



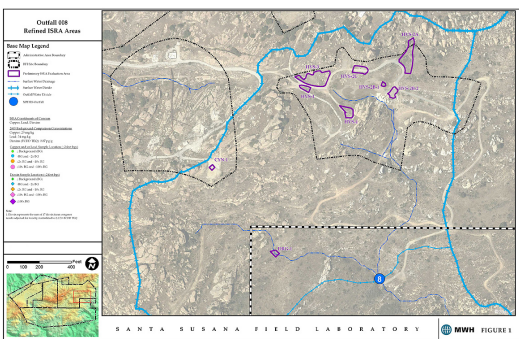
## Interim Source Removal Action (ISRA) - Outfall 8



**View of Outfall 8**

- Storm water discharges at Santa Susana are regulated under a permit issued by the Los Angeles Regional Water Quality Control Board (Water Board). The permit imposes numeric limits at multiple outfalls or drainage locations where storm water runoff leaves the site.
- In an effort to meet the Water Board's stringent water quality standards – which are for some constituents, like dioxin, a thousand times below drinking water standards – Boeing installed sophisticated drainage controls and multi-stage filtration systems at the outfall locations.
- However, compliance at Outfalls 8 and 9 has posed significant challenges, largely due to the very steep terrain and the exceptionally large size of the watersheds.

- Last year, the Water Board issued an Interim Source Removal Action (ISRA) and ordered Boeing and NASA to remove contaminated soil at Outfalls 8 and 9, respectively, under an Interim Source Removal Action (ISRA).
- The goal of the ISRA is to identify, evaluate and remediate specific areas of contaminated soil in those outfalls in order to reduce the concentrations of constituents of concern, like dioxins and metals, that exceed permit limits.
- While the Regional Board oversees the ISRA work, they work closely with the agency responsible for the final, site-wide cleanup of the site, the California Department of Toxic Substance Control (DTSC), along with Ventura County, the California Department of Fish and Game and the U.S. Army Corps of Engineers.
- This targeted cleanup is consistent with, but does not replace, Boeing's commitment to a comprehensive and expeditious site-wide cleanup that protects human health and the environment.



**Targeted soil removal locations in Outfall 8**

- Soil removal at nine targeted locations in Outfall 8 started in August 2009 and will continue through the end of the year.
- Two to four feet of topsoil will be removed; the amount necessary to ensure that constituents of concern are not carried by storm water into drainages. An estimated 3,000 – 4,000 cubic yards of soil will be removed in Outfall 8.
- Following soil removal, additional sampling will be conducted to ensure that elevated contamination levels are no longer present.
- Also, Boeing will utilize the expertise of the Santa Susana Surface Water Expert Panel, a group of independent experts advising the Water Board and Boeing. They will assist in developing stabilization measures that will prevent erosion during the rainy season as well as enhance long term restoration of these disturbed areas.

### Soil Sampling & Removal

- In order to identify target areas for soil removal, Boeing reviewed past storm water and soil analyses and examined records of historical operations. Boeing then conducted supplemental sampling to determine the specific areas for soil removal.
- Additionally, to ensure environmentally sensitive areas were not disturbed, Boeing conducted biological and cultural surveys before any new soil sampling started.



**Soil removal at Outfall 8. Water is used as a dust control measure when soil is removed from the outfall and loaded into transportation trucks.**

## Transportation & Disposal

- Before any soil is removed from the site, it is screened, sampled and characterized to determine the presence of any chemical or radiological contaminants. No radiological contamination has been found in Outfall 8.
- Prior to shipping the non-hazardous soil to an offsite landfill, the soil is wrapped in plastic, placed into a dump truck and covered with a tarp.



**Soil removal from Outfall 8 is loaded into a lined transportation truck.**



**Soil is wrapped in plastic - "burrito wrapped" - and the bed of each truck is securely tarped.**



**Each truck is inspected prior to receiving authorization to leave Santa Susana.**



**Tour of Outfall 8**

## Community Involvement

- The ISRA implementation process has included multiple opportunities for public review and input – from attending Water Board meetings, to providing ISRA Work Plan comments, to going on site visits at Santa Susana to view the soil removal areas.
- Documents describing the ISRA project – including the Water Board-approved ISRA Work Plan, Health and Safety Plan, Soil Management Plan, Transportation Plan and Storm Water Pollution Prevention Plan – are available on Boeing's website:  
[http://www.boeing.com/aboutus/environment/santa\\_susana/isra.html](http://www.boeing.com/aboutus/environment/santa_susana/isra.html).

## About Santa Susana

- Santa Susana is located on 2,850 acres of land in the Simi Hills area of eastern Ventura County. In addition to its spectacular natural beauty, the former field laboratory site is also the location of great biological, cultural and historical significance – including riparian woodlands, prehistoric pictographic art and rocket engine test stands.
  - The site was home to rocket engine testing that supported virtually every major space program in U.S. history, including the earliest satellites and the Space Shuttle. In addition, energy-related research, testing and development projects were conducted at Santa Susana.
- To date, we have removed 50,000 cubic yards of contaminated soil, analyzed more than 10,000 soil and groundwater samples, installed drainage controls at outfall locations and installed more than 400 monitoring wells on and off site.
  - Santa Susana sits within a rare and vital wildlife corridor that connects the Sierra Madre Ranges of Los Padres National Forest, to the Santa Monica Mountains and the Pacific Ocean. According to a South Coast Wildlands 2008 report, this 125,000-acre "Santa Monica-Sierra Madre Connection" is one of the few coastal-to inland linkages remaining in California's South Coast Ecoregion.
  - In an effort to preserve this vital wildlife corridor, Boeing initiated discussions with government agencies, community organizations and conservation groups on a land use plan to preserve its 2,400 acres of land at Santa Susana as open space and voluntarily donate it to serve the public for future generations.

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