



The Boeing Company  
Santa Susana Field Laboratory  
5800 Woolsey Canyon Road  
Canoga Park, CA 91304-1148

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Via FedEx

July 27, 2010  
In reply refer to SHEA-110199

Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Attention: Mr. Peter Rafferty

Subject: Interim Source Removal Action (ISRA) 2010 Boeing Soil Borrow Area submitted in response to California Water Code Section 13304 Order (NPDES No. CA0001309, CI No. 6027, SCP No. 1111, SITE ID No. 2040109)

Dear Mr. Rafferty:

The Boeing Company (Boeing) wishes to provide the attached Interim Source Removal Action (ISRA) 2010 Boeing Soil Borrow Area, as referenced in the May 1, 2009 Final ISRA Work Plan, for your review.

If you have any questions or require anything further, please contact Lori Blair at 818-466-8741.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Gallacher".

Tom Gallacher  
Director, Santa Susana Field Laboratory  
Environment, Health, and Safety

Attachment: ISRA 2010 Boeing Soil Borrow Area

cc: Ms. Cassandra Owens, RWQCB  
Mr. Buck King, DTSC  
Mr. Allen Elliott, NASA



**BUILDING A BETTER WORLD**

# MEMORANDUM

TO: Art Lenox/Lori Blair, Boeing

DATE: July 23, 2010

CC: Allen Elliott, NASA

REF: 1008208

FROM: Alex Fischl/Ben Stewart, MWH

SUBJECT: ISRA 2010 Boeing Soil Borrow Area

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This memorandum summarizes the physical and chemical characteristics of the soil borrow area selected for the 2010 Interim Source Removal Action (ISRA) Areas within Outfall 009 on Boeing property at the Santa Susana Field Laboratory (SSFL), Ventura County, California. Approximately 6,500 cubic yards (in-situ) are planned to be excavated during 2010 from nine ISRA Areas on Boeing property. An estimated 2,000 cubic yards (in-situ) of soil will be required to restore excavations to prevent the ponding of stormwater, provide topsoil sufficient to allow revegetation, and/or re-establish pre-ISRA drainage conditions. The following criteria were considered during the soil borrow area identification process:

- The proximity of the soil borrow area to former operational areas and other disturbed areas, favouring areas furthest away;
- The location at SSFL compared to where the soil will be used as fill, favouring areas located within the same watershed and on property owned by the same owner;
- The access to the area by earthmoving equipment and trucks, favouring areas with easy access;
- The volume of soil available for use, favouring areas with more available soil;
- The biological resources located within the soil borrow area, favouring areas with fewer special status species such as the coastal live oak and tar plant; and
- The concentrations of constituents compared to Risk-Based Screening Levels (RBSLs), favouring areas with constituents below RBSLs.

The sections below describe the physical and chemical characteristics of the selected soil borrow area, including its location, physical features, proximity to operational areas, and the analytical results of soil samples.

### Soil Borrow Area Physical Characteristics

The selected soil borrow area is located on Boeing property within the Outfall 009 watershed approximately 1,400 feet south of the LOX Plant and approximately 1,250 feet northeast of the Alfa (Figure 1). The soil borrow area is easily accessible via a dirt road that is currently used to access monitoring well RD-47. The soil borrow area is an east-west trending feature located within a small valley (Figure 2). The soil borrow area is approximately 450 feet long, has a maximum width of approximately 120 feet, and has a surface area of approximately 29,000 square feet (0.66 acres). The volume of available soil within the soil borrow area is estimated to be 8,000 cubic yards, based on the depth bedrock was encountered in the borings advanced during chemical characterization. Tar plant and oak trees are not present within the soil borrow area, although three oak trees are located near the southeast boundary of the area.

A review of aerial photographs was performed to assess if site operations or other activities occurred that could have potentially impacted the soil. The two sources of aerial photographs reviewed were the USEPA-Lockheed (1997) Historical Photos (USEPA, 1997) and the CH2M HILL Aerial Photos (CH2M HILL, 1998). A total of 16 aerial photos were reviewed ranging in date from 1953 through 2009. The results of the aerial photograph review are presented in Table 1, and a summary of the features observed in the aerial photographs is presented in Table 2. Representative photographs from each decade between 1950 and 2000 are included as an attachment, with key features identified.

The review of aerial photographs provided insight into the history of the operational activities in the area and the dirt road that passes by the soil borrow area. Construction of the operational areas in the vicinity of the soil borrow area had not begun by 1953. The dirt road existed prior to 1953 and connected to Service Area Road to the north, but was likely not used frequently because it was poorly defined. By 1957, operational areas, including the LOX Plant, ELV, and Alfa, were constructed or were being constructed, and the dirt road had been widened and connected Service Area Road to Skyline Drive. By 1965, a dirt road loop was present, a section of which runs through the western portion of soil borrow area. The purpose of this road is unknown, but it may have been used as a turnaround for vehicles travelling between Service Area Road and Skyline Drive. By 1972, this dirt road loop was becoming overgrown with vegetation. Around that time, another dirt road spur was constructed to the north of the dirt loop road. The purpose of this spur is also unknown. By 1980, both the dirt loop road and the spur

were overgrown with vegetation. By 1993, the portion of the dirt road beginning due west of the soil borrow area and connecting to Skyline Drive to the south was overgrown with vegetation. Also in 1993, well RD-47 was installed due west of the soil borrow area, the vegetation clearance associated with the installation of this well is present in the 1995 photograph. There are no new observations after 1995.

During site walks of the soil borrow area in June 2010, the presence of a former dirt road or path that is currently overgrown by vegetation was present through the proposed soil borrow area. The former dirt road begins at the western side of the soil borrow area and continues to the east. At the east end of the former road, several partially buried wood planks were observed, some of them partly burned (likely due to the Topanga Fire). This road was not observed in any aerial photographs, and it is believed that both the presence of the road and the wood planks are related to activities associated with the installation of well RD-47.

### **Soil Borrow Area Chemical Characteristics**

As stated above, an estimated 2,000 cubic yards of soil will be required to restore the 2010 ISRA excavations on Boeing property. Twenty soil samples from 10 locations were proposed to characterize 2,000 cubic yards of soil, one sample for every 100 cubic yards. The 10 boring locations are shown on Figure 2. Two discrete soil samples were planned at each sample location, including one surface soil sample (0 to 0.5 feet bgs) and one subsurface soil sample (4.5 to 5 feet bgs). A total of 17 soil samples were collected from the 10 boring locations, deeper samples were not collected from locations ISBS0001, ISBS0002, and ISBS0003 because bedrock was encountered at 3 feet bgs or less. Sample analysis included the following:

- Metals by EPA Methods SW6010B, SW6020, SW6020A, and SW7471A;
- Dioxins by EPA Method 1613B;
- Fluoride by EPA Method 300.0;
- pH by EPA Method 9045C;
- PCBs by EPA Method SW8082;
- TPH by EPA Method 8015B, modified;
- VOCs by EPA Method SW8260B;
- SVOCs by EPA Method SW8270C with selective ion monitoring (SIM); and
- Percent Moisture by Standard Method SM2540G.

The soil borrow area analytical sampling results are presented in Table 3. All results were below ISRA SRGs, background concentrations, and RBSLs. Metals and dioxins results were all detected below ISRA SRGs and consistent with background concentrations. PCBs, TPH, VOCs, and SVOCs were not detected at concentrations above the method reporting limits. In one sample, TPH was estimated below the standard method reporting limit. Eight SVOCs, including anthracene, benzo(b)fluoranthene, bis(2-ethylhexyl)phthalate, chrysene, di-n-butylphthalate, fluoranthene, phenanthrene, and pyrene, were detected in one or more samples at estimated concentrations below the standard method reporting limit.

### Summary

Based on review of available information in addition to characterization sampling results, no chemical operations are believed to have occurred within or in the vicinity of the soil borrow area. The physical and chemical characteristics of the soil borrow area presented above support the selection of the soil borrow area for use as backfill for ISRA Areas within Outfall 009 on Boeing property.

### ATTACHMENTS

Figure 1	2010 Boeing Soil Borrow Area Location
Figure 2	2010 Boeing Soil Borrow Area Sample Locations
Table 1	2010 Soil Borrow Area Aerial Photograph Analysis
Table 2	2010 Soil Borrow Area Aerial Photograph Review Feature Summary
Table 3	2010 Soil Borrow Area Sample Results

Aerial Photographs – 1953, 1957, 1965, 1978, 1988, 1995, and 2008

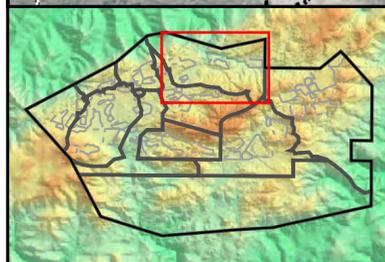
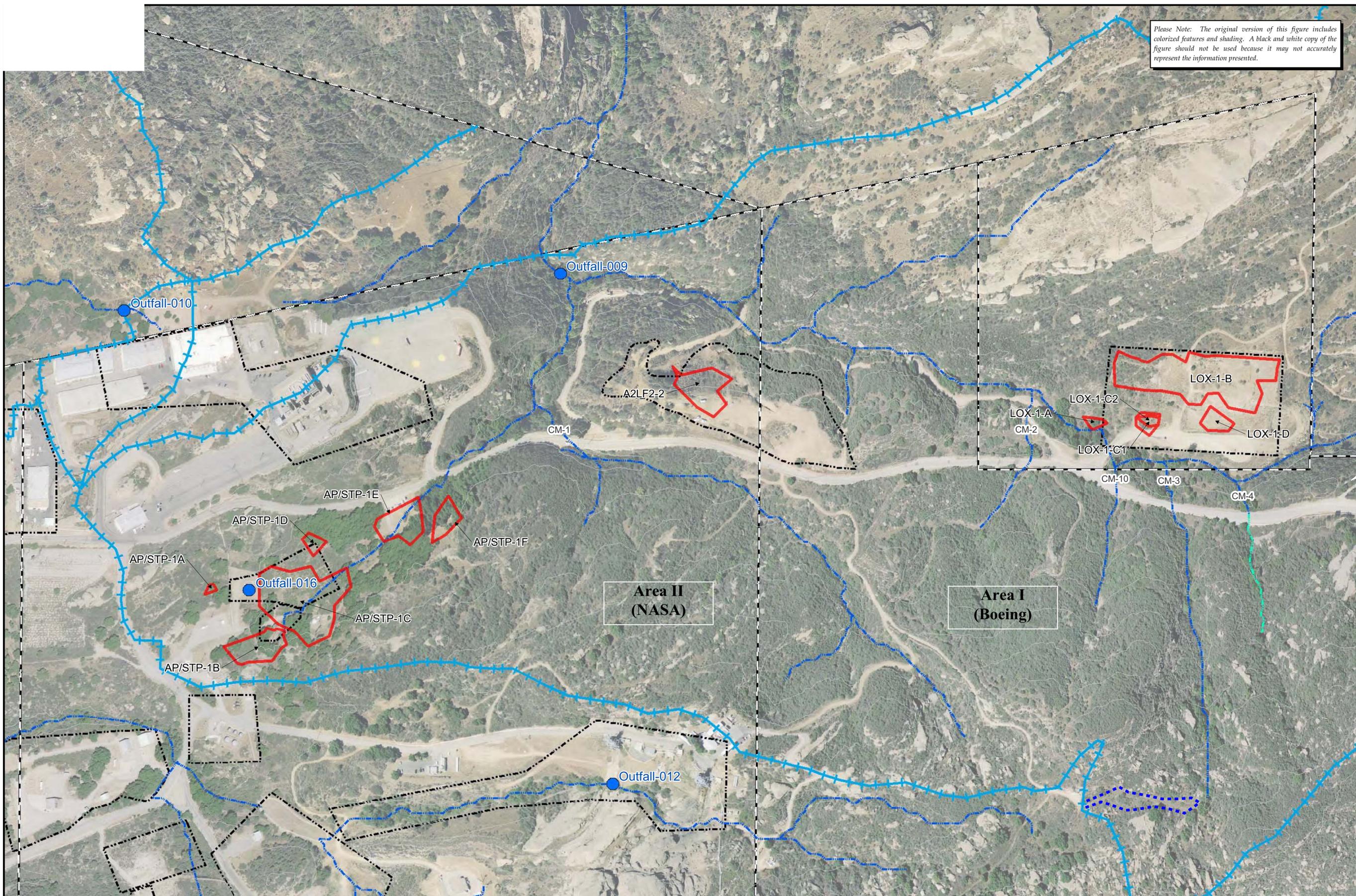
### REFERENCES

CH2M HILL, 1998. Aerial Photos 1947 to 1998 CH2M Hill.

USEPA, 1997. Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory, Ventura County, California. May.

## FIGURES

Please Note: The original version of this figure includes colorized features and shading. A black and white copy of the figure should not be used because it may not accurately represent the information presented.



**Base Map Legend**

- Administrative Area Boundary
- RFI Site Boundary
- Surface Water Divide
- Drainage
- Non Jurisdictional Surface Water Pathway
- Elevation Contour

**ISRA Evaluation Areas**

- ISRA Evaluation Area

Approximate extent of 2010 Boeing Soil Borrow Area

**Outfall 009**  
**2010 Boeing Soil Borrow Area Location**  
**SANTA SUSANA FIELD LABORATORY**

Document: ISRA\_Plots\_SP\_Bio\_Aerial\_NASA.mxd Date: May 27, 2010

1 inch = 250 feet

0 250 500 Feet

**MWH** **FIGURE 1**

**Outfall 009  
2010 Boeing Soil Borrow Area  
Sample Locations**

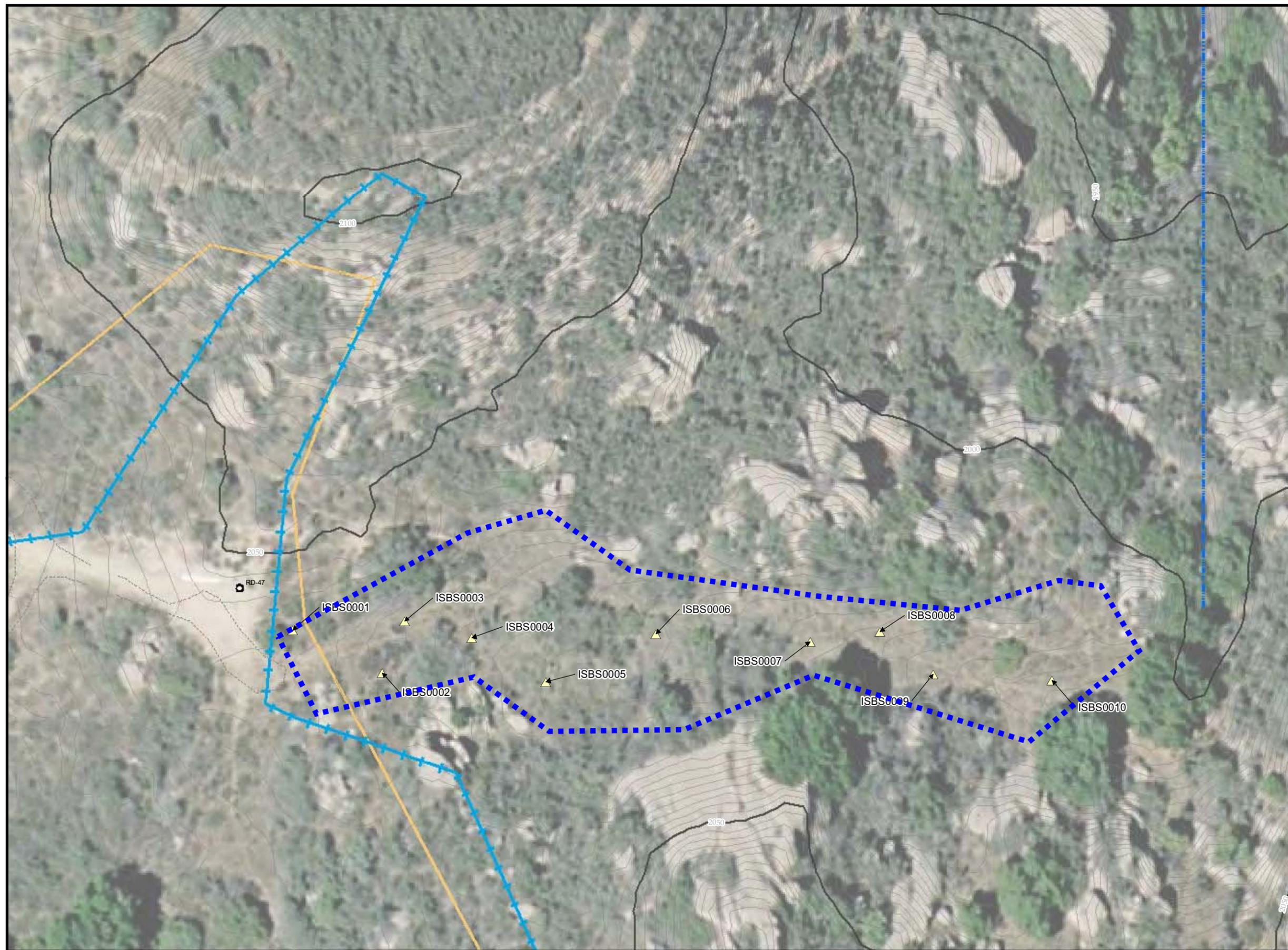
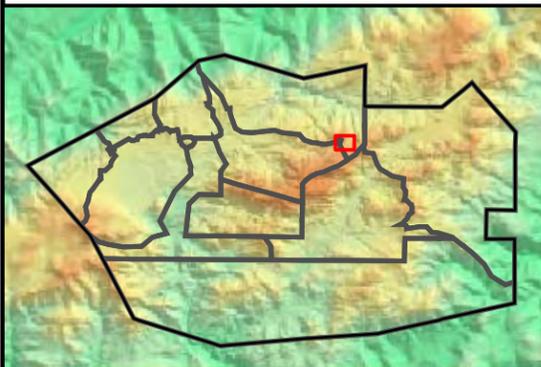
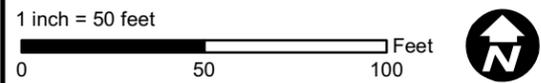
**Base Map Legend**

-  Administrative Area Boundary
-  RFI Site Boundary
-  Report Group Boundary
-  NPDES Outfall
-  Dirt Road
-  A/C Paving
-  Drainage
-  Non Jurisdictional Surface Water Pathway
-  Surface Water Divide
-  Elevation Contour

**Figure Legend**

-  Characterization Sample Location
-  Approximate extent of 2010 Boeing Soil Borrow Area

Document: ISRA\_Plots\_SP\_RD47\_SampleLocations\_060710.mxd Date: Jun 10, 2010



SANTA SUSANA FIELD LABORATORY

FIGURE 2

## TABLES

**TABLE 1  
SOIL BORROW AREA (BOEING PROPERTY) AERIAL PHOTOGRAPH ANALYSIS - 2010 ISRA  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY**

Title	Year	Buildings and other structures	Tanks	Ponds	Pits/Sumps	Pipelines	Drainage Features	Roads (Paved/Unpaved)	Stains	Soil Disturbance Areas	Vegetation Clearing	Excavation Area	Debris	Storage areas*	Paved/Unpaved Surfaces	Topography Changes	Photo Type	Comments	
USEPA - Lockheed (1997) Historical Photos "Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory Ventura County, California. May 1997" 05 Central SSFL 1953	1953	None observed	None observed	None observed	None observed	None observed	None observed	A poorly defined dirt road is present west of the soil borrow area. From the vicinity of the soil borrow area, the dirt road connects to Service Area Road to the north, and continues southwest for several hundred feet before ending.	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	B/W	Service Area Road is present. LOX, ELV, and Alpha have not been constructed. Skyline Drive is not present. A natural clearing is present west of the soil borrow area.
Aerial Photos 1947 1998 CH2M HILL 1953_November19	1953	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	B/W	Scale is too small to accurately identify any features.
USEPA - Lockheed (1997) Historical Photos "Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory Ventura County, California. May 1997" 08 Central SSFL 1957	1957	None observed	None observed	None observed	None observed	None observed	None observed	The dirt road appears wider and more defined, vegetation was cleared along the edges of the road, and the road connects to the now present Skyline Drive to the south.	None observed	*See Roads and Vegetation Clearing	Vegetation cleared along dirt road between Service Area Road and Skyline Drive.	None observed	None observed	None observed	None observed	None observed	None observed	B/W	Many operational areas have been or are being constructed, including LOX, ELV, and Alpha. Skyline Drive and tanks along Skyline Drive are present.
Aerial Photos 1947 1998 CH2M HILL 1959_August21	1959	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	The dirt road connecting Service Area Road with Skyline Drive is still present.	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	B/W	Scale is too small to accurately identify any features other than the dirt road connecting Service Area Road with Skyline Drive.
Aerial Photos 1947 1998 CH2M HILL 1965_February14	1965	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	The dirt road connecting Service Area Road with Skyline Drive is still present.	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	*See Comments	B/W	Scale is too small to accurately identify any features other than the dirt road connecting Service Area Road with Skyline Drive.
USEPA - Lockheed (1997) Historical Photos "Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory Ventura County, California. May 1997" 11 Central SSFL 1965	1965	None observed	None observed	None observed	None observed	None observed	None observed	The dirt road connecting Service Area Road with Skyline Drive is still present. A new poorly defined dirt road leading from the main dirt road east into the natural clearing before returning to the dirt road.	None observed	Soil disturbed for new poorly defined dirt road.	Vegetation cleared for new poorly defined dirt road.	None observed	None observed	None observed	None observed	None observed	None observed	B/W	
Aerial Photos 1947 1998 CH2M HILL 1967_August13	1967	None observed	None observed	None observed	None observed	None observed	None observed	No new observations compared to 1965 USEPA photograph	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	B/W	
Aerial Photos 1947 1998 CH2M HILL 1972_April20	1972	None observed	None observed	None observed	None observed	None observed	None observed	The dirt road connecting Service Area Road with Skyline Drive is still present. The poorly defined loop road is becoming overgrown with vegetation, and a new poorly defined dirt road is present that connects to the main dirt road just north of where the loop road connected, and extends north for a couple hundred feet before ending.	None observed	Soil disturbed for new poorly defined dirt road.	Vegetation cleared for new poorly defined dirt road.	None observed	None observed	None observed	None observed	None observed	None observed	B/W	
Aerial Photos 1947 1998 CH2M HILL 1977_March14	1977	None observed	None observed	None observed	None observed	None observed	None observed	No new observations compared to 1972 photograph	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	B/W	
USEPA - Lockheed (1997) Historical Photos "Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory Ventura County, California. May 1997" 14 Central SSFL 1978	1978	None observed	None observed	None observed	None observed	None observed	None observed	No new observations compared to 1972 and 1977 photographs	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	Color	
Aerial Photos 1947 1998 CH2M HILL 1980_October21	1980	None observed	None observed	None observed	None observed	None observed	None observed	The dirt road connecting Service Area Road with Skyline Drive is still present. Both poorly defined roads leading from the main dirt road are overgrown with vegetation.	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	B/W	
USEPA - Lockheed (1997) Historical Photos "Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory Ventura County, California. May 1997" 17 Central SSFL 1988	1988	None observed	None observed	None observed	None observed	None observed	None observed	No new observations compared to 1980 photograph	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	Color	
Aerial Photos 1947 1998 CH2M HILL 1993_May10	1993	None observed	None observed	None observed	None observed	None observed	None observed	The dirt road connecting Service Area Road with Skyline Drive is still present, but the portion of the dirt road leading south from the natural clearing to Skyline Drive is becoming overgrown with vegetation.	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	B/W	
USEPA - Lockheed (1997) Historical Photos "Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory Ventura County, California. May 1997" 20 Central SSFL 1995	1995	None observed	None observed	None observed	None observed	None observed	None observed	No new observations compared to 1993 photograph	None observed	A section of the natural clearing east of the dirt road was disturbed.	A section of the natural clearing east of the dirt road was cleared of vegetation.	None observed	None observed	None observed	None observed	None observed	None observed	B/W	The soil disturbance east of the dirt road near the natural clearing was related to the installation of well RD-47, which was installed in 1993.
Aerial Photos 1947 1998 CH2M HILL 1998_December07	1998	None observed	None observed	None observed	None observed	None observed	None observed	No new observations compared to 1993 and 1995 photographs	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	B/W	
Goggle Earth, 2009	2009	None observed	None observed	None observed	None observed	None observed	None observed	No new observations compared to 1993 and 1995 photographs	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	None observed	B/W	

**TABLE 2**  
**2010 BOEING SOIL BORROW AREA AERIAL PHOTOGRAPH REVIEW FEATURE SUMMARY**  
**THE BOEING COMPANY**  
**SANTA SUSANA FIELD LABORATORY**

TABLE 2

NAME	FEATURE TYPE	RFI SITE	Chemical Use Area	DESCRIPTION	Feature observed in photograph for years:						References
					1950s	1960s	1970s	1980s	1990s	2000s	
Dirt road connecting Service Area Road to Skyline Drive	Unpaved road	N/A	N/A	An unpaved road which connected Service Area Road with Skyline Drive. The road currently leads to and terminates at well RD-47. The former road leading south to Skyline Drive has become overgrown with trees and other vegetation.	1953 1957 1959	1965 1967	1972 1977 1978	1980 1988	1993 1995 1998	--	CH2M HILL Aerials (1953, 1959, 1965, 1967, 1972, 1977, 1980, 1993, 1998)  USEPA - Lockheed (1997) Historical Photos (1953, 1957, 1965, 1978, 1988, 1995)

Notes:

N/A - Not applicable, the proposed 2010 ISRA soil borrow area (Boeing Property) is not located within an RFI Site or a chemical use area.

**TABLE 3  
2010 BOEING SOIL BORROW AREA SAMPLE RESULTS  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY**

						Object Name:	ISBS0001	ISBS0002	ISBS0003	ISBS0003	ISBS0004	ISBS0004	ISBS0005	ISBS0005	ISBS0006
						Sample Name:	ISBS0001S001	ISBS0002S001	ISBS0003S001	ISBS0003S002	ISBS0004S001	ISBS0004S002	ISBS0005S001	ISBS0005S002	ISBS0006S001
						Collection Date:	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010
						Sample Depth (feet bgs):	0.5 - 1.0	0.5 - 1.0	0.5 - 1.0	2.5 - 3.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0
ANALYTE	UNITS	BG <sup>a</sup>	ISRA SRG <sup>b</sup>	Lowest RBSL <sup>c</sup>	RBSL Type	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>
<b>METALS</b>															
Aluminum	mg/kg	20,000	--	--	--	15,800	16,300	16,600	18,100	19,000	18,100	17,800	17,200	13,600	
Antimony	mg/kg	8.7	--	--	--	<1.04	<0.996	<1.02	<1.12	<1.04	<1.11	<1.05	<1.13	<1.05	
Arsenic	mg/kg	15	--	--	--	7.47	4.57	5.73	7.04	6.34	6.27	6.33	5.41	5.64	
Barium	mg/kg	140	--	--	--	76.3	43.8	109	95.3	87	63.5	87.7	62.1	110	
Beryllium	mg/kg	1.1	--	--	--	0.4	0.331	0.54	0.78	0.573	0.734	0.55	0.632	0.473	
Boron	mg/kg	9.7	--	--	--	3.79 J	2.7 J	3.41 J	2.67 J	2.7 J	2.95 J	3.16 J	2.40 J	3.3 J	
Cadmium	mg/kg	1	1	--	--	0.0897 J	0.059 J	0.192	0.174	0.142	0.0863 J	0.169	0.104 J	0.277	
Chromium	mg/kg	36.8	--	--	--	16.6	9.15	15.4	18	16.1	16.5	16.2	14.1	14.1	
Cobalt	mg/kg	21	--	--	--	4.24	2.87	5.24	5.79	5.12	6.09	5.39	6.57	4.7	
Copper	mg/kg	29	29	--	--	5.49	4.29	6.73	7.16	6.14	6.72	6.46	6.49	6.89	
Lead	mg/kg	34	34	--	--	7.19	4.48	7.35	6.4	5.55	6.01	5.54	5.41	9.49	
Mercury	mg/kg	0.09	0.09	--	--	<0.0115	<0.0111	0.0219 J	<0.0130	0.0142 J	<0.0124	0.0139 J	<0.0125	0.0117 J	
Molybdenum	mg/kg	5.3	--	--	--	0.255	0.194	0.24	0.494	0.299	0.575	0.346	0.544	0.399	
Nickel	mg/kg	29	--	--	--	7.54	6.05	10.1	11.3	10.2	9.85	11	9.52	11.9	
Selenium	mg/kg	0.655	--	--	--	0.193 J	0.0994 J	0.186 J	0.196 J	0.245 J	0.344 J	0.227 J	0.235 J	0.17 J	
Silver	mg/kg	0.79	--	--	--	0.014 J	0.0451 J	0.0346 J	0.0481 J	0.0354 J	0.0475 J	0.0327 J	0.0334 J	0.031 J	
Thallium	mg/kg	0.46	--	--	--	0.308	0.135	0.294	0.227	0.252	0.281	0.246	0.264	0.24	
Vanadium	mg/kg	62	--	--	--	30.3	15.2	27.5	32.6	28.8	32.7	28.3	28.5	25.7	
Zinc	mg/kg	110	--	--	--	42.1	29.6	49.2	55.7	43.6	48.8	46.6	49.8	53.4	
<b>DIOXINS</b>															
TCDD TEQ	pg/g	0.87	3.0	--	--	0.915	0.437	0.324	0.075	0.0514	0.0843	0.0509	0.0656	0.0644	
<b>General Chemistry</b>															
Fluoride	mg/kg	6.7	--	--	--	1.4	<0.82	1.4	1.4	1.5	1.4	1.7	1.6	1.2	
pH	SU	8.86	--	--	--	6.84	5.3	6.64	6.76	6.34	6.06	6.37	5.43	6.46	
<b>PCBs</b>															
Aroclor 1016	ug/kg	--	--	140	RES	<18	<17	<18	<20	<18	<19	<18	<19	<18	
Aroclor 1221	ug/kg	--	--	140	RES	<18	<17	<18	<20	<18	<19	<18	<19	<18	
Aroclor 1232	ug/kg	--	--	77.6	ECO	<18	<17	<18	<20	<18	<19	<18	<19	<18	
Aroclor 1242	ug/kg	--	--	78.7	ECO	<18	<17	<18	<20	<18	<19	<18	<19	<18	
Aroclor 1248	ug/kg	--	--	11.4	ECO	<18	<17	<18	<20	<18	<19	<18	<19	<18	
Aroclor 1254	ug/kg	--	--	77.6	ECO	<18	<17	<18	<20	<18	<19	<18	<19	<18	
Aroclor 1260	ug/kg	--	--	77.6	ECO	<18	<17	<18	<20	<18	<19	<18	<19	<18	
<b>TPH</b>															
Gasoline Range Organics (C8-C11)	mg/kg	--	--	1.1	RES	<12	<12	<12	<14	<13	<13	<13	<14	<13	
Kerosene Range Organics (C11-C14)	mg/kg	--	--	1400	RES	<12	<12	<12	<14	<13	<13	<13	<14	<13	
Diesel Range Organics (C14-C20)	mg/kg	--	--	1400	RES	<12	<12	<12	<14	<13	<13	<13	<14	<13	
Diesel Range Organics (C20-C30)	mg/kg	--	--	1400	RES	<12	<12	<12	<14	<13	<13	<13	<14	<13	

**TABLE 3**  
**2010 BOEING SOIL BORROW AREA SAMPLE RESULTS**  
**THE BOEING COMPANY**  
**SANTA SUSANA FIELD LABORATORY**

Object Name:						ISBS0001	ISBS0002	ISBS0003	ISBS0003	ISBS0004	ISBS0004	ISBS0005	ISBS0005	ISBS0006
Sample Name:						ISBS0001S001	ISBS0002S001	ISBS0003S001	ISBS0003S002	ISBS0004S001	ISBS0004S002	ISBS0005S001	ISBS0005S002	ISBS0006S001
Collection Date:						6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010
Sample Depth (feet bgs):						0.5 - 1.0	0.5 - 1.0	0.5 - 1.0	2.5 - 3.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0
ANALYTE	UNITS	BG <sup>a</sup>	ISRA SRG <sup>b</sup>	Lowest RBSL <sup>c</sup>	RBSL Type	RESULT <sup>d</sup>								
<b>VOCs</b>														
1,1,1,2-Tetrachloroethane	ug/kg	--	--	1.96	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,1,1-Trichloroethane	ug/kg	--	--	1,114	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,1,2,2-Tetrachloroethane	ug/kg	--	--	1.41	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	--	--	16,000	RES	<12	<11	<11	<12	<12	<11	<10	<11	<10
1,1,2-Trichloroethane	ug/kg	--	--	1.18	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,1-Dichloroethane	ug/kg	--	--	1.58	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,1-Dichloroethene	ug/kg	--	--	8.05	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,1-Dichloropropene	ug/kg	--	--	22,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,2,3-Trichlorobenzene	ug/kg	--	--	142	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,2,3-Trichloropropane	ug/kg	--	--	66	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,2,4-Trichlorobenzene	ug/kg	--	--	142	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,2,4-Trimethylbenzene	ug/kg	--	--	40.7	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,2-Dibromo-3-chloropropane	ug/kg	--	--	29	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,2-Dichlorobenzene	ug/kg	--	--	1,800	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,2-Dichloroethane	ug/kg	--	--	0.5	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,2-Dichloropropane	ug/kg	--	--	0.569	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,3,5-Trimethylbenzene	ug/kg	--	--	36	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,3-Dichlorobenzene	ug/kg	--	--	1,700	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,3-Dichloropropane	ug/kg	--	--	22,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
1,4-Dichlorobenzene	ug/kg	--	--	5.55	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
2-Chloro-1,1,1-trifluoroethane	ug/kg	--	--	--	--	<6	<5	<5	<6	<6	<6	<5	<5	<5
2-Chloroethylvinyl ether	ug/kg	--	--	0.00957	RES	<12	<11	<11	<12	<12	<11	<10	<11	<10
2-Hexanone	ug/kg	--	--	1,220,000	ECO	<12	<11	<11	<12	<12	<11	<10	<11	<10
Acetone	ug/kg	--	--	42,711	ECO	<24	<22	<21	<24	<23	<22	<20	<22	<21
Benzene	ug/kg	--	--	0.13	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Bromobenzene	ug/kg	--	--	110,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Bromochloromethane	ug/kg	--	--	25,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Bromodichloromethane	ug/kg	--	--	0.31	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Bromoform	ug/kg	--	--	38,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Bromomethane	ug/kg	--	--	25,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Carbon Tetrachloride	ug/kg	--	--	0.042	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Chlorobenzene	ug/kg	--	--	80.3	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Chloroethane	ug/kg	--	--	190,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Chloroform	ug/kg	--	--	0.77	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Chloromethane	ug/kg	--	--	25,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Chlorotrifluoroethylene	ug/kg	--	--	--	--	<6	<5	<5	<6	<6	<6	<5	<5	<5
cis-1,2-Dichloroethene	ug/kg	--	--	14	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5

**TABLE 3  
2010 BOEING SOIL BORROW AREA SAMPLE RESULTS  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY**

Object Name:						ISBS0001	ISBS0002	ISBS0003	ISBS0003	ISBS0004	ISBS0004	ISBS0005	ISBS0005	ISBS0006
Sample Name:						ISBS0001S001	ISBS0002S001	ISBS0003S001	ISBS0003S002	ISBS0004S001	ISBS0004S002	ISBS0005S001	ISBS0005S002	ISBS0006S001
Collection Date:						6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010
Sample Depth (feet bgs):						0.5 - 1.0	0.5 - 1.0	0.5 - 1.0	2.5 - 3.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0
ANALYTE	UNITS	BG <sup>a</sup>	ISRA SRG <sup>b</sup>	Lowest RBSL <sup>c</sup>	RBSL Type	RESULT <sup>d</sup>								
cis-1,3-Dichloropropene	ug/kg	--	--	22,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Dibromomethane	ug/kg	--	--	25,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Dichlorodifluoromethane	ug/kg	--	--	15	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Ethylbenzene	ug/kg	--	--	4.64	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Hexachlorobutadiene	ug/kg	--	--	854	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Methyl ethyl ketone	ug/kg	--	--	62,000	RES	<12	<11	<11	<12	<12	<11	<10	<11	<10
Methyl tert-butyl ether	ug/kg	--	--	120,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Methylene chloride	ug/kg	--	--	4	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
m-Xylene & p-Xylene	ug/kg	--	--	150	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
n-Butylbenzene	ug/kg	--	--	210,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
n-Propylbenzene	ug/kg	--	--	203	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
o-Chlorotoluene	ug/kg	--	--	160,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
o-Xylene	ug/kg	--	--	190	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
p-Chlorotoluene	ug/kg	--	--	160,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
sec-Butylbenzene	ug/kg	--	--	29,755	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
sec-Dichloropropane	ug/kg	--	--	22,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Styrene	ug/kg	--	--	7,200	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
tert-Butylbenzene	ug/kg	--	--	210,000	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Tetrachloroethene	ug/kg	--	--	0.43	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Toluene	ug/kg	--	--	234	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
trans-1,2-Dichloroethene	ug/kg	--	--	13.8	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
trans-1,3-Dichloropropene	ug/kg	--	--	4,400	ECO	<6	<5	<5	<6	<6	<6	<5	<5	<5
Trichloroethene	ug/kg	--	--	2.2	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Trichlorofluoromethane	ug/kg	--	--	110	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
Vinyl chloride	ug/kg	--	--	0.0096	RES	<6	<5	<5	<6	<6	<6	<5	<5	<5
<b>SVOCs</b>														
1-Methylnaphthalene	ug/kg	--	--	24716	RES	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
2-Methylnaphthalene	ug/kg	--	--	210000	ECO	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
Acenaphthene	ug/kg	--	--	2456	ECO	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
Acenaphthylene	ug/kg	--	--	270384	ECO	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
Anthracene	ug/kg	--	--	2384	ECO	<1.7	0.4 J	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
Benzo(a)anthracene	ug/kg	--	--	600	RES	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
Benzo(a)pyrene	ug/kg	--	--	60	RES	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
Benzo(b)fluoranthene	ug/kg	--	--	600	RES	<1.7	<1.7	1.2 J	<1.9	0.85 J	<1.9	<1.8	<1.9	<1.7
Benzo(ghi)perylene	ug/kg	--	--	6411	ECO	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
Benzo(k)fluoranthene	ug/kg	--	--	600	RES	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7
bis(2-Ethylhexyl) phthalate	ug/kg	--	--	4926	ECO	8.2 J	8.2 J	17 J	<21	16 J	29	9.1 J	8 J	<19
Butylbenzylphthalate	ug/kg	--	--	339549	ECO	<19	<18	<19	<21	<19	<20	<19	<20	<19

**TABLE 3**  
**2010 BOEING SOIL BORROW AREA SAMPLE RESULTS**  
**THE BOEING COMPANY**  
**SANTA SUSANA FIELD LABORATORY**

						Object Name:	ISBS0001	ISBS0002	ISBS0003	ISBS0003	ISBS0004	ISBS0004	ISBS0005	ISBS0005	ISBS0006
						Sample Name:	ISBS0001S001	ISBS0002S001	ISBS0003S001	ISBS0003S002	ISBS0004S001	ISBS0004S002	ISBS0005S001	ISBS0005S002	ISBS0006S001
						Collection Date:	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010
						Sample Depth (feet bgs):	0.5 - 1.0	0.5 - 1.0	0.5 - 1.0	2.5 - 3.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0
ANALYTE	UNITS	BG <sup>a</sup>	ISRA SRG <sup>b</sup>	Lowest RBSL <sup>c</sup>	RBSL Type	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>	RESULT <sup>d</sup>
Chrysene	ug/kg	--	--	2359	ECO	<1.7	0.38 J	1.1 J	<1.9	0.74 J	<1.9	0.54 J	<1.9	<1.7	<1.7
Dibenzo(a,h)anthracene	ug/kg	--	--	170	RES	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7	<1.7
Diethylphthalate	ug/kg	--	--	6940468	ECO	<19	<18	<19	<21	<19	<20	<19	<20	<19	<19
Dimethylphthalate	ug/kg	--	--	4438	ECO	<19	<18	<19	<21	<19	<20	<19	<20	<19	<19
Di-n-butylphthalate	ug/kg	--	--	488	ECO	7.8 J	8.2 J	9.8 J	8.8 J	9 J	8.4 J	9.6 J	7.8 J	8.5 J	8.5 J
Di-n-octylphthalate	ug/kg	--	--	13000	ECO	<19	<18	<19	<21	<19	<20	<19	<20	<19	<19
Fluoranthene	ug/kg	--	--	38000	ECO	<1.7	<1.7	1.3 J	<1.9	0.8 J	<1.9	<1.8	<1.9	<1.7	<1.7
Fluorene	ug/kg	--	--	1646	ECO	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7	<1.7
Indeno(1,2,3-cd)pyrene	ug/kg	--	--	600	RES	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7	<1.7
Naphthalene	ug/kg	--	--	210000	ECO	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7	<1.7
n-Nitrosodimethylamine	ug/kg	--	--	45	RES	<1.7	<1.7	<1.7	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7	<1.7
Phenanthrene	ug/kg	--	--	1314	ECO	<1.7	<1.7	0.72 J	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7	<1.7
Pyrene	ug/kg	--	--	18000	ECO	<1.7	<1.7	0.73 J	<1.9	<1.8	<1.9	<1.8	<1.9	<1.7	<1.7

**TABLE 3  
2010 BOEING SOIL BORROW AREA SAMPLE RESULTS  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY**

		<b>Object Name:</b>		<b>ISBS0006</b>	<b>ISBS0007</b>	<b>ISBS0007</b>	<b>ISBS0008</b>	<b>ISBS0009</b>	<b>ISBS0009</b>	<b>ISBS0010</b>	<b>ISBS0010</b>		
		<b>Sample Name:</b>		ISBS0006S002	ISBS0007S001	ISBS0007S002	ISBS0008S001	ISBS0009S001	ISBS0009S002	ISBS0010S001	ISBS0010S002		
		<b>Collection Date:</b>		6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010		
		<b>Sample Depth (feet bgs):</b>		4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0		
<b>ANALYTE</b>	<b>UNITS</b>	<b>BG<sup>a</sup></b>	<b>ISRA SRG<sup>b</sup></b>	<b>Lowest RBSL<sup>c</sup></b>	<b>RBSL Type</b>	<b>RESULT<sup>d</sup></b>							
<b>METALS</b>													
Aluminum	mg/kg	20,000	--	--	--	15,400	15,600	17,200	16,200	15,000	18,500	11,600	17,100
Antimony	mg/kg	8.7	--	--	--	<1.08	<1.04	<1.10	<1.01	<1.09	<1.18	<0.981	<1.12
Arsenic	mg/kg	15	--	--	--	7.27	5.6	5.77	5.06	4.71	4.37	2.99	5.13
Barium	mg/kg	140	--	--	--	98.1	119	93.2	135	104	60.1	70.7	64.9
Beryllium	mg/kg	1.1	--	--	--	0.614	0.518	0.698	0.623	0.491	0.565	0.356	0.585
Boron	mg/kg	9.7	--	--	--	2.37 J	3.49 J	2.88 J	3.89 J	3.09 J	1.91 J	2.58 J	2.69 J
Cadmium	mg/kg	1	1	--	--	0.211	0.258	0.163	0.337	0.262	0.0579 J	0.176	0.0461 J
Chromium	mg/kg	36.8	--	--	--	15.8	16.1	17.8	18	15.4	18.1	10.9	17.6
Cobalt	mg/kg	21	--	--	--	5.46	5.76	5.19	7.15	5.55	3.03	3.94	2.61
Copper	mg/kg	29	29	--	--	6.74	8.17	7.73	10.8	7.35	7	5.49	6.13
Lead	mg/kg	34	34	--	--	6.7	6.56	6.39	14.1	10.3	4.57	8.44	4.84
Mercury	mg/kg	0.09	0.09	--	--	<0.0121	0.015 J	<0.0123	0.0149 J	0.0165 J	<0.0129	0.0138 J	0.0129 J
Molybdenum	mg/kg	5.3	--	--	--	0.465	0.402	0.529	0.34	0.416	0.351	0.285	0.351
Nickel	mg/kg	29	--	--	--	11.9	13.3	12.9	18.5	12.5	10.5	9.06	10.2
Selenium	mg/kg	0.655	--	--	--	0.295 J	0.249 J	0.284 J	0.181 J	0.197 J	0.195 J	0.136 J	0.213 J
Silver	mg/kg	0.79	--	--	--	0.0317 J	0.0369 J	0.0413 J	0.0341 J	0.0303 J	0.0536 J	0.0313 J	0.0738 J
Thallium	mg/kg	0.46	--	--	--	0.264	0.285	0.249	0.244	0.251	0.252	0.192	0.245
Vanadium	mg/kg	62	--	--	--	31.2	30.2	30.5	25.7	27.6	31.7	21.5	29.7
Zinc	mg/kg	110	--	--	--	50.3	61.3	59.4	75	57.9	48.4	41.5	43.6
<b>DIOXINS</b>													
TCDD TEQ	pg/g	0.87	3.0	--	--	0.141	0.000732	0.134	0.0517	0.0297	0.0777	0.00371	0.0217
<b>General Chemistry</b>													
Fluoride	mg/kg	6.7	--	--	--	1.7	2.1	1.6	1.1	1.6	2.1	1.5	2.1
pH	SU	8.86	--	--	--	6.4	6.08	6.01	6.79	6.45	5.86	6.61	6.34
<b>PCBs</b>													
Aroclor 1016	ug/kg	--	--	140	RES	<19	<18	<19	<18	<19	<20	<17	<19
Aroclor 1221	ug/kg	--	--	140	RES	<19	<18	<19	<18	<19	<20	<17	<19
Aroclor 1232	ug/kg	--	--	77.6	ECO	<19	<18	<19	<18	<19	<20	<17	<19
Aroclor 1242	ug/kg	--	--	78.7	ECO	<19	<18	<19	<18	<19	<20	<17	<19
Aroclor 1248	ug/kg	--	--	11.4	ECO	<19	<18	<19	<18	<19	<20	<17	<19
Aroclor 1254	ug/kg	--	--	77.6	ECO	<19	<18	<19	<18	<19	<20	<17	<19
Aroclor 1260	ug/kg	--	--	77.6	ECO	<19	<18	<19	<18	<19	<20	<17	<19
<b>TPH</b>													
Gasoline Range Organics (C8-C11)	mg/kg	--	--	1.1	RES	<14	<13	<14	<13	<13	<14	<12	<14
Kerosene Range Organics (C11-C14)	mg/kg	--	--	1400	RES	<14	<13	<14	<13	4.8 J	<14	<12	<14
Diesel Range Organics (C14-C20)	mg/kg	--	--	1400	RES	<14	<13	<14	<13	5.8 J	<14	<12	<14
Diesel Range Organics (C20-C30)	mg/kg	--	--	1400	RES	<14	<13	<14	<13	11 J	<14	<12	<14

**TABLE 3  
2010 BOEING SOIL BORROW AREA SAMPLE RESULTS  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY**

		Object Name:		ISBS0006	ISBS0007	ISBS0007	ISBS0008	ISBS0009	ISBS0009	ISBS0010	ISBS0010		
		Sample Name:		ISBS0006S002	ISBS0007S001	ISBS0007S002	ISBS0008S001	ISBS0009S001	ISBS0009S002	ISBS0010S001	ISBS0010S002		
		Collection Date:		6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010		
		Sample Depth (feet bgs):		4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0		
ANALYTE	UNITS	BG <sup>a</sup>	ISRA SRG <sup>b</sup>	Lowest RBSL <sup>c</sup>	RBSL Type	RESULT <sup>d</sup>							
<b>VOCs</b>													
1,1,1,2-Tetrachloroethane	ug/kg	--	--	1.96	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,1,1-Trichloroethane	ug/kg	--	--	1,114	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,1,2,2-Tetrachloroethane	ug/kg	--	--	1.41	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	--	--	16,000	RES	<11	<10	<11	<11	<11	<11	<12	<11
1,1,2-Trichloroethane	ug/kg	--	--	1.18	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,1-Dichloroethane	ug/kg	--	--	1.58	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,1-Dichloroethene	ug/kg	--	--	8.05	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,1-Dichloropropene	ug/kg	--	--	22,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
1,2,3-Trichlorobenzene	ug/kg	--	--	142	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,2,3-Trichloropropane	ug/kg	--	--	66	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,2,4-Trichlorobenzene	ug/kg	--	--	142	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,2,4-Trimethylbenzene	ug/kg	--	--	40.7	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,2-Dibromo-3-chloropropane	ug/kg	--	--	29	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,2-Dichlorobenzene	ug/kg	--	--	1,800	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,2-Dichloroethane	ug/kg	--	--	0.5	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,2-Dichloropropane	ug/kg	--	--	0.569	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,3,5-Trimethylbenzene	ug/kg	--	--	36	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,3-Dichlorobenzene	ug/kg	--	--	1,700	RES	<6	<5	<6	<5	<5	<5	<6	<5
1,3-Dichloropropane	ug/kg	--	--	22,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
1,4-Dichlorobenzene	ug/kg	--	--	5.55	RES	<6	<5	<6	<5	<5	<5	<6	<5
2-Chloro-1,1,1-trifluoroethane	ug/kg	--	--	--	--	<6	<5	<6	<5	<5	<5	<6	<5
2-Chloroethylvinyl ether	ug/kg	--	--	0.00957	RES	<11	<10	<11	<11	<11	<11	<12	<11
2-Hexanone	ug/kg	--	--	1,220,000	ECO	<11	<10	<11	<11	<11	<11	<12	<11
Acetone	ug/kg	--	--	42,711	ECO	<22	<20	<22	<21	<21	<21	<22	<21
Benzene	ug/kg	--	--	0.13	RES	<6	<5	<6	<5	<5	<5	<6	<5
Bromobenzene	ug/kg	--	--	110,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Bromochloromethane	ug/kg	--	--	25,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Bromodichloromethane	ug/kg	--	--	0.31	RES	<6	<5	<6	<5	<5	<5	<6	<5
Bromoform	ug/kg	--	--	38,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Bromomethane	ug/kg	--	--	25,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Carbon Tetrachloride	ug/kg	--	--	0.042	RES	<6	<5	<6	<5	<5	<5	<6	<5
Chlorobenzene	ug/kg	--	--	80.3	RES	<6	<5	<6	<5	<5	<5	<6	<5
Chloroethane	ug/kg	--	--	190,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Chloroform	ug/kg	--	--	0.77	RES	<6	<5	<6	<5	<5	<5	<6	<5
Chloromethane	ug/kg	--	--	25,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Chlorotrifluoroethylene	ug/kg	--	--	--	--	<6	<5	<6	<5	<5	<5	<6	<5
cis-1,2-Dichloroethene	ug/kg	--	--	14	RES	<6	<5	<6	<5	<5	<5	<6	<5

**TABLE 3  
2010 BOEING SOIL BORROW AREA SAMPLE RESULTS  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY**

		<b>Object Name:</b>		<b>ISBS0006</b>	<b>ISBS0007</b>	<b>ISBS0007</b>	<b>ISBS0008</b>	<b>ISBS0009</b>	<b>ISBS0009</b>	<b>ISBS0010</b>	<b>ISBS0010</b>		
		<b>Sample Name:</b>		ISBS0006S002	ISBS0007S001	ISBS0007S002	ISBS0008S001	ISBS0009S001	ISBS0009S002	ISBS0010S001	ISBS0010S002		
		<b>Collection Date:</b>		6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010		
		<b>Sample Depth (feet bgs):</b>		4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0		
<b>ANALYTE</b>	<b>UNITS</b>	<b>BG<sup>a</sup></b>	<b>ISRA SRG<sup>b</sup></b>	<b>Lowest RBSL<sup>c</sup></b>	<b>RBSL Type</b>	<b>RESULT<sup>d</sup></b>							
cis-1,3-Dichloropropene	ug/kg	--	--	22,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Dibromomethane	ug/kg	--	--	25,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Dichlorodifluoromethane	ug/kg	--	--	15	RES	<6	<5	<6	<5	<5	<5	<6	<5
Ethylbenzene	ug/kg	--	--	4.64	RES	<6	<5	<6	<5	<5	<5	<6	<5
Hexachlorobutadiene	ug/kg	--	--	854	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Methyl ethyl ketone	ug/kg	--	--	62,000	RES	<11	<10	<11	<11	<11	<11	<12	<11
Methyl tert-butyl ether	ug/kg	--	--	120,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Methylene chloride	ug/kg	--	--	4	RES	<6	<5	<6	<5	<5	<5	<6	<5
m-Xylene & p-Xylene	ug/kg	--	--	150	RES	<6	<5	<6	<5	<5	<5	<6	<5
n-Butylbenzene	ug/kg	--	--	210,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
n-Propylbenzene	ug/kg	--	--	203	RES	<6	<5	<6	<5	<5	<5	<6	<5
o-Chlorotoluene	ug/kg	--	--	160,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
o-Xylene	ug/kg	--	--	190	RES	<6	<5	<6	<5	<5	<5	<6	<5
p-Chlorotoluene	ug/kg	--	--	160,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
sec-Butylbenzene	ug/kg	--	--	29,755	RES	<6	<5	<6	<5	<5	<5	<6	<5
sec-Dichloropropane	ug/kg	--	--	22,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Styrene	ug/kg	--	--	7,200	RES	<6	<5	<6	<5	<5	<5	<6	<5
tert-Butylbenzene	ug/kg	--	--	210,000	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Tetrachloroethene	ug/kg	--	--	0.43	RES	<6	<5	<6	<5	<5	<5	<6	<5
Toluene	ug/kg	--	--	234	RES	<6	<5	<6	<5	<5	<5	<6	<5
trans-1,2-Dichloroethene	ug/kg	--	--	13.8	RES	<6	<5	<6	<5	<5	<5	<6	<5
trans-1,3-Dichloropropene	ug/kg	--	--	4,400	ECO	<6	<5	<6	<5	<5	<5	<6	<5
Trichloroethene	ug/kg	--	--	2.2	RES	<6	<5	<6	<5	<5	<5	<6	<5
Trichlorofluoromethane	ug/kg	--	--	110	RES	<6	<5	<6	<5	<5	<5	<6	<5
Vinyl chloride	ug/kg	--	--	0.0096	RES	<6	<5	<6	<5	<5	<5	<6	<5
<b>SVOCs</b>													
1-Methylnaphthalene	ug/kg	--	--	24716	RES	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
2-Methylnaphthalene	ug/kg	--	--	210000	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
Acenaphthene	ug/kg	--	--	2456	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
Acenaphthylene	ug/kg	--	--	270384	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
Anthracene	ug/kg	--	--	2384	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
Benzo(a)anthracene	ug/kg	--	--	600	RES	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
Benzo(a)pyrene	ug/kg	--	--	60	RES	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
Benzo(b)fluoranthene	ug/kg	--	--	600	RES	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
Benzo(ghi)perylene	ug/kg	--	--	6411	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
Benzo(k)fluoranthene	ug/kg	--	--	600	RES	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9
bis(2-Ethylhexyl) phthalate	ug/kg	--	--	4926	ECO	9.6 J	7.9 J	26	<19	<20	19 J	7 J	<21
Butylbenzylphthalate	ug/kg	--	--	339549	ECO	<20	<19	<20	<19	<20	<21	<18	<21

**TABLE 3  
2010 BOEING SOIL BORROW AREA SAMPLE RESULTS  
THE BOEING COMPANY  
SANTA SUSANA FIELD LABORATORY**

			<table border="1"> <tr> <td><b>Object Name:</b></td> <td><b>ISBS0006</b></td> <td><b>ISBS0007</b></td> <td><b>ISBS0007</b></td> <td><b>ISBS0008</b></td> <td><b>ISBS0009</b></td> <td><b>ISBS0009</b></td> <td><b>ISBS0010</b></td> <td><b>ISBS0010</b></td> </tr> <tr> <td>Sample Name:</td> <td>ISBS0006S002</td> <td>ISBS0007S001</td> <td>ISBS0007S002</td> <td>ISBS0008S001</td> <td>ISBS0009S001</td> <td>ISBS0009S002</td> <td>ISBS0010S001</td> <td>ISBS0010S002</td> </tr> <tr> <td>Collection Date:</td> <td>6/9/2010</td> <td>6/9/2010</td> <td>6/9/2010</td> <td>6/9/2010</td> <td>6/9/2010</td> <td>6/9/2010</td> <td>6/9/2010</td> <td>6/9/2010</td> </tr> <tr> <td>Sample Depth (feet bgs):</td> <td>4.5 - 5.0</td> <td>0.5 - 1.0</td> <td>4.5 - 5.0</td> <td>0.5 - 1.0</td> <td>0.5 - 1.0</td> <td>4.5 - 5.0</td> <td>0.5 - 1.0</td> <td>4.5 - 5.0</td> </tr> </table>											<b>Object Name:</b>	<b>ISBS0006</b>	<b>ISBS0007</b>	<b>ISBS0007</b>	<b>ISBS0008</b>	<b>ISBS0009</b>	<b>ISBS0009</b>	<b>ISBS0010</b>	<b>ISBS0010</b>	Sample Name:	ISBS0006S002	ISBS0007S001	ISBS0007S002	ISBS0008S001	ISBS0009S001	ISBS0009S002	ISBS0010S001	ISBS0010S002	Collection Date:	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	Sample Depth (feet bgs):	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0
<b>Object Name:</b>	<b>ISBS0006</b>	<b>ISBS0007</b>	<b>ISBS0007</b>	<b>ISBS0008</b>	<b>ISBS0009</b>	<b>ISBS0009</b>	<b>ISBS0010</b>	<b>ISBS0010</b>																																									
Sample Name:	ISBS0006S002	ISBS0007S001	ISBS0007S002	ISBS0008S001	ISBS0009S001	ISBS0009S002	ISBS0010S001	ISBS0010S002																																									
Collection Date:	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010	6/9/2010																																									
Sample Depth (feet bgs):	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	0.5 - 1.0	4.5 - 5.0	0.5 - 1.0	4.5 - 5.0																																									
<b>ANALYTE</b>	<b>UNITS</b>	<b>BG<sup>a</sup></b>	<b>ISRA SRG<sup>b</sup></b>	<b>Lowest RBSL<sup>c</sup></b>	<b>RBSL Type</b>	<b>RESULT<sup>d</sup></b>																																											
Chrysene	ug/kg	--	--	2359	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				
Dibenzo(a,h)anthracene	ug/kg	--	--	170	RES	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				
Diethylphthalate	ug/kg	--	--	6940468	ECO	<20	<19	<20	<19	<20	<21	<18	<21																																				
Dimethylphthalate	ug/kg	--	--	4438	ECO	<20	<19	<20	<19	<20	<21	<18	<21																																				
Di-n-butylphthalate	ug/kg	--	--	488	ECO	11 J	8.4 J	8.5 J	8 J	8.6 J	9.5 J	7.7 J	9 J																																				
Di-n-octylphthalate	ug/kg	--	--	13000	ECO	<20	<19	<20	<19	<20	<21	<18	<21																																				
Fluoranthene	ug/kg	--	--	38000	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				
Fluorene	ug/kg	--	--	1646	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				
Indeno(1,2,3-cd)pyrene	ug/kg	--	--	600	RES	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				
Naphthalene	ug/kg	--	--	210000	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				
n-Nitrosodimethylamine	ug/kg	--	--	45	RES	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				
Phenanthrene	ug/kg	--	--	1314	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				
Pyrene	ug/kg	--	--	18000	ECO	<1.9	<1.8	<1.9	<1.7	<1.8	<2	<1.7	<1.9																																				

**TABLE 3**  
**2010 BOEING SOIL BORROW AREA SAMPLE RESULTS**  
**THE BOEING COMPANY**  
**SANTA SUSANA FIELD LABORATORY**

**Notes:**

"--" - not analyzed / not applicable

<sup>a</sup> Soil background values from MWH (September 2005) Soil Background Report, Santa Susana Field Laboratory, Ventura County, California.

<sup>b</sup> ISRA SRGs are established for ISRA Constituents of Concern, which include constituents that were detected at concentrations that exceeded NPDES permit limits/benchmarks. SRGs for metals are equal to the 2005 background comparison concentration and the SRG for dioxins is approximately 3 times the 2005 background comparison concentration.

<sup>c</sup> RBSL values provided to DTSC in March 2009, Interim Final Human Health and Ecological Risk-Based Screening Levels (RBSLs) for Use in RCRA Facility

<sup>d</sup> Soil Borrow Area sample results not validated

bgs - below ground surface

Dioxins/ TCDD TEQ - A sum of 17 dioxin / furan congener results adjusted for toxicity. The TEQ is calculated by multiplying the result of each congener by its respective 2005 World Health Organization (WHO) toxic equivalency factor (TEF), which is based on the relative potency of the congener to cause a toxic response relative to 2,3,7,8-TCDD. Non Detects are calculated as zero. TCDD TEQ values do not include laboratory data not quantified (DNQ) as specified in the NPDES permit.

J - Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

mg/kg - milligrams per kilogram

pg/g - picograms per gram

SRG - Soil Remediation Goal

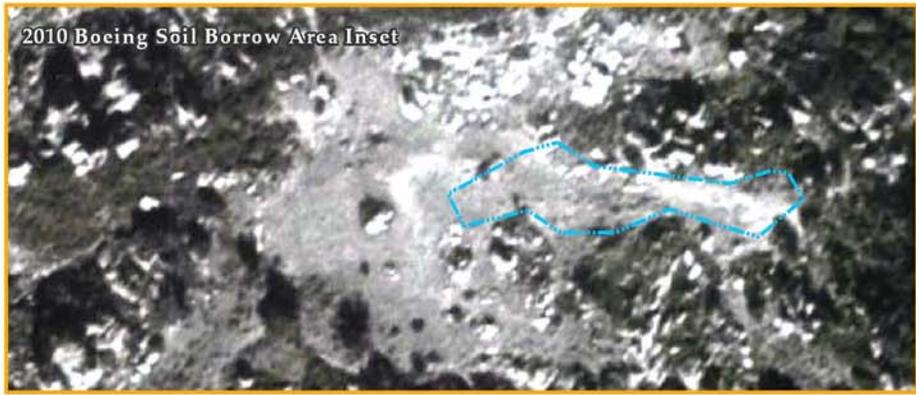
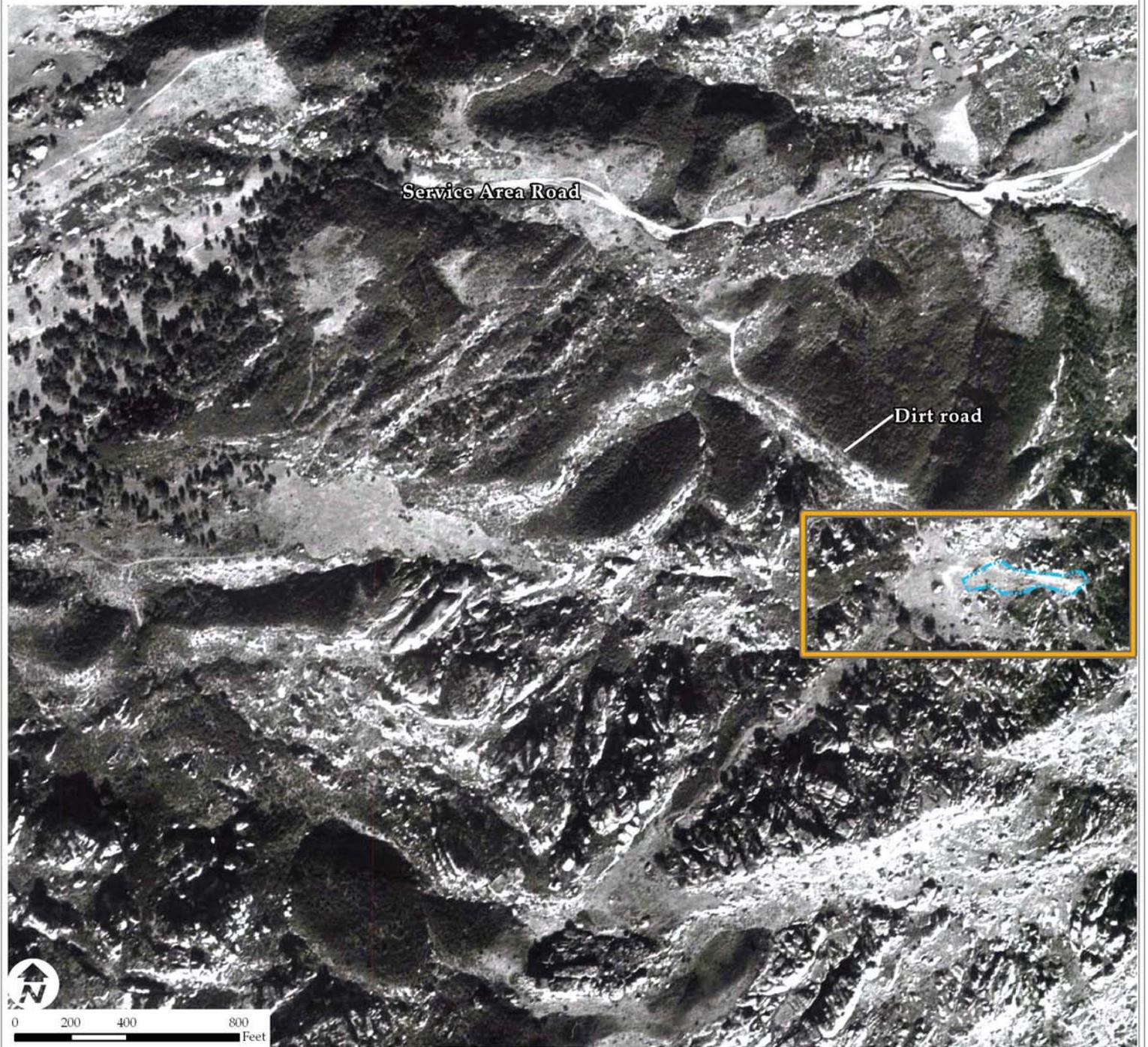
SU - Standard Units

TCDD TEQ - tetrachlorobenzo-p-dioxin toxic equivalent (normalized to 2,3,7,8-TCDD)

## **AERIAL PHOTOGRAPHS**

**1953, 1957, 1965, 1978, 1988, 1995. 2009**

USEPA, 1997. Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory, Ventura County, California. May.



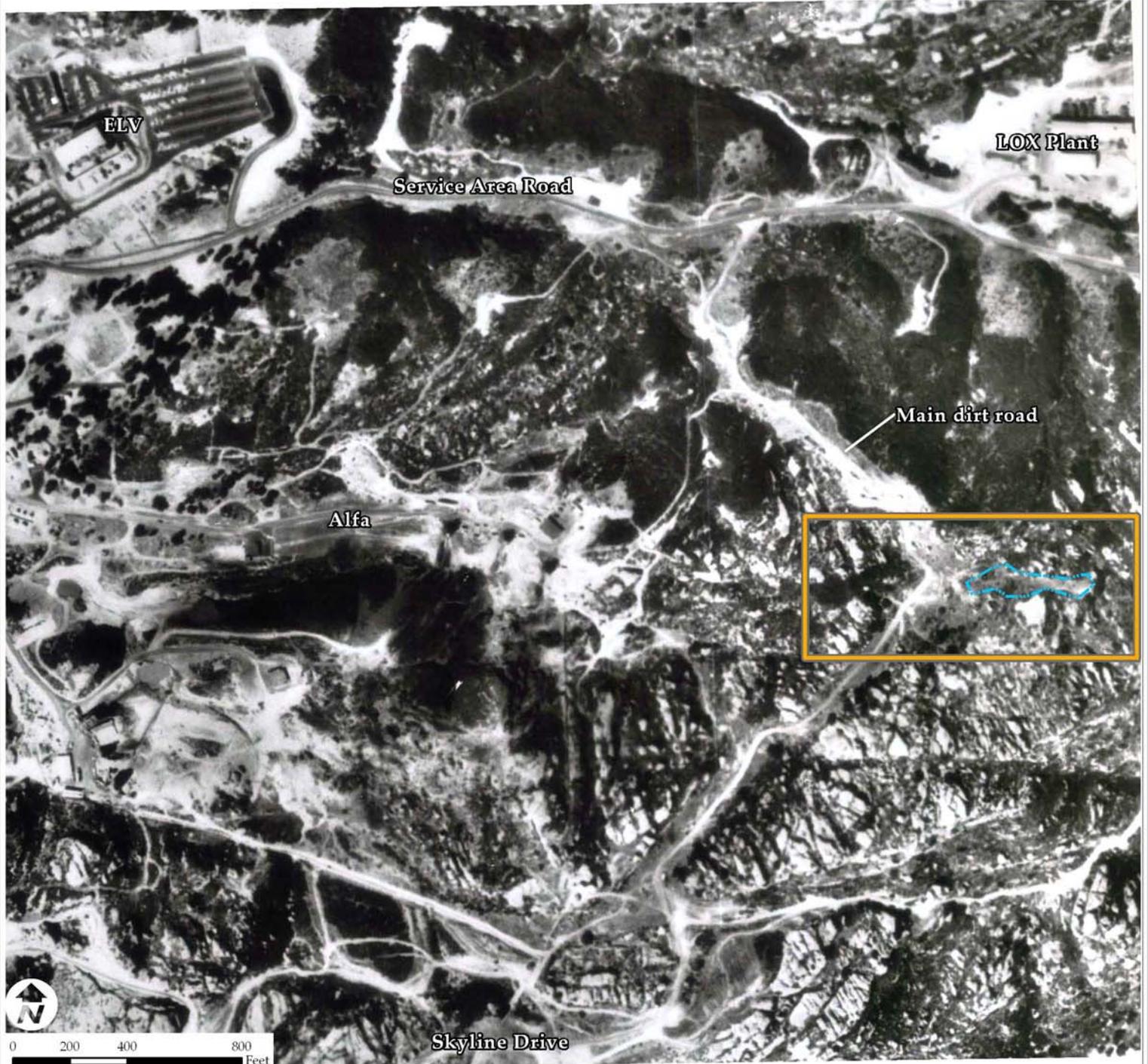
**Legend**

 2010 Boeing Soil Borrow Area

Reference: USEPA, 1997. Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory, Ventura County, California. May.

**1953 Aerial Photograph  
Santa Susana Field Laboratory**





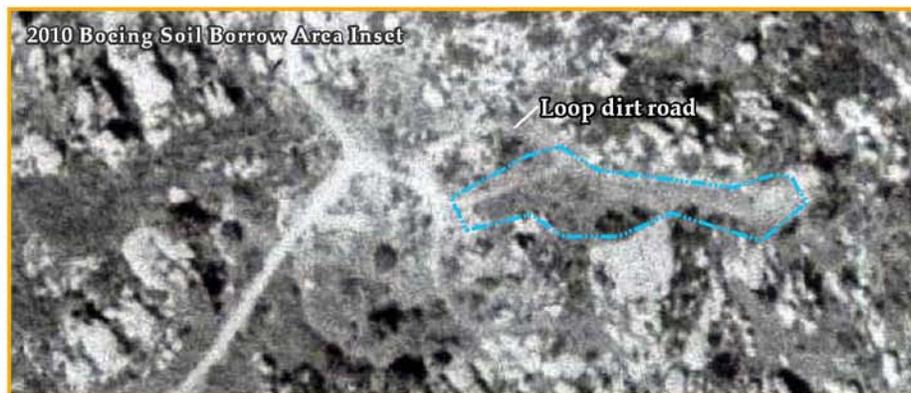
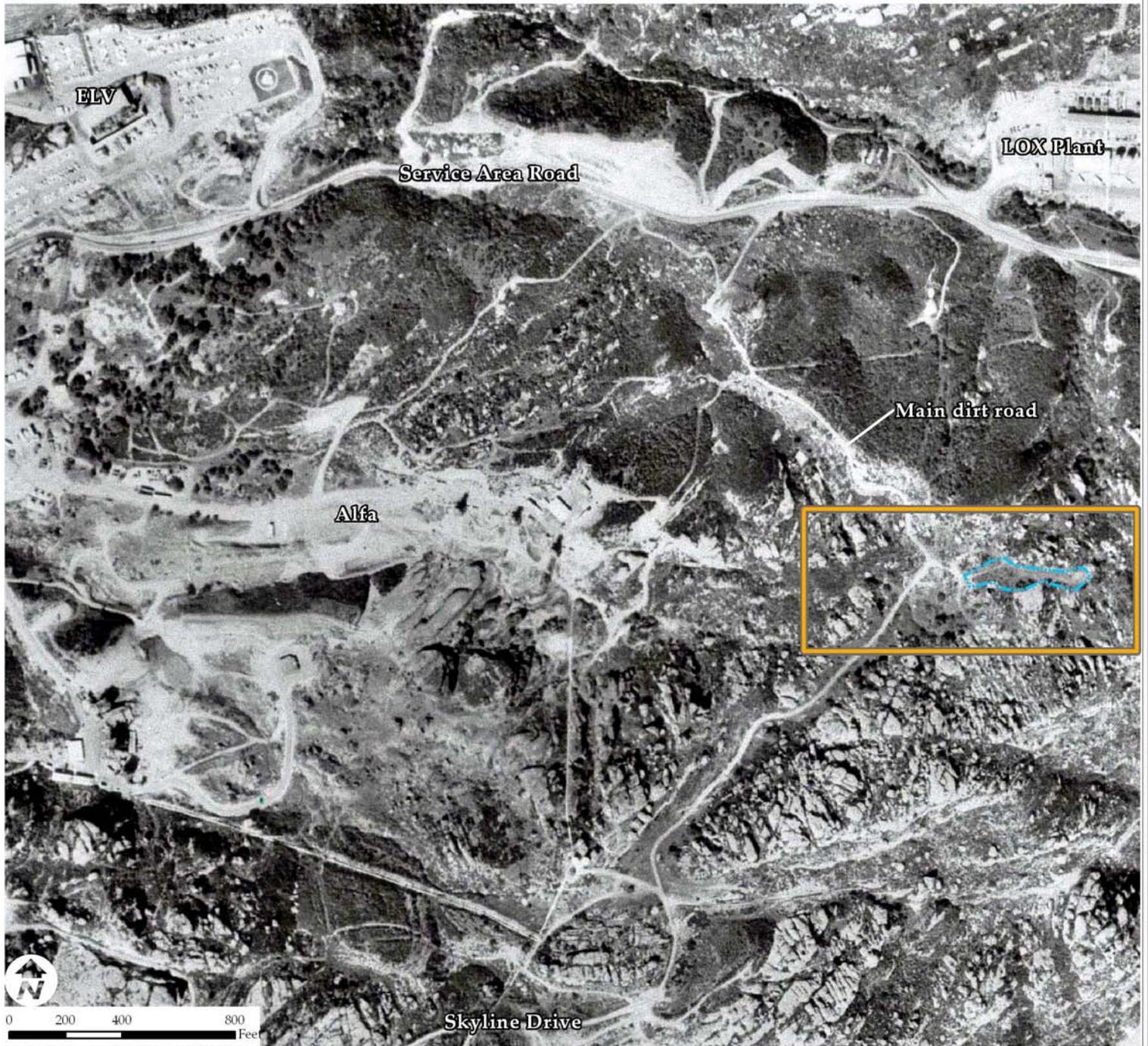
**Legend**

 2010 Boeing Soil Borrow Area

Reference: USEPA, 1997. Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory, Ventura County, California. May.

**1957 Aerial Photograph  
Santa Susana Field Laboratory**





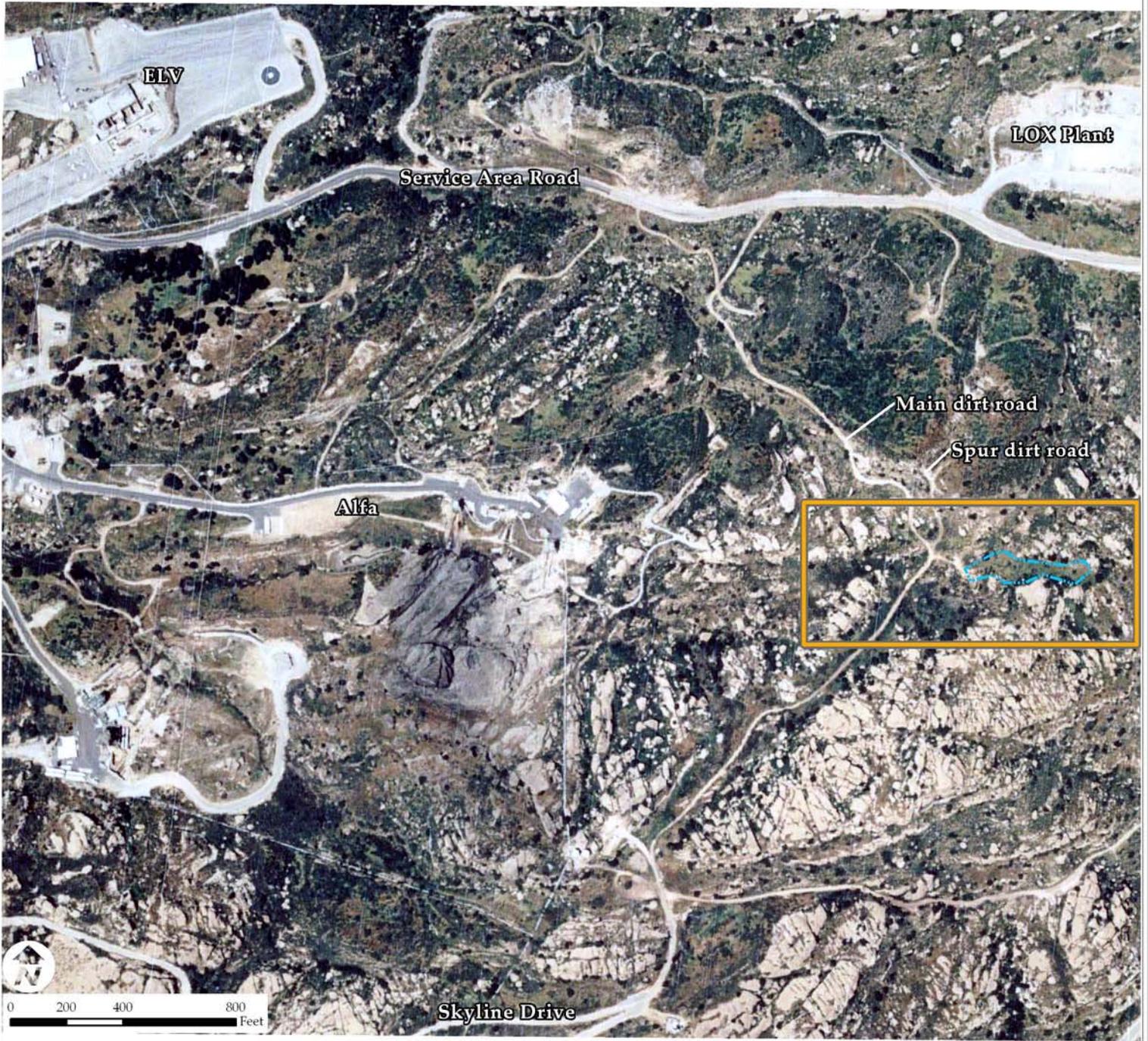
**Legend**

 2010 Boeing Soil Borrow Area

Reference: USEPA, 1997. Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory, Ventura County, California. May.

**1965 Aerial Photograph  
Santa Susana Field Laboratory**





**Legend**

 2010 Boeing Soil Borrow Area

Reference: USEPA, 1997. Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory, Ventura County, California. May.

**1978 Aerial Photograph  
Santa Susana Field Laboratory**





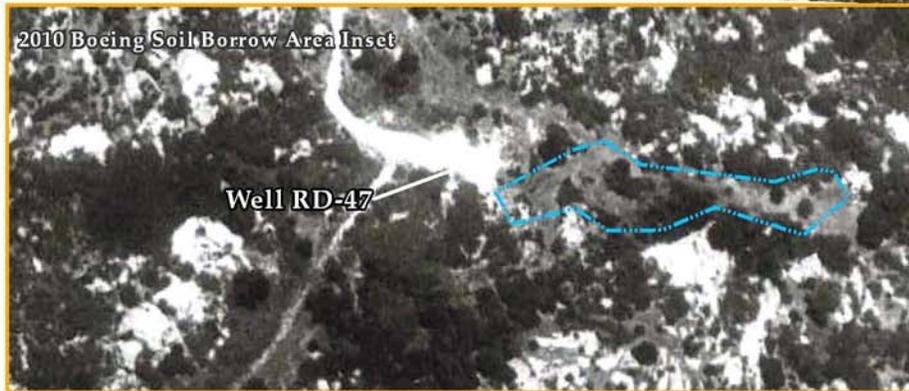
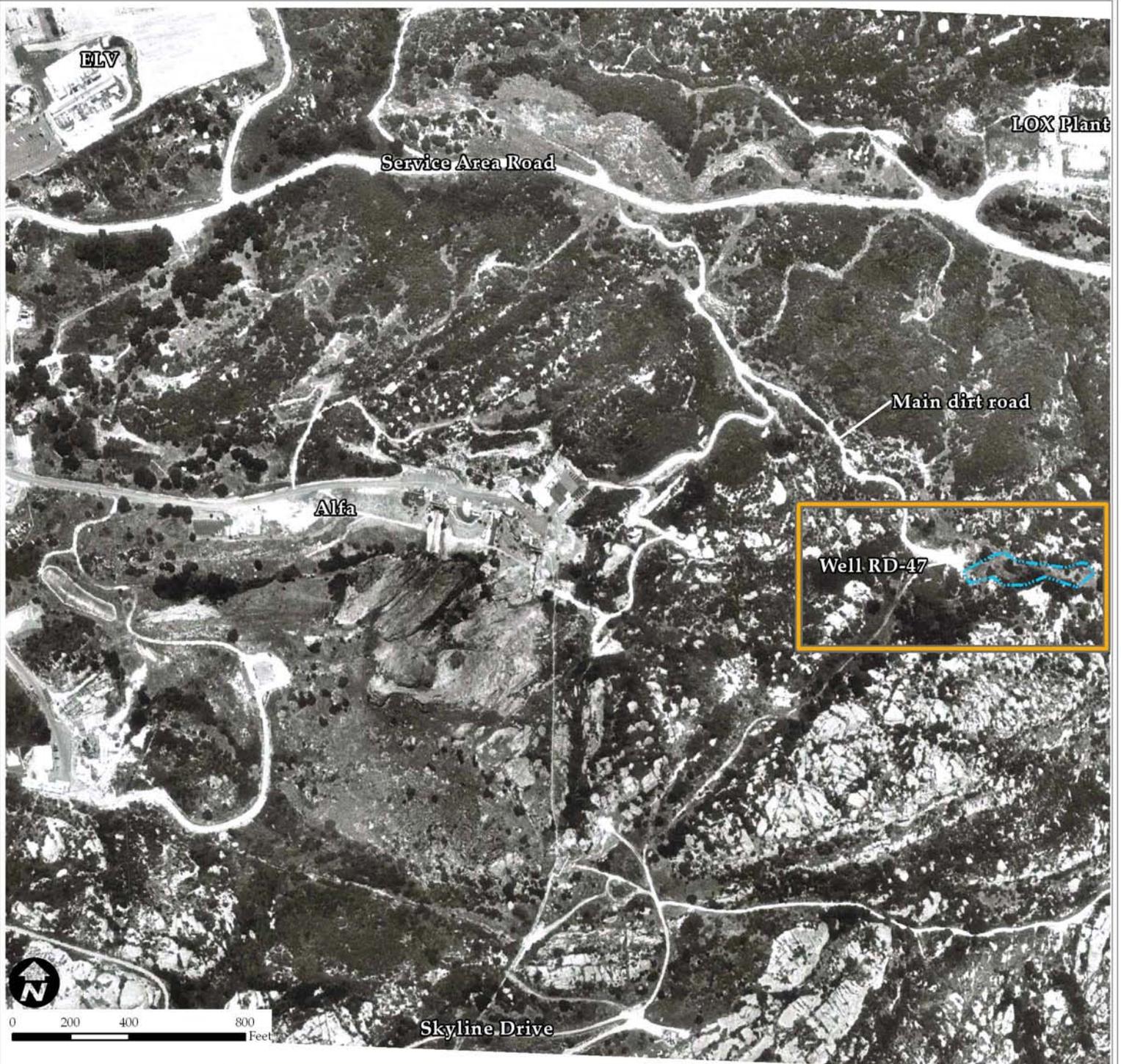
**Legend**

 2010 Boeing Soil Borrow Area

Reference: USEPA, 1997. Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory, Ventura County, California. May.

**1988 Aerial Photograph  
Santa Susana Field Laboratory**





**Legend**

 2010 Boeing Soil Borrow Area

Reference: USEPA, 1997. Aerial Photographic Analysis of Rockwell Rocketdyne Santa Susana Field Laboratory, Ventura County, California. May.

**1995 Aerial Photograph  
Santa Susana Field Laboratory**





**Legend**

 2010 Boeing Soil Borrow Area

**2009 Aerial Photograph  
Santa Susana Field Laboratory**





# California Regional Water Quality Control Board

## Los Angeles Region



Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

Linda S. Adams  
Agency Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: <http://www.waterboards.ca.gov/losangeles>

Arnold Schwarzenegger  
Governor

September 23, 2010

Mr. Tom Gallacher  
The Boeing Company  
Santa Susana Field Laboratory  
5800 Woolsey Canyon Road  
Canoga Park, CA 91304-1148

**APPROVAL OF THE INTERIM SOURCE REMOVAL ACTION (ISRA) 2010 BOEING SOIL BORROW AREA SUBMITTED IN RESPONSE TO CALIFORNIA WATER CODE SECTION 13304 ORDER (NPDES NO. CA0001309, CI NO. 6027, SCP NO. 1111, SITE ID NO. 2040109)**

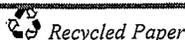
Dear Mr. Gallacher:

Los Angeles Regional Water Quality Control Board (Regional Board) staff and Department of Toxic Substances Control (DTSC) staff have reviewed the ISRA 2010 Boeing Soil Borrow Area document submitted on July 27, 2010.

The document summarizes the physical and chemical characteristics of Boeing's proposed 2010 soil borrow area. Approximately 2,000 cubic yards of soil from the borrow area may be needed to replace soil removed during Interim Source Removal Actions (ISRAs). The proposed borrow area has the following characteristics:

1. It is away from historical facility activities (>1,250 feet).
2. It is in the same watershed as the planned ISRA remedial excavations.
3. It is readily accessible.
4. There is adequate soil volume available. The proposed borrow area measures 120 feet by 450 feet, and it is estimated to contain approximately 8,000 cubic yards of useable soil.
5. There are few (if any) biological resources in the proposed borrow area.
6. Seventeen soil samples were collected from the proposed borrow area, and analyzed to determine chemical content. The soils, based on the results of laboratory analysis, are acceptable and do not contain elevated concentrations of the ISRA chemicals of concern.

**California Environmental Protection Agency**



*Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.*

Mr. Thomas Gallacher  
The Boeing Company

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September 23, 2010

Based on this information, the Regional Board and DTSC staffs approve the plan for the soil borrow area.

**If you have any questions regarding this activity, please telephone Mr. Peter Raftery at (213) 576-6724 (praftery@waterboards.ca.gov) or Cassandra Owens at (213) 576-6750 (cowens@waterboards.ca.gov).**

Sincerely,



Samuel Unger, PE  
Executive Officer

Enclosure: Email dated September 16, 2010 from Buck King with California Department of Toxic Substances Control

cc: Mr. Rick Brausch, California Department of Toxic Substances Control  
Mr. Mark Malinowski, Department of Toxic Substances Control  
Mr. Gerard Abrams, Department of Toxic Substances Control  
Mr. Buck King, Department of Toxic Substances Control  
Mr. Tom Skaug, Department of Toxic Substances Control  
Mr. Thomas Gallacher, Boeing Company  
Mr. Allen Elliot, NASA  
Ms. Merrilee Fellows, NASA  
Mr. Arthur Lenox, Boeing Company  
Ms. Lori Blair, Boeing Company

**California Environmental Protection Agency**



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**From:** Buck King <BKing@dtsc.ca.gov>  
**To:** "Peter Raftery" <praftery@waterboards.ca.gov>  
**CC:** "Gerard Abrams" <GAbrams@dtsc.ca.gov>, "Mark Malinowski" <MMalinow@dtsc....>  
**Date:** 9/16/2010 3:57 PM  
**Subject:** Re: ISRA 23 July 2010, Soil Borrow Area Memo

Peter,  
I have completed my review of the Borrow Area Plan and have no comments. I recommend that the RWQCB approve the plan for implementation.

Buck King, PG, CHG  
Senior Engineering Geologist  
(510) 540-3955 Fax (510) 540-3937  
bking@dtsc.ca.gov

>>> Peter Raftery <praftery@waterboards.ca.gov> 9/15/2010 1:42 PM >>>  
Hi Buck:

We are preparing an approval letter for the Borrow Area Plan. Please provide comments The plan sounds fine to me.

Peter

Peter J. Raftery, PG, CHG  
Engineering Geologist  
Los Angeles Regional Water Quality Control Board  
320 W. 4th Street  
Los Angeles, Ca 90013  
ph 213.576.6724  
fx 213.576.6717

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## TELEPHONE LOG NOTES

Date: 10/5/2010

Time: 12:15pm

Agency Contacted: DTSC

Person Contacted: Don Greenly – 714-484-5474

Boeing Contact Person: Lori Blair

Topic: Respond to request for information on dust control measures for ISRA

Notes:

Don Greenly, DTSC, called with a question from a nearby resident on the dust control measures used during the ISRA project. Don explained that he had a phone call from a nearby resident who was a mother who plans on taking her children to a nearby Temple located about 2 miles from the Santa Susana Facility on Valley Circle. Her concern was whether or not dust would come from facility or from the canyons down to the Temple.

I explained that the Boeing ISRA project was being done under a Ventura County grading permit and that the operations must comply with the Ventura County Rule 55 for dust suppression. Ventura county is on site once a week for random inspections, including today. In addition, representatives from the RWQCB are also on site routinely to observe work.

The soil management method used is to utilize water sprays and work the dirt prior to being loaded in the haul truck for staging [non-hazardous soils]. I described the “kneading” technique used to ensure that moisture is worked thoroughly through the soil prior to the short haul to the staging area. Monitoring is performed at the point of greatest potential to emit dust – at the loading site. A calibrated and California certified dust reader was used at the start of the project last year along with PM10 monitoring to level set the operations. PM10 monitoring continues at the loading locations – again the point with the highest possibility of generating dust. PM10 is used to indicate if the level of PPE is required to be increased. To date all work has been done in level D. The dust control measures have been successful. A weather station is also used to monitor wind in the work area. At a certain velocity work is required to be stopped per the grading permit.

I also explained that we also at times vacuum the soils rather than use heavy equipment with a large scale truck mounted vacuum.

Loading of the soils is done again using water sprays for dust suppression. The loading team uses the same protocol as at the excavation site – the soils are mixed with enough moisture to ensure that control of any dust during truck loading. The trucks are lined with a very heavy plastic and once the non-hazardous soils are loaded, the soil is then burrito wrapped with the internal liner. The load is then tightly tarped down with a truck tarp. I mentioned that Ventura County has observed the loading and very satisfied. They had also informed me that they have developed a power point presentation on how to load trucks based upon the ISRA operations. I have not been given a copy of the presentation.

Don asked if Ventura county brings a hand held meter on site. I explained that they rely on visible observations.

He said that the mother was concerned about work being performed in Bell Canyon and on Woolsey Canyon Road. I let Don know that we are only doing work on Boeing property. However, I had seen homes being built on Woolsey Canyon Road – by other people, not Boeing. I also let him know that all of the work in Outfall 008 from last year was complete and that we are only currently working in Outfall 009 which faces Simi Valley. For some reason, Don explained, the mother was concerned that we were working in all of the canyons around the hill – not just on Santa Susana. I made sure to let him know the ISRA work was only being done on Boeing property and on property that the government owns and administered by NASA.

I also let Don know that we have weekly status calls with the RWQCB – they were the ones who issued the order for ISRA, DTSC and Ventura County.

I provided Don Cassandra Owens [RWQCB] contact information along with Jim O'Tousa's [Ventura County] contact information.

I also provided Don with the web address for the ISRA website for more information.

Don said that he had left a voice mail for Steve Fischer as well. He was given both Steve and my phone numbers from Paul Carpenter [DTSC]. He asked if Bowl was on Boeing property and I confirmed that it was on Boeing property.

He said he did not think he would need to contact either Cassandra or Jim – but appreciated the information and thought that it was sufficient to answer the Mom's questions.

I called Cassandra and informed her of this conversation and provided her Don's phone number.