NEGATIVE DECLARATION

Department of Toxic Substances Control
Site Mitigation and Brownfields Reuse Program
5796 Corporate Avenue
Cypress, California 90630

Subject: ☒ DRAFT ☐ FINAL ☐ MITIGATED

Project Title: East Slag Pile Landfill Area Remedial Action Plan

State Clearinghouse No.:

Project Location: 13301 San Bernardino Avenue Fontana, California

County: San Bernardino

Project Description:

The project involves the remediation of the East Slag Pile (ESP) Landfill Area, which is owned by CCG Ontario, LLC (CCG) and located within Operable Unit No. 3 on the former Kaiser Steel Mill site in Fontana, California. The project site is located approximately 40 miles east of downtown Los Angeles, 15 miles west of downtown San Bernardino, and 30 miles northeast of central Orange County. The ESP Landfill Area is located on a portion of the former Kaiser Steel Mill site in an unincorporated area of San Bernardino County, south of the foothills of the San Gabriel Mountains. It is bounded by Valley Boulevard to the south, a commercial warehouse to the west, Mulberry Ditch to the east, and the Consolidated Waste Cell, Chrome Ponds and Wastewater Treatment Plant to the north. The CCG draft Remedial Action Plan (RAP), January 2007, and the Health Risk Assessments (Shaw, 2006) are incorporated by reference.

Site Background and History

Operations at the former Kaiser Steel Mill included coke manufacturing, coke by-product recovery, iron production, primary steel production and steel finishing and fabricating operations. After the mill closed, the larger Kaiser Site was divided into four operable units pursuant to a 1988 Consent Order. Operable Units No. 1 and 2 have been remediated, and remedial action is pending in Operable Unit 4. The ESP Landfill Area is part of Operable Unit No. 3. The East Slag Pile, on which the ESP Landfill Area lies, was used to store slag, a by-product of iron and steel production, from the inception of plant operations in 1942 until 1983. Slag is a rock-like material consisting mostly of calcium oxide (lime).

A landfill operated on the surface of the East Slag Pile as early as 1943 to dispose of the industrial wastes generated by the steel mill. The ESP Landfill operated under California Solid Waste Management Board Permit No. 36-SS-018, issued on November 2, 1979. Waste Discharge Requirements for the facility were issued as Santa Ana Regional Water Quality Control Board (SARWQCB) Order No. 79-112, adopted on August 31, 1979. The site was permitted as a Class III landfill to receive inert wastes, including industrial inert solids, blast furnace gas washer water sludge, waste firebricks, construction debris, metal scraps, and wood. Very little waste was disposed of at the site after 1983, and no waste was accepted at the site after June 30, 1985; however, in 2001 and 2002 two instances where contaminated materials were relocated onsite during ongoing remediation activity. The first case involved materials encountered during aggregate-mining operations at the nearby West Slag Pile. Approximately 135,000 cubic yards of waste materials was placed over the ESP landfill. The second instance involved an area of dispersed waste removed from a lobe of discontinuous piles of waste material located in the northwestern portion of the landfill. Approximately 175,000 cubic yards of waste materials was placed over the ESP landfill.

Historical records indicate that approximately 59,100 cubic yards of blast furnace gas washer water sludge and 532,000 cubic yards of industrial wastes (including coke waste) were disposed of at the ESP Landfill. These wastes included the following types of sludges: limy; oily; and cooling tower sludges. The landfill also contains an estimated 600,000 cubic yards of other solid wastes (such as bricks, scrap metal, plastic, concrete rubble, wood, gravel, and soil). The total volume of waste within the landfill is approximately 1,510,000 cubic yards.

The ESP Landfill Area consists of a 25.5-acre landfill and a 10.9-acre surrounding area. The entire ESP Landfill Area is located on part of the ESP, a steep-sloped, flat-topped, man-made hill. The ESP covers approximately 90 acres. Several investigations of the ESP (Shaw, 2006) were conducted from 1989 to 2003, including a 1990 Phase I Remedial

Investigation, a 1990 Water Quality Solid Waste Assessment Test, a 1990 and 1997 sampling and testing of landfill waste, a 1990 Phase 2 Remedial Investigation, a 2000 Supplemental Investigation of ESP Waste Management Unit Western Boundary, and a 2003 Landfill Soil-Gas Survey.

Borings extending 20 feet below the landfill and into native soils have been analyzed for pH, cyanide, metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), electrical conductivity and chloride. Surface soils have been analyzed for pH, electrical conductivity, cyanide, metals, and PAHs. No organic chemicals were detected in the native soil samples. Levels of some metals (lead and zinc) exceed hazardous waste criteria in samples collected from sludge waste. The concentrations of metals routinely associated with slag, particularly chromium, are at background levels, lead and zinc which are also characteristic of slag, are at elevated levels in native surface soil samples. These elevated levels could be the result of runoff from the ESP. In addition, a low pH value (5.4) found in a native surface soil sample could be the result of runoff from the ESP, considering that the native soils are alkaline (ranging from 8.5 to 12.2).

A soil-gas survey has been conducted to determine the nature and extent of LFG and VOCs in the ESP Landfill Area. Methane was detected at a concentration equal to or greater than 5 percent by volume (which is equal to or greater than the lower explosive limit [LEL] of methane in air) in certain samples, primarily those located in the central portion of the landfill. Benzene was detected at concentrations of up to 1,400 µg/L within the same area where methane was detected.

Collectively, the results of the various studies conducted at the site suggest that there were two areas of the landfill: the primary landfill area and an area of dispersed waste extending northwest from the primary landfill. The dispersed waste consisted of discontinuous piles of material with thicknesses of up to 12 feet. As described above, during previous grading activities, these dispersed wastes were removed and placed in the primary landfill area. The primary landfill extends to a maximum depth of 43 feet. The landfill materials consist of a variety of waste sludges, coke waste and mixed debris (bricks, wood, scrap metal, and concrete rubble). The western boundary of the main landfill was defined by test pits and borings.

As described above, impacted waste material was encountered in 2002 during grading operations to excavate slag as part of the ongoing development along the western edge of the East Slag Pile, outside the ESP Landfill Area. Discolored soil and slag with a strong odor were found just west of the western boundary of the ESP Landfill Area and south of the Consolidated Waste Cell area of Operable Unit No. 4. The impacted material is thought to have been entirely removed and placed into the West Chrome Pond. However, further investigation is planned at the base of the ESP's west slope to confirm this removal.

Five human health risk assessments (Shaw, 2006) were conducted for the site in 1991, 1995, 2002, 2003 and 2005. These risk assessments found arsenic, beryllium, benzene, chromium, lead, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), toluene, and zinc to be the chemicals requiring risk management. The media of concern are the industrial waste materials in soil and the landfill gas, including volatile organic compounds (VOCs). Future site workers are the potential receptors of greatest concern. If no remedial actions are taken, adults could be exposed to chemicals of concern through direct contact and inhalation of wind-eroded wastes. In soil-gas, benzene and methane are the chemicals of greatest concern, by posing a threat to a person working on top of the site in a building, if one were allowed. The 2005 risk assessment concluded that the cancer risk from benzene in the worst case (maximum concentration of 1400 micrograms per liter) is 4×10^{-3} (four excess cancers in 1,000 population), and in the reasonable maximum exposure (concentration of 250 micrograms per liter) is 7×10^{-4} (seven excess cancers in 10,000 population).

The human health risk assessments concluded that engineering and administrative controls to prevent wind and water erosion of the wastes, and to prevent people from coming in contact with the wastes, should be implemented. Landfill gas collection is also necessary, to prevent VOC exposure and ignition hazards from excessive methane accumulation. It was also concluded that land use restrictions prohibiting future residential use of the ESP are appropriate.

An Ecological Risk Assessment Report was prepared by Pacific Southwest Biological Services (PSBS) and reviewed by DTSC's Human and Ecological Risk Division (HERD). The report stated that the surface layers of the East Slag Pile Landfill Area consist primarily of slag. This is a very coarse mixture and does not have the consistency of soil. Because this type of material covers almost the entire site surface, the potential for chemicals to be contacted via the direct contact exposure pathways by animal species (that is, ingestion of the waste materials, dermal absorption of chemicals, and the inhalation of fugitive dust) is considered to be negligible and represents an incomplete exposure pathway. For water, the site offers no contact with surface water; therefore, exposure to onsite sediments is an incomplete exposure pathway. Likewise, no migration of surface water exists at the site; therefore, surface water runoff represents an incomplete exposure pathway. Groundwater is located at an average depth of approximately 380 feet beneath the ground surface. Consequently, onsite groundwater use by ecological species is also considered to be an incomplete exposure pathway.

Based on the site ecological investigation, it was concluded that the ecological receptors would have limited potential to contact the waste materials and chemicals, air, water, sediments or affected biota at the East Slag Pile Landfill Area. The exposure pathways relevant for ecological receptors are incomplete.

The Project is being conducted pursuant to the California Health and Safety Code, Division 20, Chapter 6.8 and the Consent Order between CCG and DTSC dated August 10, 2000.

The Project involves:

- Constructing, monitoring and maintaining a remedial cover (a.k.a. "cap") which will permanently cover the contaminated soil within the 36.4-acre ESP Landfill Area;
- Operating and maintaining a landfill gas collection system for the ESP Landfill Area; and
- Recording a deed restriction to limit future land uses on the site.

The Project is expected to take approximately 16 weeks to complete and is currently scheduled to begin in May 2007, after the design plans are approved.

A future project in an adjacent area is planned during the implementation of the subject project. The City of Fontana will be installing a new sewer line within San Bernardino Avenue beginning in March 2007 and continuing through December 2007. One lane of San Bernardino Avenue will be closed during this period. Potential cumulative effects analyses of air quality and traffic impacts are included in the relevant sections below.

Remedial Alternatives Considered:

1. No Action
2. Prescriptive Cover (Title 27) with Deed Restrictions, Landfill Gas Collection System
3. Monolithic Cover with Deed Restrictions, Landfill Gas Collection System
4. Enhanced Monolithic Cover with Deed Restrictions, Landfill Gas Collection System
5. Prescriptive Cover (Title 22) with Deed Restrictions, Landfill Gas Collection System

Selected Alternative: Alternative 4, Enhanced Monolithic Cover with Deed Restrictions, Landfill Gas Collection System

<u>Elements of the Project</u>:

1. *Construction*

a. *Remedial Cap*

The cap will cover the 25.5-acre landfill and a 10.9-acre surrounding area (total of 36.4-acres) and be designed to include the following layers:

- a foundation layer at the base of the cover, consisting of proof-rolled waste or soil that provides a firm base for constructing the rest of the cover;

- a minimum 3-foot thick soil layer with low permeability which will be compacted to a medium density at a water content somewhat below the soil's field capacity;

- an upper layer consisting of one of the following:

  - on the slopes, a minimum 1-foot thick vegetative layer, which is less densely compacted and amended with nutrients as needed to support vegetation growth, and which includes materials to limit biotic intrusion; or

  - on the relatively flat top after grading (about 19 acres), an asphalt-concrete pavement for vehicular parking or storage that is designed and constructed to prevent direct contact with the waste, and to reduce the permeability of the surface to minimize chemical migration to groundwater.

The cap will prevent wind and water erosion of the wastes, prevent people from coming into contact with the wastes, and minimize infiltration which could cause chemical migration to groundwater.

b. *Landfill Gas Collection System*

The gas collection system will be designed to be an active system. Horizontal collection trenches will be constructed under the final cap foundation layer and piped to a blower for extraction of the landfill gas. The landfill gas will be monitored for methane and volatile organic compounds (VOCs) and treated using carbon canisters, if necessary.

The actual field work, which includes limited grading and construction of an access road and is subject to the site's *Environmental Grading and Construction Plan*, is expected to be completed within 9 months. The engineering specifics of the remedial cap and gas collection system will be determined in the design plans. The remedial cap will be designed to prevent direct contact with the waste, control infiltration of rainfall through the waste/soil interface, and prevent rainfall runoff from spreading waste beyond the landfill boundary. The gas collection system will be designed to control, if not eliminate, the emission of LFG. The gas collection system will be operated actively at the outset and the need for continued active operation will be determined based on the maintenance and monitoring criteria discussed below.

2. *Maintenance and Monitoring of the Cap and Gas Collection System*

The monitoring and maintenance of the cap and gas collection system will be conducted in compliance with an Operation and Maintenance Plan (O&M Plan) between CCG and DTSC. The O&M Plan for the project will be developed after the design plans are approved by DTSC and will include criteria for conversion of the LFG collection system from active to passive. LFG probes will be installed around the perimeter of the landfill to monitor the effectiveness of the cap and gas collection system.

3. *Deed Restriction*

As a part of this project, the site will also be required to record a land use covenant that prohibits the development of the site for certain uses such as residential housing, day care centers, long-term care hospitals, or public or private schools.

The remedial activity proposed is a limited project restricted to the boundaries of the project site. Contractors will use appropriate traffic control to direct trucks in and out of the site, minimizing the chance of interfering with local community traffic. The actions of capping the existing landfill and installing a LFG control system are unlikely to require the excavation or handling of hazardous wastes. There will be a worker health and safety plan in place, but there are not foreseen conditions that would require an emergency response plan or emergency evacuation plan.

The Worker Health and Safety Plan elements will include the following; responsibilities; project hazards and control procedures; general hazards and control procedures; personal protective equipment; site control; decontamination; site monitoring; employee training; medical surveillance; exposure control plan; and emergency procedures. Air monitoring will be included as part of the site monitoring section. Trigger levels will be as follows:

<u>Volatile organic compounds by PID (sustained concentrations above background in the breathing zone)</u>

0 – 10 ppm	Level D required
10 – 100 ppm	Increase ventilation and upgrade to Level C
> 100 ppm	Stop work and contact project manager and health & safety officer for guidance

<u>Combustible gas by hand-held instrument (sustained concentrations at the source)</u>

< 10% LEL	Acceptable conditions
> 10% LEL	Ventilate area and contact project manager and health & safety officer for guidance

<u>Finding Of Significant Effect On Environment</u>: *(An Initial Study supporting this finding is attached.)*

Based on the information presented in the Initial Study, I find that the proposed project could not have a significant effect on the environment.

<u>Mitigation Measures:</u>

DTSC has determined that the project does not require any mitigation measures beyond those incorporated as part of the project description.

Branch Chief Signature	Date

Branch Chief Name	Branch Chief Title	Phone #