.

(d) "Hunters Point Shipyard parcels" or "HPS parcels" mean that area of the City and County
of San Francisco shown on Figure Article 31 Map - Figure 1, which is maintained for public
distribution by the Director. A copy of said figure is on file with the Clerk of the Board of Supervisors
in File No. 100575.

(e) "Improvement Plan" means an improvement plan as required under the
Subdivision Map Act, California Government Code Sections 66410 et seq.

(f) "Parcel A" means that area of the City and County of San Francisco shown on Figure
Article 31 Map - Figure 1, which is maintained for public distribution by the Director. A copy of said
figure is on file with the Clerk of the Board of Supervisors in File No. 100575. that parcel or
parcels of land of the Hunters Point Shipyard as indicated on the Map filed with the Recorder of the
City and County of San Francisco on December 3, 2004 situated in the City and Count of San
Francisco, that was transferree to the San Francisco Redevelopment Agency by the U.S. Navy.
(fg) "Prescribed Subsurface Activity Area" means the specific location and horizontal
and vertical extent of the proposed disturbance, excavation, grading or other subsurface
activity defined using coordinates compatible with the GIS to the extent feasible.

SEC. 3102. - APPLICABILITY OF ARTICLE.

(a) Applicants must comply with this Article. The Department of Public Works (for any
permit or improvement plan subject to this Article), the Department of Building Inspections (for
building and grading permits) and the Department of Health (for underground tank permits
and approvals and water well permits) shall inform the Director whenever a permit or
improvement plan application is submitted for Hunters Point Shipyard and shall refer
Applicants to the Director. The Director shall determine the applicability of this Article to the
permit application or improvement plan and shall implement and enforce the provisions of this
Article. If the Director determines that a permit or improvement plan is subject to the
provisions of this Article, the permit or improvement application shall not be deemed complete
until the Applicant has complied with the requirements of this Article or shall be conditioned
upon compliance with this Article as specified herein.

(b) Any person that obtains environmental sampling data shall submit that data to the
Director in a form acceptable to the Director.

(e) The following sections of this Article apply:

All Parcels Section 3100 et seq.
Parcel A Section 3120 et seq.
Parcel B Section 3130 et seq.
Parcel C Section 3140 et seq.
Parcel D Section 3150 et seq.
Parcel E Section 3160 et seq.
Parcel F Section 3170 et seq.

(d) Prior to applying for a permit or improvement plan any person that desires to comply with this ordinance may enter into a voluntary agreement with the Director. The voluntary agreement shall be signed as to form by the City Attorney and shall require the person to comply with the substantive requirements of this Article and any regulations adopted by the Director; require payment of fees; and provide for Director notification to the relevant department that the person has complied with this Article.

(ed) Compliance with this Article does not relieve any person of compliance with any applicable federal, state, regional or local law, and does not take the place of compliance with any requirement of any regulatory agency that has jurisdiction to enforce any legal requirement that this Article is intended to address.

SEC. 3103. - REPORTS BY DIRECTOR.

The Director shall monitor compliance with this Article and provide an annual summary of compliance with this Article to the Board of Supervisors.

SEC. 3104. - GENERAL WELFARE; NON-ASSUMPTION OF LIABILITY.

The degree of protection required by this Article is considered to be reasonable for regulatory purposes. This Article shall not create liability on the part of the City, or any of its officers or employees for any damages that result from reliance on this Article or any administrative decision lawfully made in accordance with this Article. All persons handling hazardous materials within the City should be and are advised to determine to their own satisfaction the level of protection desirable to ensure no unauthorized release of hazardous materials.

In undertaking to require Applicants to comply with this Article, the City and County of San Francisco is assuming an undertaking only to promote the general welfare. It is not
assuming, nor is it imposing on itself or on its officers and employees, any obligation for
breach of which it is liable for money damages to any person who claims that such breach
proximately caused injury.

All inspections specified or authorized in this Article shall be conducted at the discretion
of the City and nothing in this Article shall be construed as requiring the City to conduct any
such inspection nor shall any actual inspection made imply a duty to conduct any other
inspection.

SEC. 3105. - CONSTRUCTION ON CITY PROPERTY.

All departments, boards, commissions and agencies of the City and County of San
Francisco that authorize construction or improvements on land under their jurisdiction under
circumstances where no building, grading, street use or other permit or approval is required
pursuant to the San Francisco Municipal Codes shall adopt rules and regulations to insure
that the procedures set forth in this Article are followed. The San Francisco Redevelopment
Agency and the departments of Public Health, Public Works, and Building Inspection shall
assist other departments, boards, commissions and agencies to ensure that these
requirements are met.

SEC. 3106. - FORMER LANDFILL DISPOSAL AREAS.

Upon receipt of a site evaluation report from an Applicant, the Director, in consultation
with the Local Enforcement Agency and the California Integrated Waste Management Board, shall
determine whether the Prescribed Subsurface Activity Area is subject to the provisions of the
California Integrated Waste Management Act (Cal. Public Resources Code § 40000 et seq.)
as amended, relating to development on or near a former landfill disposal site. In making this
determination, the Director may consult with the Local Enforcement Agency and the California
Integrated Waste Management Board.

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(a) For any Prescribed Subsurface Activity Area or portion thereof that is subject to such provisions, the Director shall require the Local Enforcement Agency to approve proposed land uses and determine any necessary protective measures or requirements to the extent necessary to comply with California Code of Regulations, Title 27, Chapter 3, Subchapter 4, Article 6 (Section 20917 et seq.) and Subchapter 5 (Section 20950 et seq.), as amended.

(b) For any Prescribed Subsurface Activity Area or portion thereof that is located within 1,000 feet of a former landfill disposal site, but which is not subject to the above-referenced provisions of the California Integrated Waste Management Act, the Director shall review any proposed structures to ensure that the construction or use of the structure will not pose a threat to public health and safety or the environment. In making this determination, the Director shall consider the potential for adverse impacts on public health and safety and the environment, taking into account the following: the amount, nature and age of solid waste in the landfill disposal area; current and projected gas generation; effectiveness of existing controls; proximity of the proposed land uses to landfill disposal area; and other relevant geographic or geologic features. Based on these factors, the Director shall determine whether the structure must be designed and constructed in accordance with the following measures or requirements (or other design providing an equivalent degree of protection against gas migration into the structure): installation of a geomembrane or equivalent system with low permeability to landfill gas between the concrete floor slab of the structure and subgrade; installation of a permeable layer of open graded material of clean aggregate with a minimum thickness of 12 inches between the geomembrane and the subgrade or slab; installation of a geotextile filter to prevent the introduction of fines into the permeable layer; installation of perforated venting pipes, designed to operate without clogging, within the permeable layer;
construction of a venting pipe with the ability to be connected to an induced draft exhaust
system; installation of automatic methane gas sensors within the permeable gas layer, and
inside the structure to trigger an audible alarm when methane gas concentrations are
detected; and/or appropriate periodic methane gas monitoring, including monitoring inside
structures, with reporting requirements and a contingency and mitigation plan.

For purposes of this section, "structures" shall include: buildings, subsurface vaults,
utilities or any other buildings or areas where potential gas buildup would be of concern.

(c) If the Director determines under subsections (a) or (b) of this Section that protective
measures or requirements are necessary, the Director shall inform the relevant department in
writing that such measures or requirements must become conditions of the permit or
improvement plan.

SEC. 3107. - RULES AND REGULATIONS.

(a) Pursuant to the procedures specified in Section 1170 of the Health Code, the
Director may adopt rules, regulations and guidelines, including maps, necessary or
appropriate to implement this Article.

(b) Pursuant to Section 3107(a), the Director may subject additional geographic areas to the
requirements of this ordinance where those additional areas exhibit the same underlying conditions
and will be subject to the same restrictions as areas already subject to this ordinance.

(eb) Regulations promulgated by the Health Commission shall be maintained in the
Office of the Clerk of the Board of Supervisors.

(d) The Director shall maintain and update the GIS project files as site data is received
pursuant to this Article and provide public access to the GIS files and site data.

(ed) The Director shall maintain for public distribution a map that reflects the
boundaries of each Parcel of the Hunters Point Naval Shipyard. The map shall include former

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landfill disposal sites and a line representing the 1,000 foot perimeter from those sites. For
Parcel A, the Director shall adopt a map showing historic fill areas and utility lines existing
prior to the date of transfer of Parcel A from Navy ownership.

**SEC. 3108. - FEES.**

The Director is authorized to charge the following fees to defray the costs of document
processing and review, consultation with Applicants, and administration of this Article: for
fiscal year 2004-2005: (1) an initial fee of $514.00 upon submission of the site evaluation report; and
(2) an additional fee of $137.00 per hour for document processing and review and applicant
consultation exceeding three hours or portion thereof payable on an ongoing basis; for fiscal year
2005-2006: (1) an initial fee of $514.00; and (2) an additional fee of $145.00 per hour exceeding three
hours or portion thereof; for fiscal year 2006-2007: (1) an initial fee of $539.00; and (2) an additional
fee of $153.00 per hour exceeding three hours or portion thereof; Beginning with fiscal year 2007-
2008, for Fiscal Year 2010-2011, the fees are as follows: Application Fee = $592 for up to three hours
of document review/consultation and $197 for each additional hour, including site visits. No no later
than April 15 of each year, the Controller shall adjust the allowable fees provided in this Article
to reflect changes in the relevant Consumer Price Index, without further action by the Board of
Supervisors. In adjusting the fees, the Controller may round these fees up or down to the
nearest dollar, half-dollar or quarter-dollar. The Director shall perform an annual review of the
fees scheduled to be assessed for the following fiscal year and shall file a report with the
Controller no later than May 1st of each year, proposing, if necessary, an adjustment to the
fees to ensure that costs are fully recovered and that fees do not produce significantly more
revenue than required to cover the costs of operating the program. The Controller shall adjust
fees when necessary in either case.

**SEC. 3109. - VIOLATIONS.**

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In addition to any other provisions of this Article, fraud, willful misrepresentation, or any willfully inaccurate or false statement in any report required by this Article shall constitute a violation of this Article.

SEC. 3110. - ENFORCEMENT ACTIONS.
The Director shall have authority to administer and enforce all provisions of this Article and may enforce the provisions of this Article by any lawful means available for such purpose, including taking any action authorized pursuant to Article 21, Sections 1133(a)-(d), (f), and (h)-(i) of the Health Code.

SEC. 3111. - RESERVED.

SEC. 3112. - REMEDIES NOT EXCLUSIVE.
Remedies under this Article are in addition to and do not supersede or limit any and all other remedies, civil or criminal.

SEC. 31203113. - PARCEL-A INSTITUTIONAL CONTROLS.
An Applicant must comply with institutional controls included in the any deed conveying ownership of Parcel-A from the United States Navy to the San Francisco Redevelopment Agency pursuant to a final FOST or FOSET or included in any recorded covenant to restrict use of property containing environmental restrictions for Parcel-A to the extent such institutional controls apply to activities authorized by a permit or improvement plan subject to this Article. The Director will advise the relevant department of the specific requirement pursuant to the deed; require compliance with the institutional controls as a condition of the permit or improvement plan; and coordinate with the relevant department to monitor and enforce compliance with such institutional controls.

SEC. 31213114. - PARCEL-A SITE EVALUATION AND SITE MITIGATION FOR UNRESTRICTED RESIDENTIAL PROPERTY.

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This section applies to property determined by the applicable ROD to be suitable for unrestricted residential use that is transferred without a requirement for a durable cover or engineered cap.

(a) An Applicant must submit the following, satisfactory to the Director, as further specified in regulations adopted by the Director: (i) Site Evaluation Report; (ii) Dust Control Plan; (iii) Unknown Contaminant Contingency Plan; (iv) Disposal Plan (if applicable); (v) Site Specific Health and Safety Plan; (vi) stormwater and erosion control plan; (vii) Soil Importation Plan (if applicable), (viii) a determination of whether additional information is necessary to adequately characterize the Prescribed Subsurface Activity Area, and (ix) for areas that undergo demolition of structures with lead based paint, a scope of work to collect additional information as described in the regulations. The plans required by (ii)—(vix) must be specific to the activities to be conducted under a permit or improvement plan.

The Director shall review the site evaluation report and advise the Applicant on whether additional information is necessary to adequately characterize the Prescribed Subsurface Activity Area as follows:

1. In unrestricted residential parcels, if the Prescribed Subsurface Activity Area has already been evaluated in a Site Evaluation Report in the past and a Closure Report for the Prescribed Subsurface Activity Area was approved by the Director and the Closure Report included verification of: (i) the placement of at least one foot of clean imported fill or equivalent on areas with fill containing naturally occurring asbestos; or (ii) that the Area was cut into native bedrock and properly covered, if necessary, to address any concerns about naturally occurring asbestos; or (iii) that the Area has no naturally occurring asbestos concerns; then no site history, data evaluation, sampling or additional characterization will be necessary with respect to such Prescribed Subsurface Activity Area.

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(2) Unrestricted residential property that does not meet the criteria provided in subdivision (1) will be evaluated as follows:

(4A) Tier I Areas. If a portion of a Prescribed Subsurface Activity Area has been used continuously only for residential purposes, or is not located on historic fill (as defined in a map maintained by the Director pursuant to Section 3107(e)), or is not or has not been underlain by Navy utility lines (as defined on a map maintained by the Director pursuant to Section 3107(e)), and, in any case, there is no evidence that hazardous substances are present, no additional information or sampling will be necessary with respect to such portions of the Prescribed Subsurface Activity Area. The Director shall provide the Applicant and the relevant department with written notification that the Applicant has complied with the requirements of this Article as to such portions, and must comply with the plans listed in subsection (a)(ii)—(vi), as determined by the Director to be applicable, and all laws applicable to soil removal and off-site disposal.

(2B) Tier II Areas. In portions of Prescribed Subsurface Activity Area other than those described as Tier I, if the Director determines that such portions are adequately characterized, the Director shall provide the Applicant and the relevant department with written notification that the Applicant has complied with the requirements of this Article as to such portions, and must comply with the plans listed in subsection (a)(ii)—(vi), as determined by the Director to be applicable, and all laws applicable to soil removal and off-site disposal. If the Director determines that additional information is necessary to adequately characterize portions of the Prescribed Subsurface Activity Area, the Applicant must submit a proposed scope of work for a supplemental site evaluation in accordance with regulations adopted by the Director. Upon approval of the scope of work by the Director, the Applicant shall implement the scope of work and prepare a supplemental site evaluation report summarizing the new information.

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(Aa) If the supplemental site evaluation report shows that there is no existing contamination that exceeds the screening criteria established by the Director by regulation, the Director shall provide the Applicant and the relevant department with written notification that the Applicant has complied with the requirements of this Article, and must comply with the plans listed in subsection (a)(ii)—(vix), as determined by the Director to be applicable, and all laws applicable to soil removal and off-site disposal.

(Bb) If the supplemental site evaluation report shows that there is existing contamination that exceeds the screening criteria established by the Director and the Applicant wishes to retain that soil in the Prescribed Subsurface Activity Area or elsewhere within Parcel-A unrestricted residential property, the Applicant must prepare and submit to the Director a risk evaluation report and a site mitigation plan demonstrating the property can still be used for unrestricted residential purposes consistent with the FOST. The site mitigation plan must include the plans listed in subsection (a)(ii)—(vix), as determined by the Director to be applicable, and may include a deed notice, provided that any notice is consistent with use for unrestricted residential purposes. The Director must review and approve the risk evaluation report and the site mitigation plan. Upon approval of these documents, the Director shall provide the Applicant and the relevant department with written notification that the Applicant has complied with the requirements of this Article, and must comply with the site mitigation plan and all laws applicable to soil removal and off-site disposal.

(b) If the Director finds that the Applicant intends to remove soil from the Prescribed Subsurface Activity Area and dispose of that soil off-site, then the Director shall find that, as to that soil, no additional information is necessary and shall provide the Applicant and the relevant department with written notification that the Applicant has complied with the requirements of this Article, and must comply with the plans listed in subsection (a)(ii)—(vix).
as determined by the Director to be applicable, and all laws applicable to soil removal and off-site
disposal.

(c) Upon completion of the activity authorized by the permit or improvement plan, the
Applicant shall submit a closure report to the Director including: additional information or
data obtained, including information on unanticipated conditions; correcting any information
previously submitted; and certifying implementation of the plans listed in subsection (a)(ii)—
(niz), as determined by the Director to be applicable, any applicable risk management or site
mitigation plan and all laws applicable to soil removal.

SEC. 3130.—PARCEL B [RESERVED].

SEC. 3140.—PARCEL C [RESERVED].

SEC. 3150.—PARCEL D [RESERVED].

SEC. 3160.—PARCEL E [RESERVED].

SEC. 3170.—PARCEL F [RESERVED].

SEC. 3115. HPS PROPERTY WITH A DURABLE COVER REQUIREMENT.

(a) For property which is subject to a deed restriction or covenant to restrict use of
property containing an environmental restriction requiring a durable cover or engineered cap the
Applicant shall submit to the Director (i) Site Evaluation Report; (ii) Dust Control Plan; (iii) Unknown
Contaminant Contingency Plan; (iv) Disposal Plan (if applicable); (v) Site Specific Health and Safety
Plan; (vi) Soil Importation Plan (if applicable); (vii) Foundation Support Piles Installation Plan.
The Applicant will also submit verification to the Director of the following:

(b) for property that is currently subject to an Administrative Order on Consent (AOC) and
is therefore subject to the regulatory oversight of the EPA, the Applicant must submit proof that it is
complying with all environmental documents and restrictions, including without limitation as
applicable, the AOC, ETCA, CRUP, LUC RD, pre-Remedial Action Closeout Report (pre-RACR) Risk

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Management Plan (RMP), post-RACR RMP and Operation and Maintenance Plan (OMP). Proof of compliance can be: (i) a letter from EPA detailing the compliance; (ii) a report or checklist, as required by the document; or (iii) any other form acceptable to the Director demonstrating compliance.

(c) for property that is no longer subject to an Administrative Order on Consent (AOC) or that was never subject to an AOC, the Applicant must submit proof that it is complying with all environmental documents and restrictions that are applicable to the property, including without limitation as applicable, an ETCA, CRUP, pre-RACR RMP, post-RACR RMP, and OMP. Proof of compliance can be: (i) a report or checklist, as required by the document; or (ii) any other form acceptable to the Director demonstrating compliance.

(d) Whether or not an AOC is in effect for the property:

(i) if an RMP for the property includes a requirement for a Dust Control Plan and if EPA already has approved the RMP and Dust Control Plan, then the Applicant is required only to submit a copy of the approved Dust Control Plan and approval letter from EPA as proof of compliance with the Dust Control Plan requirement. However, if the EPA approved Dust Control Plan does not include specification of particulate monitoring equipment, site specific monitoring location requirements, or action levels then the Director may require submittal of this information.

(ii) if an RMP for the property includes a requirement for a Site Specific Health and Safety Plan and if EPA has already approved the RMP and the Site Specific Health and Safety Plan, then the Applicant is required only to submit a copy of the approved Site Specific Health and Safety Plan and approval letter from EPA as proof of compliance with the Site Specific Health and Safety Plan requirement.

(iii) if an RMP for the property includes a requirement for a Soil Importation Plan and if EPA has already approved the RMP and the Soil Importation Plan, then the Applicant is required only to
submit a copy of the approved Soil Importation Plan and approval letter from EPA as proof of compliance with the Soil Importation Plan requirement.

(e) Upon completion of the activity authorized by the permit or improvement plan, the Applicant shall submit a Closure Report to the Director including: additional information or data obtained, including information on unanticipated conditions; corrections as to any information previously submitted; and certifications of implementation of the plans listed in Section 3115 (a)(ii)-(vii), and all laws applicable to soil removal.

SEC. 3115. - SEVERABILITY.

If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this Article or any part thereof, is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Section or any part thereof. The Board of Supervisors hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional or invalid or ineffective.

Section 3. The San Francisco Health Code is amended by amending Section 804, to read as follows:

SEC. 804. - APPLICATION.

Any person proposing to construct, modify, operate and/or maintain a well or soil boring shall file with the Department a completed written application on forms approved by the Department and submit the appropriate application fees thirty (30) days prior to the proposed commencement of such activities. For well permits in Hunters Point Shipyard Parcel A, such permit application shall not be deemed complete until the department receives written
notification from the Director that the applicant has complied with all provisions of Article 31
that are required to be met prior to permit issuance. The completed application shall include,
without limitation, all of the following, when applicable:

(a) The name and address of the owner of the property on which the well or soil boring
is located.

(b) The name and address of the operator of the well or soil boring, if different from the
owner.

(c) The name and state license number of the general contractor, if applicable, and the
C-57 license number of the person responsible for the construction or modification of the well
or soil boring.

(d) The address at which notices issued in accordance to this Article are to be served,
if different from those specified in Subsections (a) and (b).

(e) A plot plan showing the proposed or actual location of the well or the soil boring that
is being constructed, modified, operated or maintained with respect to the following items
within a radius of five hundred feet (500') from the well or soil boring:

(1) Property lines, including ownership;

(2) Sewage or waste disposal system, including reserved waste disposal expansion
areas, or works for conveying sewage waste;

(3) The approximate drainage pattern of the property;

(4) Other wells, including abandoned wells;

(5) Access road to the well site;

(6) Any structures; and

(7) Any aboveground or below ground utilities.
(f) Location of the property with a vicinity map including the legal description of the property and the assessor’s parcel, block and lot numbers.

(g) The proposed use and the operating parameters of the well or soil boring, if applicable.

(h) The expected operational lifetime of the well or soil boring, if applicable.

(i) Location and classification by visual inspection of any solid, liquid, or hazardous waste disposal sites within five hundred feet (500’) of the proposed well or soil boring.

(j) Method of and a proposed schedule for the construction or modification of the well or soil boring.

(k) The construction parameters of the well or soil boring including, without limitations, the following information, if applicable:

(1) Total depth of the proposed well or soil boring;

(2) Depth and the type of casing to be used for the proposed well;

(3) Depth and the type of perforation; and

(4) Proposed depth and the type of annular seal.

(l) A plan for the safe and appropriate handling and disposal of drilling fluids and other drilling materials resulting from the proposed work.

(m) An approval from the San Francisco Public Utilities Commission if drilling fluids or water extracted from the well or soil boring will be discharged into the sanitary sewer.

(n) Submission of completion bonds, contractor’s bonds, cash deposits, or other adequate security of at least $10,000 to insure that all projects are performed completely and properly in a manner which protects the public health and safety and the integrity of the groundwater resources. The Director may, in his or her discretion, increase the amount of the
bond, cash deposit or security deemed necessary to protect the public health and safety and
the integrity of the groundwater resources.

(o) Submission of the appropriate filing fees as provided for in this Article.

(p) Any other information deemed necessary by the Department to ensure adequate
protection of groundwater resources.

Section 4. The San Francisco Health Code is amended by amending Section 1227 to
read as follows:

SEC. 1227. - KNOWN HAZARDOUS WASTE SITE; HUNTERS POINT SHIPYARD.

PARCEL A:

(a) If the soil sampling and analysis report or site history indicates that the property is
listed on the National Priorities List or the list of California Hazardous Substances Account Act
release sites, the applicant shall provide to the Director certification or verification from the
appropriate federal or State agency that any site mitigation required by the federal or State
agency has been completed and complete the certification procedure set forth in Section
1229. Certification by a competent State or federal agency that mitigation measures have
been properly completed shall constitute a conclusive determination and shall be binding
upon the Director.

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(b) Applicant's activities on Parcel A of the Hunters Point Shipyard, as defined in Article 31, are governed by Article 31 of the Health Code and not by this Article.

APPROVED AS TO FORM:
DENNIS J. HERRERA, City Attorney

By:
ANDREA RUIZ-ESQUIDE
Deputy City Attorney

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Ordinance amending Article 31 of the Health Code to extend, to the entire Hunters Point Shipyard area, the special permit processing requirements that now apply to Hunters Point Shipyard Parcel A to address potential residual contamination, and imposing fees to administer this Article; amending Sections 804 and 1227 of the Health Code to make conforming amendments; and making environmental findings.

July 27, 2010 Board of Supervisors - PASSED ON FIRST READING
Ayes: 10 - Alioto-Pier, Avalos, Campos, Chiu, Chu, Duffy, Elsbernd, Mar, Maxwell and Mirkarimi
Noses: 1 - Daly

August 03, 2010 Board of Supervisors - FINALLY PASSED
Ayes: 10 - Alioto-Pier, Avalos, Campos, Chiu, Chu, Duffy, Elsbernd, Mar, Maxwell and Mirkarimi
Noses: 1 - Daly

I hereby certify that the foregoing Ordinance was FINALLY PASSED on 8/3/2010 by the Board of Supervisors of the City and County of San Francisco.

Angela Calvillo
Clerk of the Board

August 3, 2010
Date Approved
I. EFFECTIVE DATE AND APPLICABILITY OF REGULATION

A. Authorization. Upon recommendation of the Director of the Department of Public Health, the Health Commission adopts this regulation pursuant to Section 3107(a) of Article 31 of the Health Code (Ordinances Nos. ) applicable to all Hunters Point Shipyard (HPS) parcels (under sections 3100 et seq.). These regulations are effective on the effective date of the ordinance. The Director of the Department of Public Health has delegated the authority to implement Article 31 to the Director of the Environmental Health Section. All references in the ordinance to the Director shall be to the Director of the Environmental Health Section.

B. Purpose. These regulations establish requirements for preparing plans and reports including: Site Evaluation, Supplemental Site Evaluation, Site Mitigation, Risk Evaluation and Closure Reports, as applicable, pursuant to Article 31, Section 3100 et seq. in connection with permit applications at HPS. These regulations also establish residual soil screening criteria for unrestricted residential property and minimum criteria for all applicable Site Evaluation Reports, Dust Control Plans, Unknown Contaminant Contingency Plans, Disposal Plans, Site Specific Health and Safety Plans Plans, and Foundation Support Piles Installation Plans and Serpentinite Cover Plans.

C. These regulations apply to the extent that a Prescribed Subsurface Activity Area is subject to these regulations as shown in the attached map adopted by the Director pursuant to Article 31, Section 3107(d).
II. REPORT PREPARER'S QUALIFICATIONS

A. For all reports required by ordinance or in these regulations, except the Site Specific Health and Safety Plan and the Foundation Support Piles Installation Plan, the preparer(s):

1. must have experience or educational background in site history, and
2. must be one or more of the following who is registered or certified by the State of California:
   a. Civil or Chemical Engineer;
   b. Geologist;
   c. Hydrogeologist;
   d. Environmental Assessor II; or
   e. Environmental Assessor I for site history only; or
   f. Equivalent registration as determined by the Director.

B. For Site Specific Health and Safety plans, the preparer(s):

1. must have experience in preparation of Health And Safety Plans for soil excavation, soil grading and soil disposal for soil that may contain contaminants listed on Table 1 and
2. must be a:
   a. Certified Industrial Hygienist or
   b. Equivalent registration as determined by the Director.

C. For the Foundation Support Piles Installation Plan, the preparer(s):

1. must have experience in designing and installing foundation support piles in potentially contaminated artificial fill materials and
2. must be a:
   a. Civil Engineer registered in the State of California or
b. Equivalent registration as determined by the Director.

III. SCREENING CRITERIA

The Director establishes the following residual soil screening criteria for unrestricted residential property:

<table>
<thead>
<tr>
<th>HAZARDOUS CONSTITUENT</th>
<th>LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inorganic persistent and bioaccumulative toxic substances listed in 22 Cal. Code Regs. §66261.24(a)(2)(A)</td>
<td>The more stringent of either the most recent California Human Health Screening Level or U.S. EPA Regional Screening Level for residential soil</td>
</tr>
<tr>
<td>Volatile organic toxic pollutants listed in 40 C.F.R. Part 122, Appendix D, Table II</td>
<td>The more stringent of either the most recent California Human Health Screening Level or U.S. EPA Regional Screening Level for residential soil</td>
</tr>
<tr>
<td>PCBs</td>
<td>The more stringent of either the most recent California Human Health Screening Level or U.S. EPA Regional Screening Level for residential soil</td>
</tr>
<tr>
<td>pH levels</td>
<td>Hazardous Waste levels for corrosivity as defined in 22 Cal. Code Regs. §66261.22</td>
</tr>
</tbody>
</table>
| Total petroleum hydrocarbons                                                         | For soil from 0 to 10 feet below ground surface:  
As gasoline  315 ppm  
As diesel 1,500 ppm  
As motor oil 1,850 ppm  
Deeper than 10 feet = consult with the Director. |
| Pesticides                                                                           | The more stringent of either the most recent California Human Health Screening Level or U.S. EPA Regional Screening Level for residential soil |
| Metals                                                                               | The more stringent of either the most recent California Human Health Screening Level or U.S. EPA Regional Screening Level for residential soil |
| Radionuclides                                                                        | USEPA Preliminary Remediation Goals for residential soil with two exceptions:  
Cs-137 = 0.113 pCi/g and Ra-226 = 1 pCi/g above background or may use 1.485 pCi/g if site specific background not available. |
| Semi-volatile organic compounds                                                     | The more stringent of either the most recent California Human Health Screening Level or U.S. EPA Regional Screening Level for residential soil |
| Polycyclic aromatic hydrocarbons                                                    | The more stringent of either the most recent California Human Health Screening Level or U.S. EPA Regional Screening Level for residential soil |
IV. DUST CONTROL PLAN, UNKNOWN CONTAMINANT CONTINGENCY PLAN, DISPOSAL PLAN, SITE SPECIFIC HEALTH AND SAFETY PLAN, SOIL IMPORTATION PLAN, FOUNDATION SUPPORT PILES INSTALLATION PLAN AND SERPENTINITE COVER PLAN.

Whenever a Dust Control Plan; Unknown Contaminant Contingency Plan, Disposal Plan, Site Specific Health and Safety Plan, Soil Importation Plan, Foundation Support Piles Installation Plan or Serpentine Cover Plan is required pursuant to Article 31, the Applicant shall prepare such plan to the satisfaction of the Director in accordance with the following minimum requirements:

A. Dust Control Plan: Shall be prepared in accordance with (a) Article 22B of the Health Code; (b) mitigation measures imposed by the Hunters Point Reuse Plan FEIR (2000) [specifically, Mitigation Measures 2.B and 8.A], and the Candlestick Point-Hunters Point Shipyard Phase II FEIR (2010), [specifically, Mitigation Measure MM HZ-15]; (c) DPW Order #171,378, as amended, and d) BAAQMD regulations pertaining to visible dust, and, if applicable, dust from asbestos or lead-based paint materials, as amended.

B. Unknown Contaminant Contingency Plan: Details on actions that will be taken if previously unknown contamination is found, as required in the Candlestick Point-Hunters Point Shipyard Phase II FEIR (2010), [specifically, Mitigation Measure MM HZ-2a.1];

C. Disposal Plans: Must include: a list of landfills and contact information to be used for offsite disposal; examples of tracking spreadsheets (or equivalent) that must include: date of excavation, location of excavation, quantity, soil type, bill of lading or manifest number, transporter and landfill; and comply with Hunters Point Reuse Plan FEIR Mitigation Measure 8.A.
D. Site Specific Health and Safety Plans: Must address the safety and health hazards of each phase of the site operation and include the requirements and procedures for employee protection, including: (1) a health and safety risk or hazard analysis for each activity in the work plan; (2) training requirements for employees, including use of PPE, work practices to minimize risk, use of engineering controls and equipment, medical surveillance requirements; (3) PPE to be used for each site task; (4) medical surveillance; (5) frequency and types of air monitoring, personnel monitoring, monitoring techniques and maintenance of equipment; (6) site control measures; (7) decontamination procedures; (8) an emergency response plan; and (9) spill containment program; and must comply with Hunters Point Reuse Plan FEIR Mitigation Measures 7.D, 7.E, 8.A (2000) and the Candlestick Point-Hunters Point Shipyard Phase II FEIR (2010), [specifically, Mitigation Measure MM HZ-2a.2]; and applicable Cal/OSHA rules and regulations in effect at the time the activity is being conducted.

E. Soil Importation Plan: The Soil Importation Plan must estimate the quantities of soil to be imported onto the site; describe the locations of use and describe the procedures to be used to ensure that imported soil does not exceed the established screening levels.

F. Foundation Support Piles Installation Plan: Shall be prepared in accordance with the Candlestick Point-Hunters Point Shipyard Phase II FEIR (2010), [specifically, Mitigation Measure MM HZ-5A]. The Foundation Support Piles Installation Plan shall be written for installing foundation support piles in artificial fill materials and shall specify: (1) that pilot boreholes for each pile will be drilled through the artificial fill materials so the piles can be installed without damage or misalignment and to prevent potentially contaminated fill materials from being pushed into the underlying sediments or groundwater or (2) an
equivalent process that can accomplish the same goal of installing the piles without damage or misalignment and to prevent potentially contaminated fill materials from being pushed into the underlying sediments or groundwater.

G. Serpentinite Cover Plan: This plan shall be prepared for unrestricted residential property in accordance with the Hunters Point Reuse Plan FEIR (2000) Mitigation Measure 8.A.

1. Prior to covering serpentinite fill with a clean, non-serpentinite, non-naturally occurring asbestos containing fill or an equivalent cover, the applicant shall submit a Serpentinite Cover Plan to the Director that contains descriptions and figures designating the different types of cover material that will be used.

2. If one foot of non-serpentinite or non-naturally occurring asbestos containing fill is to be used as a cover then the Serpentinite Cover Plan shall include a sampling and analysis plan that describes the protocols that will be used to verify that the one foot of cover does not contain naturally occurring asbestos. Once the sampling and analysis plan is approved by the Director then sampling shall be conducted to verify that the fill is acceptable as a cover material. Alternatively, imported fill may be used as cover provided that it has been tested for asbestos and verified not to contain asbestos, in accordance with the Soil Importation Plan prepared pursuant to paragraph IV.E. of this regulation. The sample results or verification of non-asbestos containing imported fill shall be submitted for the Director's approval. The results or verification can be submitted as part of the Closure Report or as a separate report.
3. A building, street, sidewalk, paving stones, rip rap or similar material, as determined by the Director, can be used as a cover in lieu of fill that is tested and verified to not contain naturally occurring asbestos.

4. The Serpentinite Cover Plan, or the Closure Report, shall describe how institutional controls will be implemented to prevent future excavation of the naturally occurring asbestos containing fill. The institutional controls may include, but shall not necessarily be limited to, compliance with Article 31, these regulations and their dust control plan requirements, as applicable, and must demonstrate that they will effectively prevent generation of dust, including dust containing naturally occurring asbestos, during future construction.

V. SITE EVALUATION REPORT

A Site Evaluation Report must include a project description, site history, data evaluation and determination as to whether additional information is necessary to adequately characterize the Prescribed Subsurface Activity Area prior to permit issuance as described below. All data must be provided in a form compatible with GIS, to the extent feasible. As described in Article 31 Section 3114 (a) (1), a Site Evaluation Report for a Prescribed Subsurface Activity Area that has an existing approved Closure Report and maps verifying placement of fill, as required, must include the project description information and a statement about the approved Closure Report and comply with the other requirements included in Article 31 (but need not include a site history, data evaluation, statement of adequate characterization, etc). As described in subdivision (A)(6) below, a Site Evaluation Report for a Prescribed Subsurface Activity Area subject to a durable cover requirement must include the project description information, reference appropriate CERCLA documents
and comply with the other requirements included in Article 31 (but need not include a site
history, data evaluation, statement of adequate characterization, etc.).


In addition to those requirements listed in Article 31, the Site Evaluation Report shall
contain all of the following, unless otherwise specified by the Director:

1. Project description, which must include:

   a. Block and lot numbers and address(es) of the proposed project and any
      subparcel designation;
   b. The permit being applied for, if any;
   c. The permit agency and application number assigned to the project, if
      applicable;
   d. The proposed workplan for the Prescribed Subsurface Activity Area, 
cross-referencing the Hunters Point Shipyard Redevelopment Plan and showing intended
land uses.
   e. The name, address, and phone number of the following:
      (i) Contractor(s);
      (ii) Property Owner(s);
      (iii) Project Coordinator(s) or Expediter(s);
      (iv) Architect(s); and
      (v) Site Evaluation Preparer(s)
   f. A plot map, to scale, of the proposed project, proposed land uses, and
the Prescribed Subsurface Activity Area. This plot map must include, but is not limited to, the
following:
      (i) SCALE: 200 ft to 1 inch Minimum; and
(ii) LOCATION(S) of all previous buildings and potentially contaminating uses.

g. A detailed description of the Prescribed Subsurface Activity Area, including but not limited to:

(i) Lineal foot dimensions (i.e. length, width, and depth);

(ii) Any excavation or disturbance of soils during all phases of construction – both onsite and within the sidewalk(s) adjacent to project;

(iii) Planned landscaping, if any, during or after major construction is completed; and

(iv) The relationship of the Prescribed Subsurface Activity Area to the total project and the perimeter of the property line.

h. A line showing a 1,000 foot radius from the closest former landfill disposal area, if applicable. The Director will provide the Applicant with the most current data available to the Director on former landfill disposal areas.

2. Site history, which must include a summary of land use, location and years of existence of the buildings, structures or operations, suspected chemical substances used or produced with probable years of use and production, and identification of previous environmental investigations and remediation for the Prescribed Subsurface Activity Area. The report must be prepared based on the following list of core documents available as part of the Administrative Record for the Hunters Point Shipyard Site (located at the City of San Francisco’s Main Library, 100 Larkin Street). The core documents include:

a. Final Basewide Environmental Baseline Survey, Revision 01, September 4, 1998

b. Draft Final Parcel A Remedial Investigation Report, September 22, 1995

c. Parcel specific Record of Decision (ROD) that describes the Prescribed
Subsurface Activity Area. Currently the following RODs exist:

- Parcel A ROD, dated November 16, 1995
- ROD Amendment for Parcel B, dated January 2009
- ROD for Parcel D-1, dated September 2009
- ROD for Parcel G, dated February 2009
- ROD for Parcel UC-1, dated August 2009
- ROD for Parcel UC-2, dated in December 2009.

d. Parcel specific Finding of Suitability for Transfer (FOST) or Early Transfer that describes the Prescribed Subsurface Activity Area. The Parcel A Finding of Suitability to Transfer was published on October 14, 2004.


  f. Parcel specific Remedial Design Documents that exist for the Prescribed Subsurface Activity Area. Currently the following Remedial Design documents exist:

- Final IR7/18 Remedial Design dated January 2010
- Draft Parcel B Remedial Design dated February 2010
- Draft Parcel G Remedial Design dated February 2010

3. Data Evaluation, which must include a summary of existing soil and groundwater information and data, chemical plume maps and hydraulic gradient maps for each Prescribed Subsurface Activity Area. This data must be compared to the values listed in Table 1.

4. A determination of whether the sample results are greater than the values in Table 1. This determination need not be a direct comparison but may include the same or equivalent data analysis/methodology used by the Navy in evaluating the Hunters Point Shipyard, including statistical analysis, risk assessments and risk management.
5. The Applicant must demonstrate that the Prescribed Subsurface Activity Area is adequately characterized. In making this determination the Applicant shall use one of the following methods or an alternative method, providing the rationale for such determination:

   a. Existing sampling data.

   A. Number of samples based on existing data meets the grid size of no greater than 75 feet for a lot size of 100 feet by 125 feet or no greater than 150 feet for lot size exceeding 100 feet by 125 feet for each Prescribed Subsurface Activity Area.

   B. For former subsurface Navy utility lines: 1 sample every 150 linear feet

   C. Samples were collected at one foot less than the proposed depth of the excavation/grading and at a minimum of one sample for each 5-foot vertical interval.

   D. Samples were tested for chemicals of concern.

   b. For Tier I areas, the Applicant may make this determination by demonstrating that the criteria for Tier I areas is met.

   c. For Tier II areas, if the Applicant determines that potential unknown hazardous substances of concern can be identified through visual observation during the activity requiring the permit (e.g., grading or excavation), the Applicant shall submit, for approval by the Director, a protocol setting forth the steps that will be taken to visually identify those hazardous substances during the subsurface activity; sampling and analysis; management methods; record-keeping and reporting; and other appropriate measures that will be taken if hazardous substances are identified during the subsurface activity. Based on concurrence with the determination and approval of the protocol, the Director shall provide written notification to the Applicant and the permit-issuing agency that the Applicant has complied with the requirements of Article 31.
6. Notwithstanding the previous subdivisions, an Applicant submitting a Site Evaluation Report for property with a durable cover requirement may reference the ROD prepared under CERCLA for the parcel in which the Prescribed Subsurface Activity Area is located, or other core documents listed above containing relevant site history and data for the Prescribed Subsurface Activity Area, in lieu of the submissions otherwise required under subdivisions 2 through 5 of this subsection.

B. Site Evaluation Report Certification Statement.

The Site Evaluation Report shall contain a certification statement from the Site Evaluation Report preparer(s), that, "In my professional judgment and in accordance with standards of practice for my profession, the Site Evaluation Report, including the determination of whether additional information is needed to adequately characterize the area (as applicable), contains all required information, meets the requirements of all applicable law and properly evaluates the required information."

VI. SCOPE OF WORK TO COLLECT ADDITIONAL INFORMATION AND/OR DATA

If the Director, upon review of the Site Evaluation Report for any unrestricted residential property determines that additional information and/or data is necessary then Applicant must prepare and submit for the Director's approval a scope of work to collect additional information and/or data. Unless approved by the Director, soil samples must be collected and analyzed for all applicable constituents of concern which exceed the Table 1 values.

A. Minimum Standards for the Contents of the Scope of Work.

The Scope of Work shall contain the following:
1. A plot map, to scale, of the Prescribed Subsurface Activity Area that has been determined to require additional investigation. This plot map must include, but is not limited to, the following:

   SCALE: 50 ft to 1 inch Minimum (unless another scale has been previously approved for use)

   LOCATION(s) of all previous uses

   LOCATION(s) of Prescribed Subsurface Activity Area

   LOCATION(s) of previous (historical) and proposed sampling bores and depths

2. A discussion of the type (discrete or composite) and number of samples to be taken and the rationale behind the sample location, sample type and number proposed.
   
a. Number of samples must meet a grid size of no greater than 75 feet for a lot size of 100 feet by 125 feet or no greater than 150 feet for lot size exceeding 100 feet by 125 feet for each Prescribed Subsurface Activity Area.

   b. For former Navy subsurface utility lines, one sample every 150 linear feet.

   c. Any alternative plan, if proposed, must be accompanied by the rationale for such proposal.

3. A discussion with rationale of field sampling protocol and quality assurance/quality control procedures.

4. A Health And Safety Plan supporting the collection of additional information and/or data, if not already detailed in the Site Specific Health and Safety Plan already submitted.

B. Requirements Related to Lead Based Paint in Soil

For unrestricted residential property, soil in areas that undergo demolition of lead based paint impacted buildings must be sampled in accordance with HUD Guidelines. Chapter 5, page 24 and 25 or http://www.hud.gov/offices/lead/lbp/hudguidelines/Ch05.pdf
using a 400 ppm standard for all areas rather than the standard otherwise applicable using
Table 1. A plan for collection and analysis of soil samples for lead must be submitted as a
Scope of Work to Collect Additional Information. For all HPS property, if all soil in areas that
undergo demolition of lead based paint impacted buildings is subject to a durable cover or an
engineered cap deed restriction or covenant to restrict use of property, then no further action
is required. If this durable cover or engineered cap deed restriction or covenant to restrict
use of property is removed and if the reuse is changed to unrestricted residential reuse then
a plan for collection and analysis of soil samples for lead shall be submitted.

C. Scope of Work to Collect Additional Information Certification Statement.

The Scope of Work to collect additional information shall include a statement from the
Scope of Work preparer(s), that, "In my professional judgment and in accordance with the
standards of practice for my profession the Scope of Work to Collect Additional Information
describes the conditions for the Prescribed Subsurface Activity Area, contains all required
information, meets the requirements of all applicable law and properly evaluates the required
information."

VII. SUPPLEMENTAL SITE EVALUATION REPORT

A Supplemental Site Evaluation Report must be prepared following implementation of
the Scope of Work to Collect Additional Information and/or Data.

A. Minimum Standards for the Contents of the Supplemental Site Evaluation

Report.

1. The Supplemental Site Evaluation Report shall contain the following with all
data provided in a form compatible with the GIS, to the extent feasible:
a. A scale map with sample locations plotted with contaminants at concentrations exceeding the values listed in Table 1, respective concentrations, and depths indicated, and showing proposed land uses;

b. On the map, or a separate table, a comparison of the laboratory results and the analyte appropriate value of constituents of concern compared to the values listed in Table 1.

c. An analysis of all of the information and/or data in the Prescribed Subsurface Activity Area:

(i) a determination of whether the Prescribed Subsurface Activity Area is adequately characterized;

(ii) a determination of whether the sample results are greater than the values listed in Table 1. This determination need not be a direct comparison but may include the same or equivalent data analysis/methodology used by the Navy in performing the cleanup of the Hunters Point Shipyard, including statistical analysis, risk assessments and risk management.

B. Supplemental Site Evaluation Report Certification Statement.

The Supplemental Site Evaluation Report shall include a statement from the preparer that, "In my professional judgment and in accordance with standards of practice for my profession, the Supplemental Site Evaluation Report describes the conditions for the Prescribed Subsurface Activity Area, contains all required information, meets the requirements of all applicable law and properly evaluates the required information."

VIII. RISK EVALUATION REPORT

In unrestricted residential property, if the Applicant wishes to retain soil which has been required to be evaluated under the Site History and Data Evaluation Process that
exceeds the values in Table 1 in the Prescribed Subsurface Activity Area or elsewhere within
unrestricted residential property, the Applicant shall prepare a Risk Evaluation Report, which
may be combined with the Site Mitigation Plan. The Risk Evaluation Report must conclude
that the property may be used for unrestricted residential use consistent with the FOST for
the unrestricted residential property. The Risk Evaluation Report may use the same or
equivalent data analysis/methodology used by the Navy during the cleanup of the Hunters
Point Shipyard.

IX. SITE MITIGATION PLAN

A. When required. The Applicant must prepare a Site Mitigation Plan if the
Applicant wishes to retain soil that exceeds the values in Table 1 within the unrestricted
residential property.

B. Minimum Standards for the Contents of the Site Mitigation Plan. The Site
Mitigation Plan shall contain the following:

1. A detailed description of the contemplated mitigation measures, including, if
necessary, a Dust Control Plan, an Unknown Contaminant Contingency Plan, Disposal Plan,
Site Specific Health And Safety Plan, and Soil Importation Plan and deed notice language (if
necessary).

2. If Applicant determines that no mitigation measures are necessary then the
rationale for such determination.

3. A list of requirements for all future contractors/owners/developers to include in
their written Health and Safety Plan for all site workers who may be exposed to hazardous
soils left in-place.

C. Site Mitigation Plan Certification Statement.
The Site Mitigation Plan shall include a statement from the preparer that, "In my professional judgment and in accordance with standards of practice for my profession, either no mitigation is required or the mitigation measures identified, if completed, will mitigate the significant environmental or health and safety risks caused or likely to be caused by the contamination left in the soil and that the property may be used for unrestricted residential use."

X. CLOSURE REPORT

A closure report must be prepared following completion of activities authorized by a permit subject to Article 31.

A. Minimum Standards for the Contents of the Closure Report. The Closure Report shall list the permit numbers (i.e. from DBI, DPW or DPH) or assigned Article 31 case numbers covered by the Closure Report and describe how and when the Dust Control Plan, Unknown Contaminant Contingency Plan, Disposal Plan, Site Specific Health And Safety Plan, Soil Importation Plan, Foundation Support Piles Installation Plan, Serpentinite Cover Plan, and Site Mitigation Plan, as applicable, were implemented and any changes that were made during implementation. The Report shall include any drawings, figures and pictures necessary. The Closure Report must include completed tracking spreadsheets (or equivalent) for disposal of excavated soil. The Closure Report shall include all environmental sampling data in a form compatible with GIS, to the extent feasible.

B. Closure Report Certification Statement.

The Closure Report shall include a statement from the preparer that, "In my professional judgment the control, safety, and mitigation measures identified in the Dust Control Plan, Unknown Contaminant Contingency Plan, Disposal Plan, Site Specific Health And Safety Plan, Soil Importation Plan, Foundation Support Piles Installation Plan,
Serpentinite Cover Plan, and Site Mitigation Plan, as applicable, and all other requirements of applicable law were implemented as described in this report and in accordance with standards of practice for my profession.”

XI. MAPS.

To assist with compliance with the ordinance and these regulations, the attached map shows the Parcel boundaries, the historic fill areas, former landfill disposal sites and a line representing the 1,000 foot perimeter from those landfill sites. For unrestricted residential property, the map illustrates the Navy utility lines suspected to still be in place on the property.

By: [Signature]
Dr. Mitchell Katz
Director, San Francisco Department of Public Health

Resolution No.

By: [Signature]
Mark Morewitz
Executive Secretary to the Health Commission