

NOTICE OF EXEMPTION

To: Office of Planning and Research
State Clearinghouse
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From: Department of Toxic Substances Control
Northern California Permitting and Corrective
Action Branch
8800 Cal Center Drive
Sacramento, California [95826

Project Title: Interim Measures Work Plan for the Area I Burn Pit – Solid Waste Management Unit (SWMU) 4.8, Santa Susana Field Laboratory.

Project Location: The Boeing Company (Boeing), Woolsey Canyon Road, Simi Hills (unincorporated)

County: Ventura County

Project Description:

The goal of the Interim Measures (IM) for the Area I Burn Pit (SWMU) is to remove known elevated concentrations of dioxins, chromium, and other chemicals in soils at the SWMU and to better characterize the SWMU by addressing data gaps. The objective of the IM is to remove an estimated 6,500 cubic yards of soil containing elevated concentrations of dioxins and chromium, as well as other chemicals that are co-located. The interim measures will be conducted in two phases. Phase I includes the removal of the highest concentrations of dioxins and chromium detected in soil. Phase II includes post excavation confirmation sampling, exploratory trenching of up to 1,000 cubic yards, and additional soil sampling and analysis in areas across and adjacent to the SWMU. The work will be conducted by Haley & Aldrich, Inc. and the Department of Toxic Substances Control (DTSC) will provide oversight.

Background

The SWMU is located in Area I at the Santa Susana Field Laboratory (SSFL). The Thermal Treatment Facility (TTF) Interim Status Facility, which is located within the SWMU boundaries, will be addressed under a separate closure plan. The SWMU formerly consisted of several earthen and concrete-lined ponds, a control center and two explosives storage sheds. Concrete ponds were historically used for burning wastes. The SWMU was primarily used for the destruction of explosive and flammable wastes by open burning. Wastes treated in the SWMU primarily included solvents and fuels generated from other areas at the SSFL. The SWMU was operated intermittently between approximately 1958 and the early 1980s. Elevated concentrations of dioxins and chromium in soil have been identified at the SWMU. IM actions were prompted to reduce the potential for migration of elevated dioxins and chromium in soil. The scope of work is described in *Interim Measures Work Plan for the Areal Burn Pit – Solid Waste Management Unit (SWMU) 4.8, Santa Susana Field Laboratory*, prepared by Haley & Aldrich, Inc. for Boeing.

Previous Soil Sampling

Since the early 1980's, multiple remedial investigations and sampling activities have been conducted at the TTF Interim Status Facility and the SWMU. Chemicals identified in these prior investigations included metals, volatile organic compounds (VOCs), total petroleum hydrocarbons, and semi volatile organic compounds such as pentachlorophenol. However, more recent investigations in March 2003 and April 2005 also detected dioxin and perchlorate.

Dioxin, toxicity equivalency quantity (TEQ) value, was detected at concentrations as high as 5,257.4 picograms per gram (pg/g) in Earth Pond 2 (Excavation A on Figure 1), in the southwestern corner of the SWMU. Concentrations of chromium were identified near the former fire training area of the SWMU (860 milligrams per kilogram; mg/kg) and in the southeastern portion of the SWMU (Excavation B on Figure 1). At Earth Pond 3, in the southeast corner of the SWMU, trichloroethene (TCE) was detected at a concentration of 190 mg/kg at 4 - 4.5 feet below land surface (bls). Petroleum hydrocarbons and fuel hydrocarbons (C7-C28 as diesel) were detected at concentrations of 6,500 and 4,400 mg/kg, respectively. Analytes detected at other areas of the SWMU include lower concentrations of dioxins, perchlorate, VOCs, petroleum hydrocarbons, cyanide, and metals. At Burn Pit 2 of the TTF Interim Status Facility, perchlorate was detected in a soil leachate sample at a concentration of 360 micrograms per liter (µg/L).

Project Activities

The implementation of the IM will be conducted in two separate phases.

Phase I: The first phase will focus on removing the highest concentrations of dioxins and chromium detected in soil, noted as excavations A', B', and C' in Figure 1. The implementation of the first phase of the IM at the SWMU will include the excavation, removal, transportation, and disposal of between 3,780 and 6,500 cubic yards of impacted soil. Excavation activities will include the following:

- Removing soil excavation areas A', B', and C' as shown in Figure 1 to the depth of bedrock which typically ranges from 0 to 5 feet below ground surface,
- Dust and vapor monitoring, dust suppression using imported water source,
- Erosion control measures including plastic sheeting, sand bags, silt-fencing and hydro-mulch,
- Waste profiling sample collection,
- Direct hauling of known-contaminated soils to an off-site disposal facility,
- Temporary stockpiling of soil requiring further characterization prior to disposal, and
- Loading and transport of characterized, temporary stockpiled soil to offsite disposal facility.

The interim cleanup goal for dioxin targets dioxins TEQs greater than 13.1 pg/g and is based on one already determined for the Former Sodium Disposal Facility. The IM clean-up goal for total chromium is 185 mg/kg which is 5 times the level established in the Standardized Risk Assessment Methodology (SRAM) (Revision 2; SRAM) yet below the EPA preliminary remediation goals. Three excavation areas (A'-C') of the SWMU are delineated, based on the concentration and distribution of dioxins and chromium in soil and other co-located chemicals. The highest concentrations of dioxins and chromium detected at the SWMU are the targets of the excavations and will be the focus of IM activities. Excavations will occur at three locations as shown on Figure 1.

Excavation A' will be located in the southwestern portion of the SWMU at Earth Pond 2. The excavation activities will target dioxins TEQs greater than the IM clean-up goal. The excavation dimensions are anticipated to be about 3,850 square feet in area, excavated to bedrock approximately 1.5 to 2.5 feet bls, yielding a volume ranging from 500 to 1,000 cubic yards.

Excavation B' is located in the west-central portion of the SWMU. The excavation activities will target chromium clean-up goals. The proposed excavation is anticipated to be approximately 1,500 square feet, excavated to bedrock about 1 to 5 feet bls, yielding a volume ranging from 280 to 500 cubic yards.

Excavation C' is located in the southeastern portion of SWMU. The excavation activities will target chromium and dioxin using an IM clean-up goals previously mentioned. The proposed excavation is anticipated to be approximately 16,200 square feet, excavated to bedrock ranging from 0 to 5 feet bls, yielding a volume ranging from 3,000 to 5,000 cubic yards.

The analytical data suggest that areas with concentrations of dioxins and chromium that exceed the IM clean-up goals are co-located with other chemicals, including TCE, petroleum hydrocarbons, and metals with concentrations. Samples from these areas will be analyzed for the constituents previously detected in this area that are listed in the SRAM. Following the removal of soil to the IM cleanup goals, the boundary and depths of the excavations will be surveyed and documented for future reference in the event further removal is needed as part of the final site-wide cleanup objectives.

Air monitoring will be conducted during excavation activities per Ventura County Air Quality Management District area guidelines. The depth of excavations may be up to 7 feet below ground surface based on detected concentrations of chemicals and visual field evidence such as stained soil and burned debris. Soil from the excavations will be directly hauled to the appropriate disposal facilities, binned, or placed on and covered by plastic sheeting and the sheeting held in place with sandbags. Temporary stockpiles will not remain in place for more than 60 days. It is expected that the excavation activities will be completed and stockpiles will be removed by November 1, 2006. If stockpiles are present after this date, then the following tasks shall be implemented to minimize incidental run-off from temporary stockpiles: 1) place temporary stockpiles in roll-off bins, or 2) underlay and overlay stockpiles with plastic sheeting, secure all plastic sheeting in place, and berm stockpile area.

Excavated soils will be properly characterized according to California and Federal hazardous waste regulations. Excavated soils that are determined to be non-hazardous waste will be shipped to a Class III landfill in accordance with applicable regulations. If any excavated material is determined to be hazardous waste, it will be shipped to Kettleman Hills or other Class I landfill. The open holes remaining from excavation areas A', B', and C' will be: 1) graded to match surrounding contours, 2) backfilled with clean on-site borrow soil, 3) backfilled with clean crushed rock, or 4) any combination of 1, 2, or 3.

Phase II: Phase II includes 1) post excavation confirmation sampling, 2) exploratory trenching of 600 to 1,000 cubic yards of soil, and 3) additional soil sampling and analysis in areas across and adjacent to the SWMU. Confirmation sampling will be conducted in excavation areas A', B', and C' as shown on Figure 1. The purpose of the sampling activities is to evaluate the effectiveness of the soil excavations. In addition, exploratory trenching will be conducted at eleven locations as shown on Figure 1 to investigate suspect contamination areas in and around the SWMU. The trenches will be advanced to depth of bedrock or the maximum depth allowable by the excavation equipment. Additional soil sampling will also be conducted in investigation areas A through E (Figure 1) to delineate the extent of other potential contaminants. In the event chemicals are detected above the IM clean up goals, then the affected soil will be removed and disposed of at a licensed landfill. The open holes remaining from the exploratory trenches will be: 1) backfilled with soil concentrations below clean up levels from the respective trench, 2) backfilled with clean on-site borrow soil, or 3) backfilled with clean crushed rock. Some activities from Phase I and Phase II may occur simultaneously. If, after the completion of Phase II, it is determined that additional soil removal is necessary, additional interim measures will be prepared for DTSC review and approval.

Name of Public Agency Approving Project: Department of Toxic Substances Control

Name of Person or Agency Carrying Out Project: Boeing

Exemption Status: (check one)

- Ministerial [PRC, Sec. 21080(b)(1); CCR, Sec. 15268]
- Declared Emergency [PRC, Sec. 21080(b)(3); CCR, Sec.15269(a)]
- Emergency Project [PRC, Sec. 21080(b)(4); CCR, Sec.15269(b)(c)]
- Categorical Exemption: [State type and section number]
- Statutory Exemptions: [State code section number]
- General Rule [CCR, Sec. 15061(b)(3)]

Exemption Title: Title 14, California Code of Regulations, Section 15061 (b)(3).
With certainty, no possibility of significant environmental effect.

Reasons Why Project is Exempt: The first phase of IM activities at the SWMU, which include excavating, field monitoring, and soil profiling and disposal, are intended to remove elevated concentrations of dioxins and chromium in soil and will be performed in a manner absent of potential environmental effects. Control measures that will limit environmental effects to insignificant levels include the following:

1. The duration of Phase I will be limited to 4 weeks, and duration of Phase II will be limited to 4 weeks.
2. Excavated soils will be characterized according to California and Federal hazardous waste regulations.
3. In the event on-site borrow soils will be required to supplement the backfill material or contoured excavation areas, soil from an existing permitted borrow source will be used. Due to the upcoming rainy season, borrow soil will be stockpiled prior to November 1, 2006. This task will assure the availability of backfill material for trenches in the event stockpiled trench material cannot be reused as backfill. Also, this will minimize the need to work in the borrow area in potentially rainy/muddy conditions to obtain borrow soil late in the construction season.
4. After completing the excavation activities, and before the rainy season, the excavations will be secured with plastic sheeting, sand bags, silt-fencing and hydro-mulch to prevent migration of impacted soils.
5. Appropriate dust suppression techniques will be implemented during soil excavation, transfer, and transportation activities. Dust suppression techniques will include fine spraying of water on the active excavation areas, and covering non-active excavations and stockpiles with plastic. Dust suppression measures will be increased if visible dust is observed during excavation and loading.
6. Ambient air quality will be monitored for organic vapor and dust for the protection of employees and subcontractors in accordance with the standard operating procedures and action levels stated in the Site-specific Health and Safety Plan and *RCRA Facility Investigation (RFI) Work Plan Addendum* (Appendix E, Health and Safety Plan, Ogden; September 1996).

7. Calculated emissions for heavy duty diesel trucks idling at the work site and in route to respective landfills were below the respective pounds per day significant threshold levels established by the Ventura County Air Quality Management District (VCAQMD), the South Coast Air Quality Management District (SCAQMD) and the San Joaquin Air Quality Management District (threshold in tons per year). This assessment was conducted using SCAQMD California Environmental Quality Act Handbook, VCAQMD guidelines, and emission factors. As determined by the air emissions calculations, truck traffic leaving the site will not exceed 20 per day. Trucks and vehicles idling at the work site will not exceed VCAQMD pound per day thresholds
8. The project activities will not impact plant or animal habitats. A biological specialist identified the Santa Susana tarplant (a sensitive plant species) and the coast horned lizard (a sensitive wildlife species) in the SWMU, but not in areas where work activities will be conducted. A pre-construction survey will be conducted by a qualified biologist to monitor resources to verify that the species are not present in the ground disturbance area. In addition, other activities will include fencing off of Santa Susana tarplant prior to field activities, training of field personnel to identify and keep distance from subject sensitive biological resources, and continued weekly monitoring by a qualified biologist during field activities.
9. The project activities will not impact cultural resources. Three previously recorded cultural resources are located within 1 mile of the SWMU, however, none are within or adjacent to the project site. This information is based on a May 16, 2006 site visit by qualified cultural resource specialist. Twenty cultural resource studies have been previously conducted within 1/8 mile of the SSFL. None of these surveys identified cultural resources near or in the Area I Burn Pit. While not expected to be found, if cultural resources are identified, then fieldwork will stop until a qualified archaeologist who will be on-call assesses the resources and approves further work.
10. The project activities will not impact paleontological resources. Two geologic units underlie the SWMU project area: Upper Cretaceous Chatsworth Formation and Quaternary alluvium. There are no previously recorded vertebrate fossil localities within the project boundaries. However, there are two documented fossil localities nearby that yield scientifically significant remains of several fossil sharks from the same geologic units that underlie the project area in other portions of the SSFL. While not expected to be found, if fossils are identified, then fieldwork will stop until a qualified paleontologist who will be on-call assesses the resources and approves further work.
11. The project location is remote. Approximately 3,000 feet of undeveloped area separates the work area and the nearest residential area eliminating public disturbance from heavy equipment noise or potential dust generated during IM activities.
12. No earth work or stream alteration activities are proposed in drainages, thus no permits are required through the Army Corp of Engineers and the US Department of Fish and Game.
13. Fieldwork will not affect surface water quality. Due to the short duration of the excavation activities proposed at the SWMU, work will be completed during the dry season. After the completion of excavation activities, surface water controls will include temporary barriers to prevent surface water runoff from entering excavations. Plastic sheeting, sand bags, silt-fencing, and hydro mulch will be used to prevent migration of impacted soil.
14. Groundwater quality will not be affected by the excavation activities because:
 - a) groundwater was not encountered in soil sampling borings and exploratory borings to bedrock in the proposed excavation areas;
 - b) the elevation of groundwater at monitoring well RD-03, located approximately 50 feet downgradient and south of the nearest IM excavation (Excavation C'), was measured to be 1,737.89 feet in January 2006 and is below the maximum anticipated excavation depth of approximately 1,741 feet; and
 - c) excavation will take place during the dry season.
15. No effect on worker safety is anticipated from working in excavations of 1 to 4 feet deep. If excavations exceed this depth, appropriate side-wall modification measures will be taken to insure stability. A worker health and safety plan will also provide for personal protective equipment and working conditions to assure overall worker safety during investigation work.

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Figure 1

Area I Burn Pit boundary, excavation locations (A, B, and C), and exploratory trench locations (purple rectangles)

