INTERIM SOURCE REMOVAL ACTION (ISRA) TRANSPORTATION PLAN SANTA SUSANA FIELD LABORATORY VENTURA COUNTY, CALIFORNIA

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Prepared For:

THE BOEING COMPANY

and

THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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ABBREVIATIONS AND ACRONYMS

Boeing The Boeing Company

CAO Cleanup and Abatement Order
CFR Code of Federal Regulations

cy cubic yards

DOT Department of Transportation

DTSC Department of Toxic Substances Control

ELV Expendable Launch Vehicle

fwy freeway

HSP health and safety plan

ISRA Interim Source Removal Action

NASA National Aeronautics and Space Administration
NPDES National Pollutant Discharge Elimination System

PEA preliminary evaluation area

RCRA Resource Conservation and Recovery Act

RFI RCRA Facility Investigation

RWQCB Los Angeles Regional Water Quality Control Board

SMP Soil Management Plan

SSFL Santa Susana Field Laboratory





1.0 INTRODUCTION

This Transportation Plan was prepared to support implementation of the Interim Source Removal Action (ISRA) at the Santa Susana Field Laboratory (SSFL), Ventura County, California. Details of the ISRA implementation effort that this Transportation Plan supports were described in the Final ISRA Work Plan prepared by MWH Americas, Inc. (MWH) (MWH, 2009b). This Transportation Plan was prepared by MWH on behalf of The Boeing Company (Boeing) and the National Aeronautics and Space Administration (NASA).

This Transportation Plan outlines proposed Interim Source Removal Action (ISRA) transportation activities to be completed by Boeing in Areas I and II at and near the Canyon, Happy Valley South (HVS), and Expendable Launch Vehicle (ELV) areas.

1.1 PROJECT BACKGROUND

The SSFL is located approximately 29 miles northwest of downtown Los Angeles, California, in the southeast corner of Ventura County. Figure 1 shows the geographic location and property boundaries of the SSFL, as well as surrounding communities.

Stormwater discharges from the SSFL are currently regulated by National Pollution Discharge Elimination System (NPDES) permit number R4-2007-0055 issued by the Los Angeles Regional Water Quality Control Board (RWQCB), and are monitored at 15 Outfalls. On December 3, 2008, the RWQCB issued a California Water Code Section 13304 Cleanup and Abatement Order (CAO) requiring an ISRA for Outfalls 008 and 009. The CAO was issued by the RWQCB in order to achieve compliance with the Waste Discharge Requirements (WDR) for Outfalls 008 and 009 contained in Order No. R4-2004-0111, as amended by Orders No. R4-2006-0008, R4-2006-0036, and R4-2007-0055. A Final ISRA Work Plan was submitted to the RWQCB on May 1, 2009, that detailed the ISRA area identification and remedial planning process for these Outfalls (MWH, 2009b). Remedial actions consist of excavation, offsite transportation, and disposal of impacted soil; re-contouring and re-vegetation of disturbed areas; and soil confirmation sampling.



Investigation of chemical contamination in soil, groundwater, and related media (e.g., soil vapor, weathered bedrock) at the SSFL is also being conducted under the Resource Conservation and Recovery Act (RCRA) Corrective Action Program regulated by the Department of Toxic Substances Control (DTSC). The RCRA program at the SSFL is currently in the RCRA Facility Investigation (RFI) phase, with much of the investigative sampling complete and RFI reports being prepared. Although some of this sampling and analysis is ongoing, substantial data have already been collected in many of the planned ISRA Areas. Additional sampling in the ISRA preliminary excavation areas (PEAs) that were identified in the Preliminary ISRA Work Plan (MWH, 2009a) is currently ongoing to further define impacted soil areas for ISRA implementation in 2010 and 2011.

Remedial actions at Happy Valley within Outfall 008 watershed and at ELV within Outfall 009 watershed are scheduled for activity in 2009, and remedial actions at other areas within Outfall 009 are scheduled for activity in 2010 and 2011.

1.2 ISRA EXCAVATION DESCRIPTION

There are a total of nine excavation areas planned for 2009: seven excavation areas in the Outfall 008 watershed (HVS-1, HVS-2A, HVS-2B, HVS-2C, HVS-3, CYN-1, DRG-1) and two excavation areas in the Outfall 009 watershed (ELV-1C and ELV-1D). Impacted soil from the excavation areas will be removed by a backhoe, front-end loader, vacuum truck, and hand tools. The removal, transportation, and disposal activities will be performed in accordance with applicable federal, state, and local laws, regulations, and ordinances.

1.3 PURPOSE AND OBJECTIVE

The purpose of this Transportation Plan is to identify and minimize potential health, safety, and environmental risks that may result during loading; SSFL entry and egress; and during transportation of waste on public roads. The Transportation Plan as well as the required Contingency Plan Section will be used as a stand-alone document by personnel involved in the transportation of the excavated soil.



As stated above, ISRA implementation is defined for 2009 activities for which this Transportation Plan has been prepared. Future 2010 and 2011 ISRA activities will be documented in ISRA Work Plan Addenda for RWQCB review and approval. Therefore, this Transportation Plan and Contingency Plan Section will be updated as warranted once future ISRA activities are defined to provide stand alone documents for personnel involved in the transportation of excavated soil.





2.0 WASTE CHARACTERIZATION AND QUANTITY

The estimated *ex situ* excavated soil volume from ISRA Areas in 2009 is approximately 7,610 cubic yards (cy) (MWH, 2009b). This volume was estimated based on an evaluation of data from RFI and ISRA sampling efforts.

2.1 ESTIMATED WASTE QUANTITY

The total volume of *ex situ* excavated soil is approximated at 7,610 cy, or approximately 690 truck loads, assuming an average truck load of 11 cy and no bulking. Because adjustments to the limits of removal may be warranted based on confirmation sampling, volumes are estimates and do not include potential additional soil removal that may be necessary in order to meet the post-removal goals of the ISRA Final Work Plan (MWH, 2009b).

2.2 WASTE PROFILING

Waste profiling will be largely determined by reviewing analytical results from *in situ* soil samples previously collected within each planned excavation area (historical samples obtained as part of ongoing RFI activities, and pre-excavation ISRA data gap samples). For any further waste characterization, *ex situ* soil samples may be collected from stockpiled waste soil, but this is expected to be minimal. Soil will be classified in accordance with regulations described in California Code of Regulations, Title 22, and Sections 66261.21 to 66261.24. Waste soil characterization analytical results will be submitted to the appropriate disposal facilities for approval and disposal of waste. Once approval from the disposal facility is obtained, the waste will be handled and transported to the disposal facility. All generated wastes will be sampled, analyzed, and managed in accordance with CCR Title 22, Division 4.5.

Based on the chemical analysis, it is anticipated that the soil will be classified as non-hazardous waste. However, the dry, ephemeral pond sediments from ISRA Area ELV-1D may be hazardous waste and will be handled separately pending any additional waste characterization data deemed necessary.





3.0 WASTE STAGING OPERATIONS

It is anticipated that most of the removed soil will be temporarily stockpiled onsite before being loaded for transport to a disposal facility. Soil excavated from the Outfall 008 ISRA areas will be loaded directly into haul trucks and transported to a temporary stockpile location at the Lower Parking Lot near the SSFL facility entrance. Soil excavated from the Outfall 009 ISRA areas will be stockpiled at the parking lot adjacent to the helipad, located west of excavation areas ELV-1C and ELV-1D. Any soil anticipated to exceed hazardous waste levels will be segregated and managed separately. Soil that is not promptly loaded for transport to a disposal facility will be stored per the Soils Management Plan (SMP) (MWH, 2009c).





4.0 REQUIREMENTS OF TRANSPORTERS

A transporter or combination of transporters will be selected prior to the implementation of this Transportation Plan. The selected transporters will be qualified, fully licensed, and insured to transport the wastes generated. For transportation of hazardous wastes, if necessary, the selected transporter will be a registered hazardous waste hauler.

The soil will be transported in bulk, using 10-wheel end dump trucks, or equivalent, each with a capacity of 15 to 18 tons of material. Prior to leaving the SSFL, non-hazardous waste will be covered and secured with a tarp completely extending over the truck bed. RCRA or California-hazardous wastes, if encountered, will be placed in labeled, Department of Transportation (DOT)-approved, 20-cy transport bins or other DOT-approved containers and transported by appropriate truck.





5.0 TRAFFIC CONTROL PROCEDURES

The plan is to dispatch trucks to and from the SSFL at set intervals to avoid traffic problems along Woolsey Canyon Road, the significant local traffic bottleneck. Between 7 a.m. to 9 a.m. and 4 p.m. to 7 p.m., trucks traveling on City of Los Angeles streets will be staggered at a minimum of 15 minute intervals. For other periods, the interval will be approximately 10 minutes. Although truck drivers will be instructed to approach the SSFL at the prescribed intervals, there is always the possibility that some trucks will approach the SSFL ahead of time.

Upon entrance, each truck driver will make a temporary stop at the facility entrance at the end of Woolsey Canyon Road. The driver will park the truck at an area designated by the security guards. The security guard will issue a temporary pass permit to the driver and authorize the truck entry to the facility. The driver will proceed to the loading area following the posted signs. While at the SSFL, vehicles will be required to maintain slow speeds for safety purposes and for dust control measures. Upon exit of the SSFL, each driver will again temporarily stop at the facility control point to relinquish the temporary pass permit to facility personnel.

No more than 20 trucks will arrive and leave the SSFL on the same day. At any time, approximately four to five trucks may be staged at the loading area of the Lower Parking Lot or in the ELV staging area near the helipad. Excess trucks will use available parking space at SSFL.





6.0 TRUCK LOADING OPERATIONS

Transportation trucks will be loaded at stockpile staging areas, which are anticipated to be at the Lower Parking Lot (Outfall 008) and the helipad near the ELV (Outfall 009) (Figure 2).

Gentle loading will be performed to minimize the potential for spill or dust creation. Water spraying will be implemented as needed to suppress potential dust generation during loading operations. Care will be taken to apply dust suppression water to the top of the load or source material to avoid wetting the truck tires. Loading will not be performed during unfavorable weather conditions (i.e., high winds or storms). Any material that is spilled during loading will be collected for subsequent loading. After loading, trucks will then pass through the decontamination and inspection station prior to weighing and departure from the SSFL. Trucks will be decontaminated by dry-brushing prior to leaving the staging/loading areas to prevent track out. Material from the decontamination of the trucks will be collected and hauled out with the last load of soil.

Transported material will be covered prior to leaving the SSFL property. Trucks will be inspected before leaving the SSFL. The inspection will include visual checking of tire conditions, brake pads, latches, properly-secured covering, decontamination, placarding, and hauling documents (manifests). The inspection results will be logged in the daily construction logs.





7.0 SHIPMENT DOCUMENTATION

The characteristics of the waste will be determined prior to transportation offsite. A copy of the shipping document for each truckload will be maintained onsite until completion of waste transportation operations.

7.1 NON-HAZARDOUS WASTE SHIPMENT

For material characterized as non-hazardous waste, the truck driver will be handed a non-hazardous waste manifest or bill of lading. After loading the truck, a Boeing representative and the driver will sign the non-hazardous waste manifest. A generator's copy will be retained by the transportation manager for logging and tracking purposes. At a minimum, the manifest will include the following information:

- Name and Address of Waste Generator;
- Name and Address of Waste Transporter;
- Name and Address of Disposal Facility;
- Description of the Waste; and
- Quantity of Waste Shipped.

7.2 HAZARDOUS WASTE SHIPMENT

For material that is categorized as a hazardous waste, a manifest of hazardous waste will be prepared for each truck, based on analytical data and the landfill approval profile sheet. After loading the truck, a Boeing representative and the driver will sign the manifest. The generator's copy (yellow) and the DTSC's copy (blue) will be removed from the manifest package, by the transportation manager, for logging and tracking purposes. The balance of the manifest sheets will be handed over to the driver to accompany the shipment of the waste to the landfill facility. At a minimum, the manifest document will include the following information:

- Name and Address of Waste Generator;
- Name and Address of Waste Transporter;
- Name and Address of Disposal Facility;
- Description of the Waste; and
- Quantity of Waste Shipped.





8.0 TRANSPORTATION ROUTES

Transportation of wastes will occur arterial streets and/or freeways (Fwys), approved for truck traffic, to minimize any potential impact on the local neighborhoods. The onsite truck route, primary offsite truck routes, and alternate offsite truck routes are described in detail below.

8.1 ONSITE TRUCK ROUTE

Onsite truck routes from the Happy Valley Area and ELV Area excavation sites to stockpile areas, from stockpile areas to scale, and from scales to the SSFL Gate are shown on Figure 3 and described below.

Happy Valley Area. Onsite haul trucks transporting soil from Happy Valley excavation sites to the Outfall 008 stockpile staging area will proceed from Happy Valley on the gravel road and head west toward the Canyon area, continue west on Canyon Road, turn right onto Area I Road, and turn left into the Lower Parking Lot. Offsite disposal trucks loading in the Lower Parking Lot will travel west on the Area II Service Road towards the scales. At the scales, trucks will receive a manifest for the load, at which point they will travel east on the Area II Service Road and exist through the SSFL gate.

ELV Area. Onsite haul trucks transporting soil from ELV excavation sites to the Outfall 009 stockpile staging area will travel southwest to the helipad area. Offsite disposal trucks loading in at the helipad will travel north east, turn right on helipad road, turn left on Area II Service Road, and travel east on Area II Service Road towards the scales (Figure 3). At the scales, trucks will receive a manifest for the load, at which point they will travel east on the Area II Service Road and exist through the SSFL gate.

8.2 PRIMARY OFFSITE TRUCK ROUTE

Once offhaul trucks leave SSFL, the primary route to the various facilities will be based on reaching the Ronald Reagan 118 Fwy.



Primary Route to the 118 Fwy

From the SSFL gate, vehicles will turn right (east) onto Woolsey Canyon Road, turn right (south) onto Valley Circle Boulevard, turn left (west) onto Roscoe Boulevard, and turn left (north) onto Topanga Canyon Boulevard (Figure 4). The entrance to the 118 Fwy is on Topanga Canyon Boulevard.

Route to Antelope Valley and Lancaster Recycle and Disposal Facilities

Vehicles will go east on the 118 Fwy, merge north onto on San Diego Fwy 405 followed by I-5, and then east on the 14 Fwy (Figure 5). Vehicles in route to Antelope Valley Recycle and Disposal Facility will exit and proceed west on W. Avenue S, turn right (north) onto Tierra Subida Ave, and proceed approximately 0.6 miles to the facility entrance. Vehicles in route to Lancaster Recycle and Disposal Facility will exit and proceed east on Avenue G, turn left (north) onto Division St., turn right (east) on E. Avenue F, and proceed approximately 0.7 miles to the facility entrance.

Route to Chemical Waste Management – Kettleman Hills Facility

Vehicles will go east on the 118 Fwy, north on San Diego Fwy 405, north on I-5 to Kettleman Hills, south on Skyline Boulevard, and finally left on Old Skyline Road (Figure 6). The landfill is located at 35251 Old Skyline Road, Kettleman Hills.

Route to Clean Harbors – Buttonwillow, California Facility

Vehicles will go east on the 118 Freeway for approximately 7.2 miles then north on the 405 Freeway for approximately 3.1 miles and continue north on the 5 for approximately 98.6 miles. Vehicles will take exit 257 toward McKittrick/Buttonwillow/State Highway 58 and will merge onto Tracey Avenue. Vehicles will turn right onto California State Highway 58 (CA-58) and proceed approximately 8 miles to Lokern Road. Vehicles will turn right onto Lokern Road and proceed into the facility (Figure 7).

8.3 ALTERNATE OFFSITE TRUCK ROUTE

The 101 and 405 Fwy can be used to reach necessary Fwys instead of the 118 Fwy. This alternate route is not recommended because traffic on the 101 Fwy is usually heavier than on the



118 Fwy. Another alternate route is to access the 118 Fwy from De Soto Avenue instead of Topanga Canyon Boulevard.





9.0 OFFSITE LAND DISPOSAL FACILITIES

Based on the results of waste profile and classification, the generated waste will be transported to a proper offsite disposal facility. Final determination of the facility selected for disposal will be based on approval from the disposal facility. Once the disposal facility is determined, copies of waste profile reports used to secure disposal permission from the facility will be provided to DTSC.

9.1 NON-HAZARDOUS MATERIAL

Most of the removed soil from the excavations will meet non-hazardous waste classification criteria. Non-hazardous material will be transported to Chemical Waste Management's Antelope Valley Recycle and Disposal Facility. Soil profiles will be prepared based on the results of the laboratory analyses of samples from each waste stream. The landfill facility will dispose of the non-hazardous materials in accordance with each specific profile.

Facility Address

Antelope Valley Recycle and Disposal Facility 1200 W. City Ranch Road Palmdale, CA 93553 **Facility Contact**

Elizabeth Navarro Tel: (559) 834-9151

9.2 HAZARDOUS MATERIAL

The only soils anticipated to hazardous waste classification criteria are from ISRA Area ELV-1D. Material classified as hazardous waste will be secured in 55-gallon drums, 20-yard bins, or other DOT-approved containers, and transported to the Chemical Waste Management Kettlemen Hills Facility or the Clean Harbors Buttonwillow Landfill for disposal. Soil profiles will be prepared based on the results of the laboratory analyses of samples from each waste stream. The landfill facility will dispose of the hazardous materials in accordance with each specific profile.

Facility Address

Chemical Waste Management, Inc. 35351 Old Skyline Road Kettleman Hills Facility Kettleman City, California 93239

Facility Contact

Rachel Lopez Tel: (559) 386-9711 Esther Salazar

Tel: (559) 386-9711



Facility Address

Clean Harbors Buttonwillow Landfill 2500 West Lokern Road Buttonwillow, CA 93206 **Facility Contact**

Marie Bouni Tel: (661) 762-6200



10.0 RECORDKEEPING

A daily field logbook will be maintained by the transportation manager during transportation activities. The field logbook will serve to document observations, personnel onsite, important transportation information, and other vital project information.

The daily field logbook will document the following waste transportation details for each load that departs the SSFL:

- Date and time of loading;
- Vehicle identification;
- Truck driver name and trucking company name;
- Approximate weight of the load;
- Decontamination verification;
- Comments or remarks;
- Handling or the hazardous waste manifest;
- Type and quantity of waste in container/load;
- Destination and departure time;
- Instruction to truck drivers on record-keeping;
- Handling of hazardous waste manifest (signature, distribution of copies and handling);
- Handling of Transportation Plan; and
- Handling of driving certificate, maintenance log and vehicle permits.

Each truck driver will be given a copy of this Transportation Plan, which includes complete instructions describing the route to each disposal facility. The Transportation Plan, trucking company's Health and Safety Plan (HSP), manifests or bills of lading, and analytical results (profile) shall be kept by the truck driver in the cab of the truck with the driver. The driver will be responsible for handing over the manifest or the bill of lading to the disposal facility, at the disposal facility gate, for signature and processing by the disposal facility.





11.0 HEALTH AND SAFETY

A site-specific HSP has been prepared for the ISRA removal activities. Personnel working at the SSFL will be required to be familiar with the HSP. The HSP will be used for training purposes prior to the start of the project. Prior to transportation activities, the transportation manager will hold a health and safety meeting with all vehicle operators to thoroughly communicate the Transportation Plan and the HSP to the vehicle operators. Each vehicle operator will acknowledge their understanding of the plans by signing the attendance sheet. New truck drivers assigned to haul hazardous waste will go through the same procedures prior to being authorized to commence the work.

Truck drivers hauling hazardous waste will have Health and Safety training in accordance with 29 Code of Federal Regulations (CFR) 191 0.120 and CFR Title 8 Section 5192. The drivers will be protected per level D. Onsite personnel will not be allowed near the loading area to avoid unnecessary exposure to airborne dust and/or physical risks associated with movement of heavy equipment (loaders, etc.).





12.0 CONTINGENCY PLAN

Each waste hauler is required to have a contingency plan prepared for emergency situations (vehicle breakdown, accident, waste spill, waste leak, fire, explosion, etc.) during transportation of waste from the SSFL to the designated disposal facilities. Once the waste hauler is selected, a copy of their contingency plan will be attached to this Transportation Plan.

Prior to transportation activities, the transportation manager will hold a kick-off meeting with all truck drivers to thoroughly communicate the Contingency Plan to the drivers. Each driver will carry a copy of the Contingency Plan in the cab of the truck and will be prepared to implement the tasks assigned to them. The transportation manager will communicate the Transportation Plan to emergency service organizations, law enforcement agencies, and transportation authorities that have jurisdiction along the proposed route.

In case of hazardous waste release during transportation, the following shall be contacted by the driver:

| 911 | if release originates on the highway |
|---|--|
| (800) 852-7550 | if release originates off highway (State Office of Emergency Services) |
| 911 | Local Fire Department |
| (415) 974-8132 EPA Regional Emergency Response Office, Region 9 | |
| (916) 255-6504 | DTSC – Emergency Response |





13.0 REFERENCES

MWH. 2009a. Preliminary ISRA Work Plan, Santa Susana Field Laboratory, Ventura County. February.

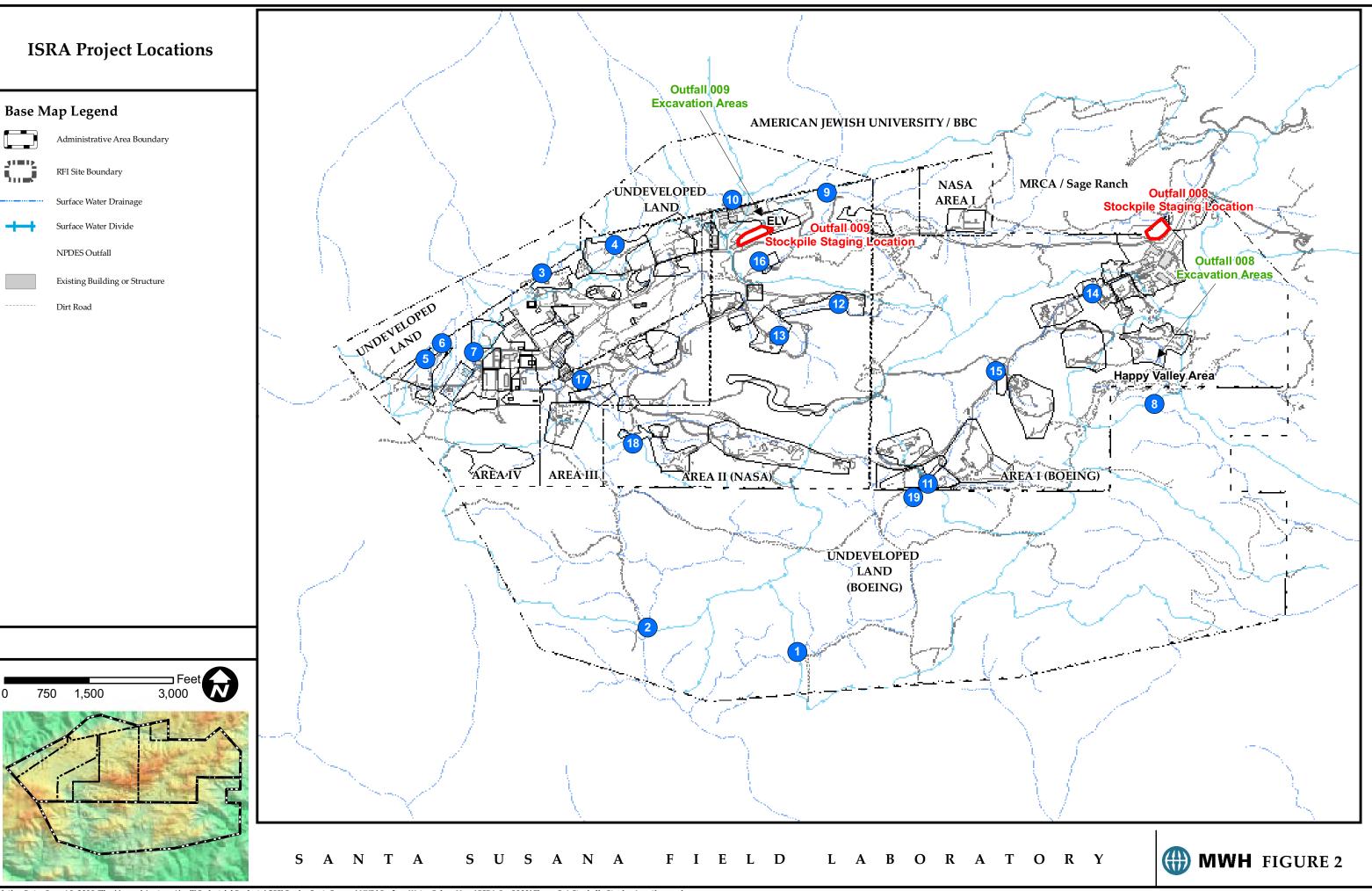
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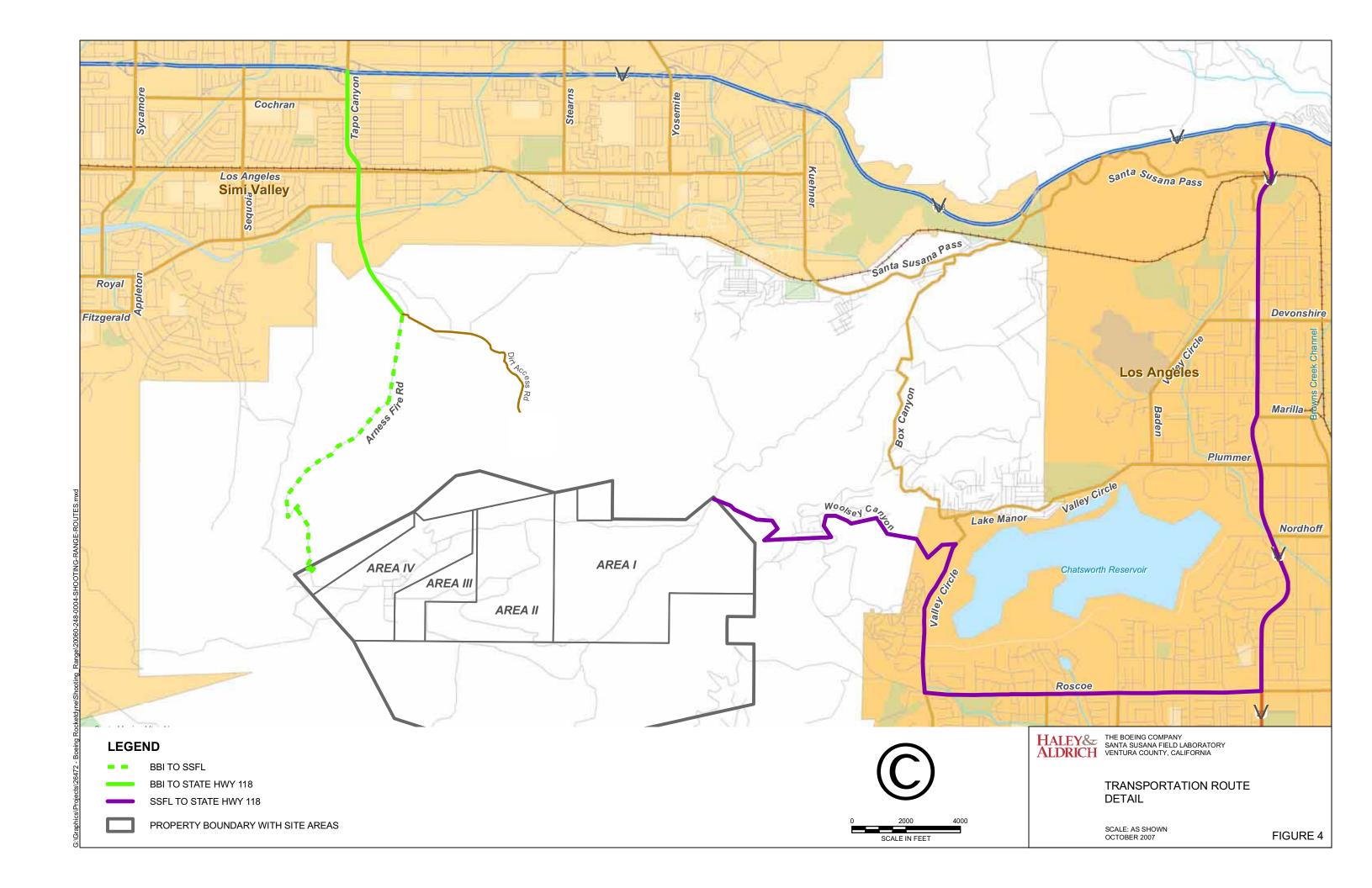
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