

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

Certified Mail

May 22, 2009  
In reply refer to SHEA-108709

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



Attention: Mr. Dana Cole, 401 Certification Unit

Subject: Pre-Certified 401 Notification  
The Boeing Company, Santa Susana Field Laboratory  
Interim Source Removal Action-Outfalls 008 and 009 Watersheds  
Ventura County, California

Dear Mr. Cole:

The Boeing Company (Boeing) is submitting this notification to the California State Water Resources Control Board (SWRCB) and the Los Angeles Regional Water Quality Control Board (RWQCB) as required under Clean Water Act (CWA) Section 401, and as promulgated by the Water Quality Certification (WQC) of certain U.S. Army Corps of Engineers (ACOE) Nationwide Permits (NWP).

This notification is for the Interim Source Removal Action (ISRA) to control the release of constituents of concern (COCs) to surface water within the Outfall 008 and Outfall 009 watersheds at the SSFL. The work will be performed by The Boeing Company (Boeing) and the National Aeronautics and Space Administration (NASA) pursuant to a California Water Code Section 13304 Cleanup and Abatement Order (CAO) issued by the Los Angeles Regional Water Quality Control Board (RWQCB) dated December 3, 2008. The CAO was issued by the RWQCB to enforce compliance with the Waste Discharge Requirements (WDR) for Outfalls 008 and 009 contained in Order No. R4-2004-0111, as amended by Order Nos. R4-2006-0008, R4-2006-0036, and R4-2007-0055.

The objective of the ISRA RWQCB CAO is to improve surface water quality within the Outfalls 008 and 009 watersheds by identifying, evaluating, and remediating areas of contaminated soil in order to eliminate the COCs that have resulted in exceedances of NPDES permit limits and benchmarks. Based on the work scope, the Project is a notifying Nationwide Permit 38-Cleanup of Hazardous and Toxic Waste. Based on this category of NWP, this Project is pre-certified by the SWRCB under the CWA Section 401 program. Therefore, Boeing is providing this notification, and not a complete Section 401 certification application. This is consistent with the May 11, 2007 SWRCB memorandum that identifies specific Section 401 activities which are pre-certified and only require appropriate notification.

**Pre-Certified Notification Information**

**1. Name, address, and telephone number of the:**

**a. Applicant**

The Boeing Company  
Mr. Thomas Gallacher  
5800 Woolsey Canyon Road, MC 055-T487  
Canoga Park, California 91304-1148  
Phone: 818-466-8877 or 818-466-8778  
Fax: 818-466-8730

**b. Applicant's Agent**

MWH Americas, Inc.  
Mr. Glenn Jaffe  
618 Michillinda Avenue, Suite 200  
Arcadia, California 91007  
Phone: 818-391-4243  
Fax: 626-568-6515  
Email: glenn.jaffe@mwhglobal.com

**2. Identification of Federal permits and licenses for proposed project activities**

United States Army Corps of Engineers (USACOE), Ventura Branch  
CWA Section 404 Notifying Nationwide Permit 38

A copy of the Army Permit Application form is attached. The application serves as the USACOE pre-construction notification for the NWP 38.

Note: The California Department of Fish and Game previously approved a Notification of Lake or Streambed Alteration and issued Streambed Alteration Agreement (SAA) 1600-2003-5052-R5. This SAA has been amended and extended, and is an active SAA. In accordance with CDFG conditions stipulated in the SAA and its amendments, biological studies will be performed to minimize potential impacts to flora and fauna in Project work areas. Biological surveys of the Project areas have been performed and no sensitive species or other issues were identified. The biologist will again visit the Project areas prior to equipment being mobilized and field work commencing. This pre-field activities' survey is performed so that potential concerns can be addressed without affecting field work schedules. At the start of field work, Project areas will be re-visited and surveyed by a biologist to verify the pre-field activities' survey results, potentially transplant sensitive wildlife, and to evaluate current conditions. Upon field activities commencing in Project areas, a biologist will visit the areas as work is being performed to verify SAA conditions are being met, and to provide guidance to the field crews, if necessary.

**3. Project Description**

a. Purpose and Final Goal: The objective of the ISRA RWQCB CAO is to improve surface water quality within the Outfalls 008 and 009 watersheds by identifying, evaluating, and remediating areas of contaminated soil in order to



eliminate the COCs that have resulted in exceedances of NPDES permit limits and benchmarks. An evaluation of remediation alternatives identified excavation, capping, and/or diversion/collection surface controls as the most likely remedial actions for the ISRA project. Of these 3 actions, the most likely alternative for both the Outfall 008 and the Outfall 009 ISRA Areas is excavation. Whichever alternative(s) is chosen, ISRA activities may include the use of the following adjacent to and within the Outfall 008 and 009 ephemeral drainages:



Excavators	Shovels
Bobcats	Backhoes
Vacuum trucks	Manual removal
Personal trucks	Roll-off bins
Transport trucks	Dump Trucks

If capping is chosen as a portion of the remedy, it may involve completely covering the potential ISRA Areas with a low-hydraulic-conductivity layer. The goal for installation of the cap is to minimize the infiltration of water into the potential source area and to provide erosion control, thereby minimizing the mobilization of COCs. The two potential capping techniques for ISRA Areas include installation of a clay cap and a geomembrane cap. The general field methods to install these caps are described below. Both clay and geomembrane caps will require routine inspection, maintenance, and land use restrictions (such as fencing or deed notifications) to prevent damage to the cap or future use in an area.

The soil cap will consist of clean cohesive soil installed over the existing site grade, with the final soil cap grade designed to drain stormwater without ponding and minimize erosion of the surrounding areas. Surrounding areas may need to be recontoured to minimize erosion. Although the soil cap will not be impermeable, it will effectively isolate the COCs in soil from contact with stormwater and serve to prevent the transport of constituents by rain water.

The geomembrane cap will consist of a 30-mil low linear density polyethylene geomembrane placed on a suitable prepared subgrade and graded to provide a firm, unyielding foundation designed to drain stormwater. The geomembrane will be seamed by extrusion and/or fusion welding. The geomembrane will be protected with a 12-inch thick layer of clean soil or gravel placed over the geomembrane recontoured to drain stormwater and to minimize erosion of the surrounding areas. Surrounding areas may need to be recontoured to minimize erosion.

If surface water diversion is chosen as a portion of the alternative, diversion drainage channels will be constructed around the ISRA Area to prevent stormwater run-on. The diversion channels will direct stormwater around the ISRA Area to reduce the volume of water in contact with and potentially mobilizing COCs. A sedimentation or detention basin will be constructed downstream of the ISRA Area to collect stormwater flowing off the site and allow the suspended solids to settle. The basin operates as a detention reservoir while sediment is deposited by flow moving slowly through it. The sedimentation basin will discharge via an overflow weir or pipe and reconnect with the natural drainage. The basin will require

cleaning out frequently, likely after each storm, to prevent re-suspension of trapped sediments.

- b. Address including city and county, assessor's parcel number, and latitude and longitude:** The Boeing Company Santa Susana Field Laboratory, 5800 Woolsey Canyon Road, Simi Hills, Ventura County; Longitude 118°40.690'W and Latitude 34°14'N.
- c. Receiving water bodies:** Surface water that flows in the Outfall 008 Watershed flows through a natural unlined drainage on-site and eventually leaves the property (approximately 1/2 mile from Outfall 008) into Dayton Creek. Dayton Creek eventually flows into the Los Angeles River, which flows into the Pacific Ocean. Surface water that flows in the Outfall 009 Watershed flows through a natural unlined drainage on-site and eventually flows into Arroyo Simi, then into Calleguas Creek, and eventually into the Pacific Ocean.
- d. Types of receiving water bodies:** See 3c.
- e. For each water body type reported in 3c, the total quantity of waters and types of discharge material that may temporarily or permanently impact waters of the State:** The ISRA Project will not negatively affect the quantity of water flowing in these watersheds and will not result in waters being introduced into the drainage. As described above, impacted soil, sediment, and/or bedrock will be removed from the watersheds and drainages.

Soil, sediment, gravel, rock, rip rap, filter media, vegetation, and other similar materials may be placed in and adjacent to the subject ephemeral drainages. The type of each material is not currently known or is still being determined. It is anticipated up to 10,000 cubic yards of materials may be placed within, adjacent to, and in upland areas of the drainages. These materials may be used to restore the areas to pre-existing conditions; minimize the potential for surface soil/sediment erosion and transport into or within the drainages; and/or to improve surface water quality by limiting the volume of suspended or settleable solids in the drainages.

In addition to removing impacted soil, sediment, and/or bedrock and the potential restoration of the Project areas, a series of check dams and rip rap may be installed across a portion of the Northern Drainage channel to contain clay target and lead shot debris (under Department of Toxic Substances Control [DTSC] and RWQCB oversight, soils and sediment containing clay target and lead shot debris were recently removed from this area). The check dams and rip rap will also promote drainage bed and bank stabilization and sediment settling in specific locations during channel flow events. The deposited sediment will be inspected for the presence of clay target and lead shot debris and removed, if found to contain such debris.

It is anticipated the check dams will be constructed of gabion structures (rocks and grout in a wire mesh binder) and/or loose on-site or imported rocks and boulders.





The check dams may be founded in the near surface bedrock with a concrete base that will be poured and cured before channel flow events. If channel topography permits, the concrete base may be deleted.

The check dams will span across the channel and be approximately 6 feet high from toe to crest. The check dams will be installed such that ideally the toe of the upstream dam will be at the same elevation as the crest of the next downstream dam, and so on. After rainfall and channel flow events, the areas behind the check dams will be inspected for accumulation of sediment and the presence of clay target and lead shot debris. If sediment is present at approximately one half the height of the dam or more, the sediment may be removed using a vacuum truck and/or excavation equipment as necessary. Routine maintenance of the check dams and sediment deposition areas will continue until the check dams are deemed to no longer be required and removed.

Rip rap may be used to aid in stabilizing the drainage bed and banks to minimize erosion and sediment transport. Rip rap may be placed along drainage banks as well as in the drainage to reduce flow velocity and minimize scouring and erosion.

- f. The attached figures show project locations and work areas. The attached table indicates Project area coordinates. The attached ACOE information provides additional project details.

A check in the amount of \$77 made payable to the State Water Resources Control Board, is included.

I certify that to the best of my knowledge, the information in this notification is true and correct and that I am authorized to sign this notification as, or on behalf of, the applicant. If you have any questions or comments on this submittal, please do not hesitate to contact Ms. Lori Blair at 818-466-8741 or Glenn Jaffe of MWH at 818-391-4243.

Respectfully,

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

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

LNB:bjc

Attachments: Check for \$77 to SWRCB  
Site Figures  
Table with Project area coordinates  
Supplemental Information  
USACOE NWP 38 Pre-Construction Notification

Mr. D. Cole, RWQCB (SHEA-108709)  
May 22, 2009  
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cc: Mr. Oscar Balaguer, SWRCB  
Mr. Antal Szijj, USACE  
Dr. L. B. Nye, RWQCB  
Ms. Valerie Carrillo, RWQCB  
Ms. Cassandra Owens, RWQCB  
♥ Mr. Glenn Jaffe, MWH





M P Environmental Services, Inc.  
P.O. Box 80358 Bakersfield, CA 93380 (661) 393-1151

Bank One, Columbus, N.A.  
Columbus, OH 43271

152145

152145

25-80/440

DATE

AMOUNT

PAY

05/15/2009

\$77.00

\*\*\*seventy seven dollars and no cents

TO THE ORDER OF STATE WATER RESOURCES CONTROL BOARD  
PO BOX 1888  
SACRAMENTO CA 95812-1888  
USA

*Jason Caldwell*

SAFEGUARD SEC  
SAFEGUARD SEC  
MP

THIS DOCUMENT CONTAINS HEAT SENSITIVE INK. TOUCH OR PRESS HERE - RED IMAGE DISAPPEARS WITH HEAT.

⑈ 152145⑈ ⑆044000804⑆ ⑆041107661150⑈

M P Environmental Services, Inc.  
P.O. Box 80358 Bakersfield, CA 93380 (661) 393-1151

152145

Reference #	Transaction #	Trans. Date	PO Number	Trans. Amount	Amount Paid	Discount	Net Paid
PRE-CERTIFIED CW. 20090514		05/14/2009	JH	77.00	77.00	0.00	77.00
				77.00	77.00	0.00	77.00

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT  
(33 CFR 325)

OMB APPROVAL NO. 0710-0003  
Expires December 31, 2004

The public reporting burden for this collection of information is estimated to average 10 hours per response, although the majority of applications should require 5 hours or less. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies. Submission of requested information is voluntary, however, if information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME The Boeing Company/Mr. Thomas Gallacher	8. AUTHORIZED AGENT'S NAME AND TITLE <i>(an agent is not required)</i> Glenn Jaffe/MWH Project Manager
6. APPLICANT'S ADDRESS 5800 Woolsey Canyon Road, MC 055-T487 Canoga Park, California 91304-1148	9. AGENT'S ADDRESS 168 Michillinda Ave., Suite 200 Arcadia, California 91007
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business 818-466-8161	10. AGENT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business 626-568-6329

11. STATEMENT OF AUTHORIZATION

I hereby authorize Glenn Jaffe and/or MWH to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE

DATE

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE <i>(see instructions)</i> Interim Source Removal Action (ISRA)--Outfalls 008 and 009 Watersheds	
13. NAME OF WATERBODY, IF KNOWN <i>(if applicable)</i> Unnamed ephemeral drainages	14. PROJECT STREET ADDRESS <i>(if applicable)</i> 5800 Woolsey Canyon Road, MC 055-T487 Canoga Park, California 91304-1148
15. LOCATION OF PROJECT Ventura COUNTY California STATE	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN *(see instructions)*

Unsectioned portion of Calabasas Quadrangle, T2N, R17W, Various locations, Santa Susana Field Laboratory Property *(See attached figures)*

17. DIRECTIONS TO THE SITE

From Highway 118, exit at Topanga Canyon Boulevard and proceed south to Roscoe Boulevard. Turn west (right) onto Roscoe and then turn north (right) onto Valley Circle Boulevard. At the 3-way stop, turn left onto Woolsey Canyon. Proceed to the top of the road and then turn left into the SSFL facility.



18. Nature of Activity (Description of project, include all features)

THIS IS A PRE-CONSTRUCTION NOTIFICATION. Perform Interim Source Removal Action of constituents of concern to attain surface water quality objectives. Activities may include soil, sediment, bedrock, and/or other material/debris removal from drainages and or land surfaces to minimize contact with surface water and to improve surface water quality (Notifying NWP 38); potential installation of surface capping material; and/or installation of surface water diversion features. Install BMPs to minimize sediment transport into drainages and improve surface water quality. BMPs may consist of silt fencing, sand bags, straw wattles or bales, rock, gravel/grout check dams, rip rap, sand/gravel filter media, hydromulching, hydroseeding to improve vegetative cover and minimize erosion, etc. The attached supplemental information provides more details about the Project.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

All work is being performed in response to the RWQCB CAO requiring improvements to surface water quality in the Outfalls 008 and 009 drainages and watersheds.

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

If fill material consisting of sediment, gravel, rock, and/or rip rap is discharged to Outfall 008 and/or 009 ephemeral drainages, it will be placed to restore the drainages(s) to its pre-ISRA condition and to minimize soil erosion and potential transport. It is not anticipated dredging will be performed.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

The ISRA is more of a removal project than discharge project. See the attached Supplemental Information for additional details.

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Wetlands are not present and will not be filled. See the attached Supplemental Information for details.

23. Is Any Portion of the Work Already Complete? Yes \_\_\_\_\_ No  IF YES, DESCRIBE THE COMPLETED WORK

24. Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

Work will be completed on site which is owned by The Boeing Company. See attached sheets for more information regarding working on property used by Boeing but owned by the United States.

25. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
RWQCB	Pre-Certified 401	Pending	Concurrently	Pending	
CDFG	SAA	1600-2003-5052-R5	August, 2003	October, 2003	

\*Would include but is not restricted to zoning, building and flood plain permits

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.



SIGNATURE OF APPLICANT

5/22/09

DATE

SIGNATURE OF AGENT

DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States, knowingly and willfully falsifies, conceals, or covers up any trick scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Instructions for Preparing a  
**Department of the Army Permit Application**

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**Blocks 1 through 4.** To be completed by Corps of Engineers.

**Block 5. Applicant's Name.** Enter the name of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked Block 5.

**Block 6. Address of Applicant.** Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked Block 6.

**Block 7. Applicant Telephone Number(s).** Please provide the number where you can usually be reached during normal business hours.

**Blocks 8 through 11.** To be completed, if you choose to have an agent.

**Block 8. Authorized Agent's Name and Title.** Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, or any other person or organization. Note: An agent is not required.

**Blocks 9 and 10. Agent's Address and Telephone Number.** Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

**Block 11. Statement of Authorization.** To be completed by applicant, if an agent is to be employed.

**Block 12. Proposed Project Name or Title.** Please provide name identifying the proposed project, *e.g.*, Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center.

**Block 13. Name of Waterbody.** Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

**Block 14. Proposed Project Street Address.** If the proposed project is located at a site having a street address (not a box number), please enter it here.

**Block 15. Location of Proposed Project.** Enter the county and state where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked Block 15.

**Block 16. Other Location Descriptions.** If available, provide the Section, Township, and Range of the site and / or the latitude and longitude. You may also provide description of the proposed project location, such as lot numbers, tract numbers, or you may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed project site if known.

**Block 17. Directions to the Site.** Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site.

**Block 18. Nature of Activity.** Describe the overall activity or project. Give appropriate dimensions of structures such as wingwalls, dikes (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 18.

**Block 19. Proposed Project Purpose.** Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

**Block 20. Reasons for Discharge.** If the activity involves the discharge of dredged and/or fill material into a wetland or other waterbody, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

**Block 21. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards.** Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

**Block 22. Surface Areas of Wetlands or Other Waters Filled.** Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper marked Block 22.

**Block 23. Is Any Portion of the Work Already Complete?** Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identify the authorization, if possible.

**Block 24. Names and Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Project Site.** List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the waterbody or aquatic site where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked Block 24.

**Information regarding adjacent landowners is usually available through the office of the tax assessor in the county or counties where the project is to be developed.**

**Block 25. Information about Approvals or Denials by Other Agencies.** You may need the approval of other federal, state, or local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

**Block 26. Signature of Applicant or Agent.** The application must be signed by the owner or other authorized party (agent). This signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).

## DRAWINGS AND ILLUSTRATIONS

### General Information.










Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number.

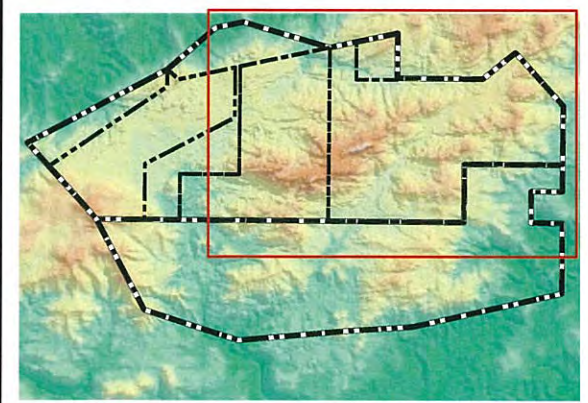
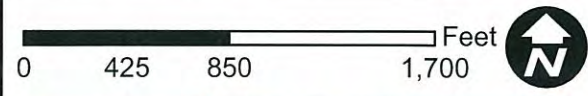
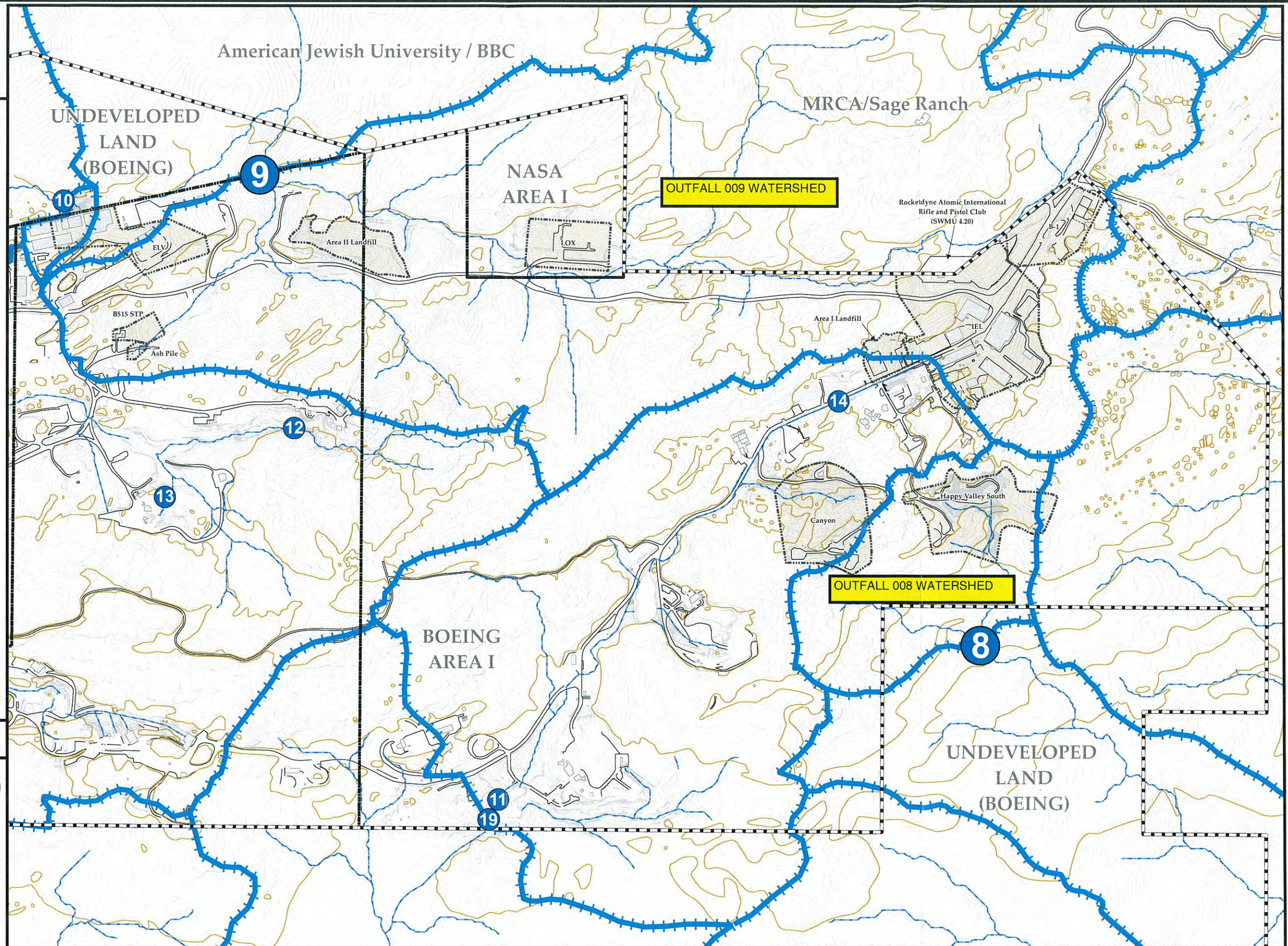
Please submit one original, or good quality copy, of all drawings on 8½ x 11 inch plain white paper (tracing paper or film may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.

Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). **While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.**

# Outfalls 008 and 009 Location Map

## Base Map Legend

-  Administrative Area Boundary
-  Historical Operations Areas (RFI Sites) Within Outfall 008 and 009
-  Surface Water Drainage
-  Surface Water Divide
-  NPDES Outfall
-  Existing Building or Structure
-  Paved Road
-  Elevation Contour
-  Bedrock Outcrop



S A N T A S U S A N A F I E L D L A B O R A T O R Y

Revised Date: February 12, 2009 File: \\uswld4\ntwrp4\land\Industrial\Projects\CTC\Boeing\State\Susana\MXD\Surface Water Drainage Maps\TCRA Feb2009\Figure 1-4.mxd

# Outfall 008 Refined ISRA PEAs and ISRA Areas

## Base Map Legend

- Administrative Area Boundary
- RFI Site Boundary
- Existing Building or Structure
- Previously Excavated Area
- Preliminary ISRA Evaluation Area
- Surface Water Drainage
- Surface Water Divide
- Outfall Water Divide
- NPDES Outfall
- Dirt Road
- Paved Road
- Elevation Contour
- Bedrock Outcrop
- 2009 Data Gap Location, Sample(s) Not Analyzed
- Proposed Sample Location / Sample Results Pending

## ISRA Constituents of Concern

Copper, Lead, Dioxins  
 2005 Background Comparison Concentrations  
 Copper: 29 mg/kg  
 Lead: 34 mg/kg  
 Dioxins (TCDD TEQ): 0.87 pg/g

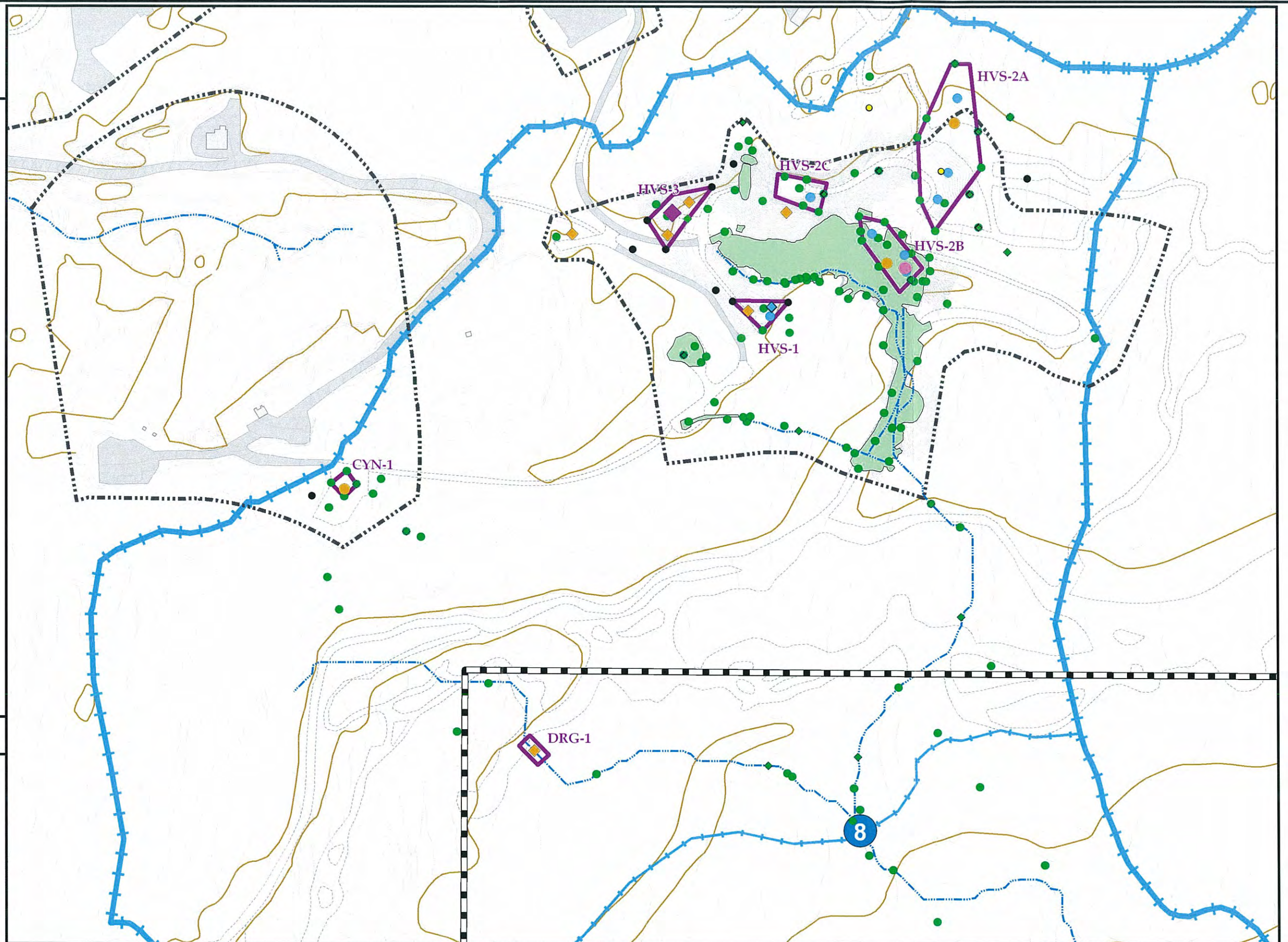
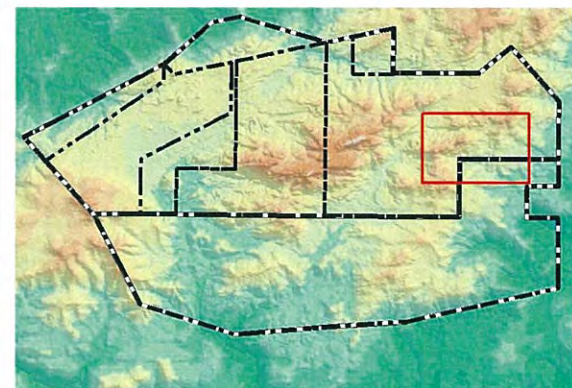
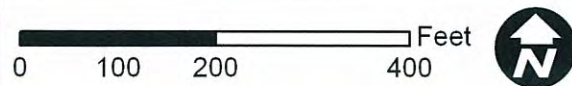
## Copper and or Lead Sample Location (~2 feet bgs)

- ≤ Background (BG)
- >BG and <2x BG
- ≥2x BG and <10x BG
- ≥10x BG and <100x BG

## Dioxin Sample Location (~2 feet bgs)

- ≤ Background (BG)
- >BG and <2x BG
- ≥2x BG and <10x BG
- ≥10x BG and <100x BG
- ≥100x BG

Note: Dioxin represents the sum of 17 dioxin furan congener results adjusted for toxicity, normalized to 2,3,7,8-TCDD TEQ



S A N T A S U S A N A F I E L D L A B O R A T O R Y

# Eastern Outfall 009 Preliminary ISRA Evaluation Areas

**Base Map Legend**

- Administrative Area Boundary
- RFI Site Boundary
- Existing Building or Structure
- Previously Excavated Area
- Preliminary ISRA Evaluation Area
- Surface Water Drainage
- Surface Water Divide
- NPDES Outfall
- Dirt Road
- Paved Road
- Elevation Contour
- Bedrock Outcrop

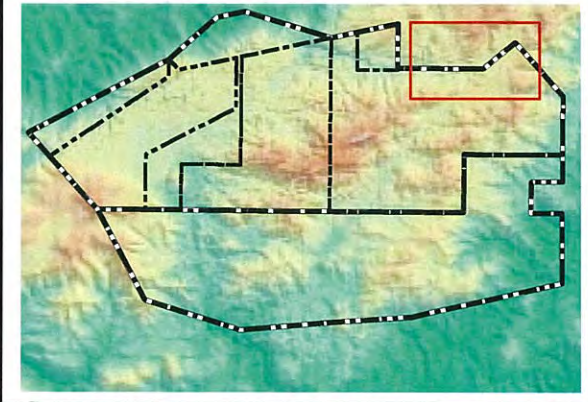
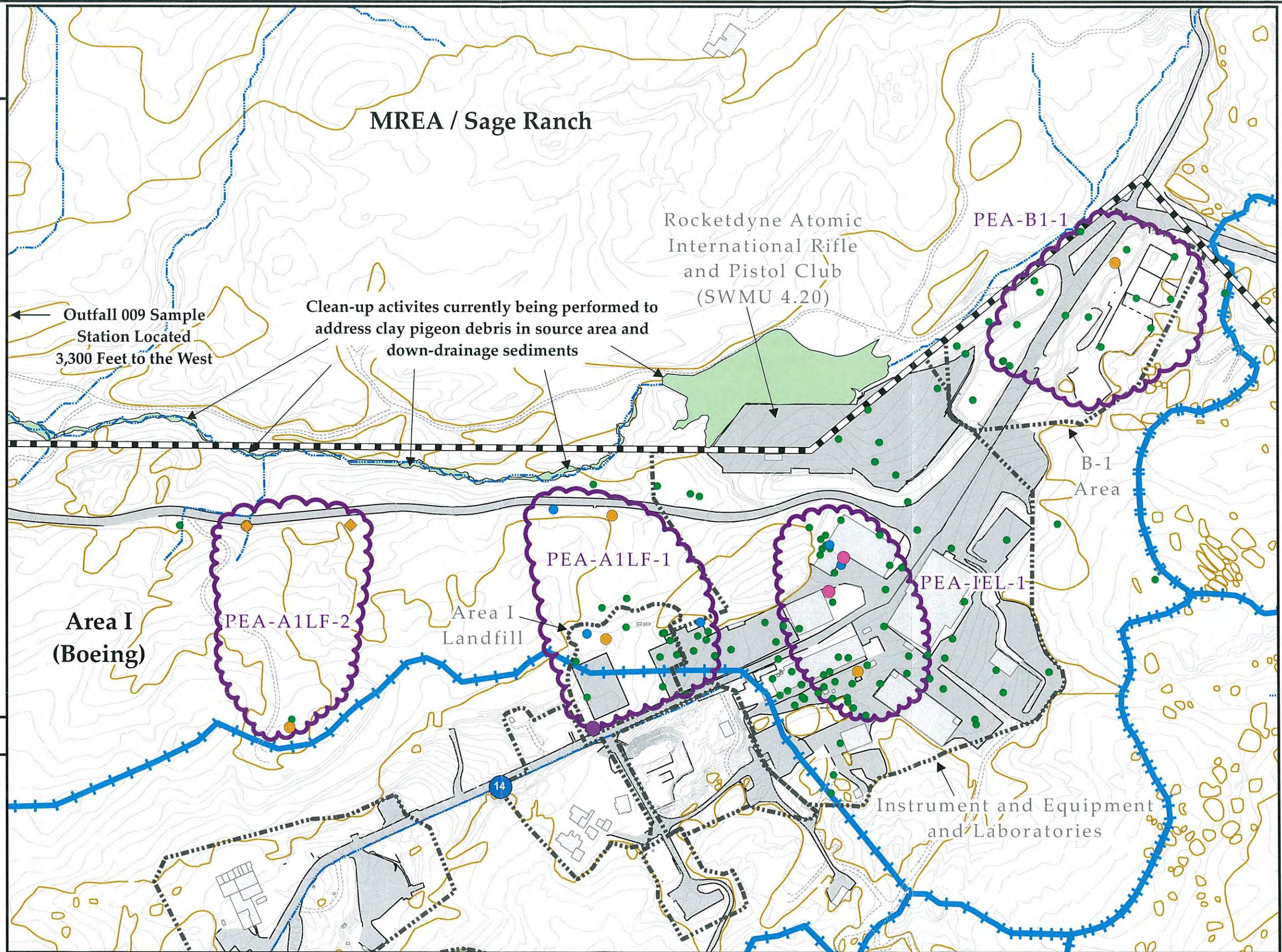
**Constituents of Concern**  
Cadmium, Copper, Lead, Mercury, Dioxin

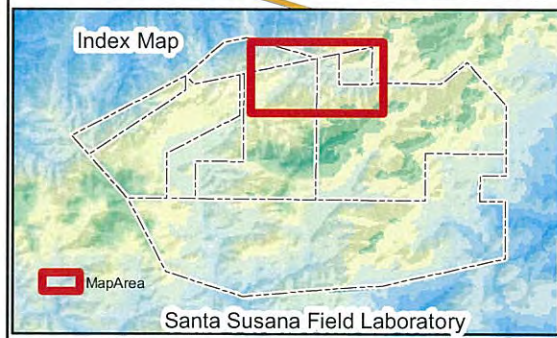
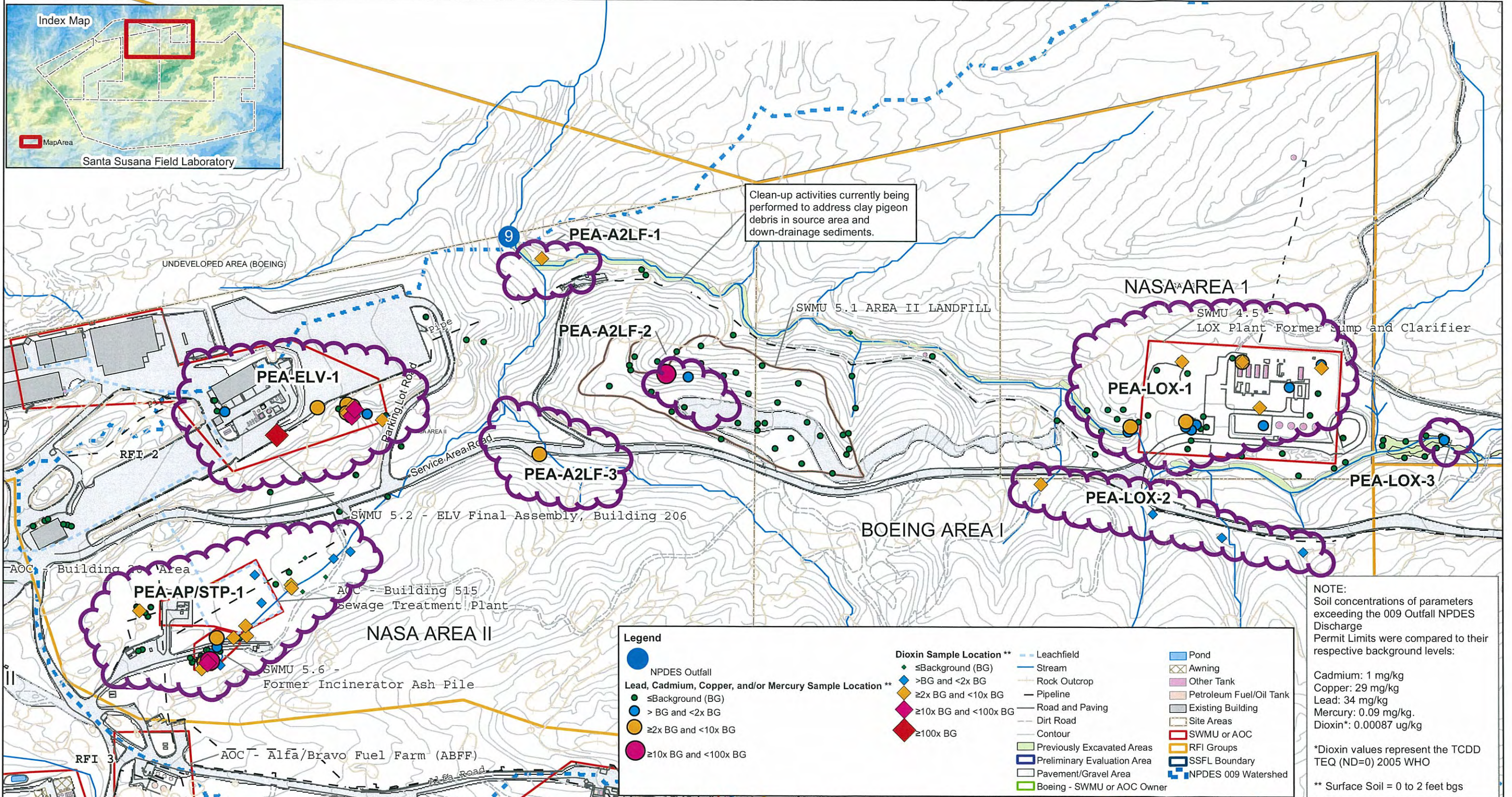
**Background Comparison Concentration**

Cadmium: 1 mg/kg	Dioxin Sample Location (<2 feet bgs)
Copper: 29 mg/kg	◆ ≤ Background (BG)
Lead: 34 mg/kg	◆ >BG and <2x BG
Dioxin: 0.00087 µg/kg	◆ ≥2x BG and <10x BG
Mercury: 0.09 mg/kg	◆ ≥10x BG and <100x BG
	◆ ≥100x BG

**Cadmium, Copper, Lead, and/or Mercury Sample Location (<2 feet bgs)**

● ≤ Background (BG)
● >BG and <2x BG
● ≥2x BG and <10x BG
● ≥10x BG and <100x BG
● ≥100x





Clean-up activities currently being performed to address clay pigeon debris in source area and down-drainage sediments.

**Legend**

- NPDES Outfall
- Lead, Cadmium, Copper, and/or Mercury Sample Location \*\*
  - ≤Background (BG)
  - > BG and <2x BG
  - ≥2x BG and <10x BG
  - ≥10x BG and <100x BG
- Dioxin Sample Location \*\*
  - ≤Background (BG)
  - >BG and <2x BG
  - ≥2x BG and <10x BG
  - ≥10x BG and <100x BG
  - ≥100x BG
- Leachfield
- Stream
- Rock Outcrop
- Pipeline
- Road and Paving
- Dirt Road
- Contour
- Previously Excavated Areas
- Preliminary Evaluation Area
- Pavement/Gravel Area
- Boeing - SWMU or AOC Owner
- Pond
- Awning
- Other Tank
- Petroleum Fuel/Oil Tank
- Existing Building
- Site Areas
- SWMU or AOC
- RFI Groups
- SSFL Boundary
- NPDES 009 Watershed

**NOTE:**  
Soil concentrations of parameters exceeding the 009 Outfall NPDES Discharge Permit Limits were compared to their respective background levels:

Cadmium: 1 mg/kg  
Copper: 29 mg/kg  
Lead: 34 mg/kg  
Mercury: 0.09 mg/kg.  
Dioxin\*: 0.00087 ug/kg

\*Dioxin values represent the TCDD TEQ (ND=0) 2005 WHO  
\*\* Surface Soil = 0 to 2 feet bgs



11-FEB-2009  
Drawn By:  
D. Scott Stevens

Figure 5-6  
Western Outfall 009  
Preliminary ISRA Evaluation Areas  
Santa Susana Field Laboratory

**The Boeing Company, SSFL, Ventura County, California  
Approximate Coordinates of the ISRA Project Locations**

**RWQCB CWA Section 401 Certification Form, Section 6b.**

	<u>Longitude</u>	<u>Latitude</u>
Outfall 008 Watershed (Happy Valley)	118.6722 to 118.6793	34.2272 to 34.2304
<hr/> <hr/>		
Outfall 009 Watershed (Northern Drainage)	118.6722 to 118.6881	34.2336 to 34.2402



**Supplemental Information**  
**Application for Department of the Army Permit (Notifying NWP 38)**  
**Interim Source Removal Action (ISRA)--Outfalls 008 and 009 Watersheds**

As part of the Application for Department of the Army Permit (Permit) for the above project, this information is being provided as a supplement to the Permit. The information is formatted to refer to the specific "Blocks" of the Permit. The application is for a project that involves a Nationwide Permit 38 (Cleanup of Hazardous and Toxic Waste). Cleanup activities will consist of the removal of impacted soils, sediment, and/or bedrock. Future activities may be necessary subsequent to cleanup and potentially installing gravel check dams and rip rap to control sediment transport and stabilize the drainage during surface water flow events. These activities are described herein.

**Block 16. Other Location Descriptions**

The attached figures show the SSFL location, the SSLF facility, and the proposed locations of the Project.

**Block 18. Nature of Activity**

**Project Description for ISRA**

**Northern Drainage and Happy Valley Watersheds (Outfalls 008 and 009)**  
**Boeing Santa Susana Field Laboratory**

The Interim Source Removal Action (ISRA) is the approach used to control the release of constituents of concern (COCs) to surface water within the Outfall 008 and Outfall 009 watersheds at the SSFL. The work will be performed by The Boeing Company (Boeing) and the National Aeronautics and Space Administration (NASA) pursuant to a California Water Code Section 13304 Cleanup and Abatement Order (CAO) issued by the Los Angeles Regional Water Quality Control Board (RWQCB) dated December 3, 2008. The CAO was issued by the RWQCB to enforce compliance with the Waste Discharge Requirements (WDR) for Outfalls 008 and 009 contained in Order No. R4-2004-0111, as amended by Order Nos. R4-2006-0008, R4-2006-0036, and R4-2007-0055.

The objective of the ISRA RWQCB CAO is to improve surface water quality within the Outfalls 008 and 009 watersheds by identifying, evaluating, and remediating areas of contaminated soil in order to eliminate the COCs that have resulted in exceedances of NPDES permit limits and benchmarks. An evaluation of remediation alternatives identified excavation, capping, and/or surface water diversion/collection controls as the most likely remedial actions for the ISRA project. Of these 3 actions, the most likely alternative for both the Outfall 008 and the Outfall 009 ISRA Areas is excavation. Whichever alternative(s) is chosen, ISRA activities may include the use of the following adjacent to and within the Outfall 008 and 009 ephemeral drainages:

Excavators  
Bobcats  
Vacuum trucks  
Personal trucks  
Transport trucks

Shovels  
Backhoes  
Manual removal  
Roll-off bins  
Dump Trucks

If capping is chosen as a portion of the remedy, it may involve completely covering the potential ISRA Areas with a low-hydraulic-conductivity layer. The goal for installation of the cap is to minimize the infiltration of water into the potential source area and to provide erosion control, thereby minimizing the mobilization of COCs. The two potential capping techniques for ISRA Areas include installation of a clay cap and a geomembrane cap. The general field methods to install these caps are described below. Both clay and geomembrane caps will require routine inspection, maintenance, and land use restrictions (such as fencing or deed notifications) to prevent damage to the cap or future use in an area.

The cap will consist of clean cohesive soil installed over the existing site grade, with the final soil cap grade designed to drain stormwater and minimize erosion of the surrounding areas. Surrounding areas may need to be recontoured to minimize erosion. Although the soil cap will not be impermeable, it will effectively isolate the COCs in soil from contact with stormwater and serve to prevent the transport of constituents by rain water.

The geomembrane cap will consist of a 30-mil low linear density polyethylene geomembrane placed on a suitable prepared subgrade and graded to provide a firm, unyielding foundation designed to drain stormwater. The geomembrane will be seamed by extrusion and/or fusion welding. The geomembrane will be protected with a 12-inch thick layer of clean soil or gravel placed over the geomembrane recontoured to drain stormwater without ponding and to minimize erosion of the surrounding areas. Surrounding areas may need to be recontoured to minimize erosion.

If surface water diversion is chosen as a portion of the alternative, diversion drainage channels will be constructed around the ISRA Area to prevent stormwater run-on. The diversion channels will direct stormwater around the ISRA Area to reduce the volume of water in contact with and potentially mobilizing COCs. A sedimentation or detention basin will be constructed downstream of the ISRA Area to collect stormwater flowing off the site and allow the suspended solids to settle. The basin operates as a detention reservoir while sediment is deposited by flow moving slowly through it. The sedimentation basin will discharge via an overflow weir or pipe and reconnect with the natural drainage. The basin will require cleaning out frequently, likely after each storm, to prevent re-suspension of trapped sediments.

In accordance with CDFG conditions as stipulated in the SAA and its amendments, biological surveys will be performed to minimize potential impacts to flora and fauna in Project work areas. A biological survey will be performed in each Project work area prior to equipment being mobilized and field work commencing. This pre-field activities' survey is performed so that potential concerns can be addressed without affecting field work schedules. Just prior to starting field work, Project areas will be re-visited and surveyed by a biologist to verify pre-field activities' survey results, potentially relocate sensitive wildlife, and to evaluate current conditions. Upon field activities commencing in Project areas, a biologist will visit the areas as work is being performed to verify SAA conditions are being met, and to provide guidance to the field crews, if necessary.

#### **Block 21. Types of Material Being Discharged and the Amount of Each Type in Cubic Yards**

Soil, sediment, gravel, rock, rip rap, filter media, vegetation, and other similar materials may be placed in and adjacent to the subject ephemeral drainages. The type of each

material is not currently known or is still being determined. It is anticipated up to 10,000 cubic yards of materials may be placed within, adjacent to, and in upland areas of the drainages. These materials may be used to restore the areas to pre-existing conditions; minimize the potential for surface soil/sediment erosion and transport into or within the drainages; and/or to improve surface water quality by limiting the volume of suspended or settleable solids in the drainages.

In addition to removing impacted media and the potential restoration of the Project areas, a series of check dams and rip rap may be installed across a portion of the Northern Drainage channel to contain clay target and lead shot debris (under Department of Toxic Substances Control [DTSC] and RWQCB oversight, soils and sediment containing clay target and lead shot debris were recently removed from this area). The check dams and rip rap will also promote drainage bed and bank stabilization and sediment settling in specific locations during channel flow events. The deposited sediment will be inspected for the presence of clay target and lead shot debris and removed, if found to contain such debris.

It is anticipated the check dams will be constructed of gabion structures (rocks and grout in a wire mesh binder) and/or loose on-site or imported rocks and boulders. The check dams may be founded in the near surface bedrock with a concrete base that will be poured and cured before channel flow events. If channel topography permits, the concrete base may be deleted.

The check dams will span across the channel and be approximately 6 feet high from toe to crest. The check dams will be installed such that ideally the toe of the upstream dam will be at the same elevation as the crest of the next downstream dam, and so on. After rainfall and channel flow events, the areas behind the check dams will be inspected for accumulation of sediment and the presence of clay target and lead shot debris. If sediment is present at approximately one half the height of the dam or more, the sediment may be removed using a vacuum truck and/or excavation equipment as necessary. Routine maintenance of the check dams and sediment deposition areas will continue until the check dams are deemed to no longer be required and removed.

Rip rap may be used to aid in stabilizing the drainage bed and banks to minimize erosion and sediment transport. Rip rap may be placed along drainage banks as well as in the drainage to reduce flow velocity and minimize scouring and erosion.

#### **Block 22. Surface Area in Acres of Wetlands or Other Waters Filled**

Dredging is not anticipated. Work in wetlands is not anticipated. Fill material(s), as described on the attached sheets, may be placed in ephemeral drainages and adjacent to drainages. The fill will be placed with equipment such as backhoes, loaders, excavators, Bobcats, or other similar equipment, and/or with smaller equipment or manually. The estimated total area of the entire Project is approximately 5 acres. Approximately 100 linear feet of drainage may be ACOE jurisdictional (Waters of the US) and less than 0.1 acres of ACOE jurisdictional area may receive fill material.

#### **Block 24. Addresses of Adjoining Property Owners, Lessees, etc., Whose Property Adjoins the Waterbody**

The SSFL is jointly owned by Boeing and the federal government. NASA administers the portion of the property owned by the federal government. The site is divided into four administrative areas (Areas I, II, III, and IV) and undeveloped land areas to both the north and south (Figure 1-1). Boeing owns Areas III and IV, and most of Area I. The federal government property administered by NASA includes a 42-acre portion of Area I and all of Area II. Ninety acres of Area IV were leased to the United States Department of Energy (DOE). The northern and southern undeveloped lands of the SSFL were not used for industrial activities and are owned by Boeing.

The Boeing Company  
Santa Susana Field Laboratory  
5500 Westpark Drive  
Canoga Park, CA 91304

Certified Mail

May 22, 2009  
In reply refer to SHEA-108710



U. S. Army Corps of Engineers  
Ventura County Field Office-Regulatory Branch  
2151 Alessandro Dr, Suite 110  
Ventura, California 93001

Attention: Mr. Antal Szijj

Subject: U. S. Army Permit--NWP 38 Pre-Construction Notification  
Interim Source Removal Action, Outfalls 008 and 009 Watersheds  
Santa Susana Field Laboratory, Ventura County, California

Dear Mr. Szijj:

Enclosed, please find the permit application form for a Nationwide Permit (NWP) 38 (to be used as the pre-construction notification) for the Interim Source Removal Action (ISRA) Project, located at The Boeing Company (Boeing), Santa Susana Field Laboratory (SSFL) in Ventura County, California. The work being performed as outlined in this application form is to satisfy requirements of the California Environmental Protection Agency's Los Angeles Regional Water Quality Control Board (RWQCB).

The work will be performed by Boeing and the National Aeronautics and Space Administration (NASA) pursuant to a California Water Code Section 13304 Cleanup and Abatement Order (CAO) issued by the RWQCB dated December 3, 2008. The CAO was issued by the RWQCB to enforce compliance with Waste Discharge Requirements (WDR) for Outfalls 008 and 009 contained in Order No. R4-2004-01111, as amended by Order Nos. R4-2006-0008, R4-2006-0036, and R4-2007-0055.

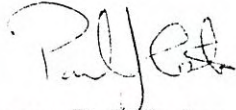
Based on sampling and analytical testing in both the Outfall 008 and Outfall 009 watersheds, soils, sediments, and/or bedrock that have been identified to contain constituents of concern that could impact surface water and result in water quality objective exceedances. Boeing is undertaking this ISRA to remove these soils, sediments, and/or bedrock. Although the potential areas where media removal may take place are typically not in jurisdictional drainages, a limited quantity of impacted media has been identified in US Army Corps of Engineers (ACOE) jurisdictional areas. Therefore, Boeing is submitting this notification to the ACOE, and also notifying the RWQCB (NWP 38 activities are CWA Section 401 pre-certified) prior to commencing the project. In addition, the California Department of Fish and Game has approved a Notification of Lake or Streambed Alteration (SAA) agreement that places conditions on the activities that will be performed as part of this ISRA project.

An application (to be used as pre-construction notification) and supplemental information accompanies this cover letter. If you have any questions regarding this submittal, please

Mr. A. Szijj, U.S. ACOE (SHEA-108710)  
May 22, 2009  
Page 2

contact Lori Blair at (818) 466-8741 or Glenn Jaffe of MWH at (626) 568-6329 with any questions you have.

Sincerely,



Thomas D. Gallacher  
Director, Santa Susana Field Laboratory  
Environment, Health and Safety



LNB:bjc

Attachments: Site Figures  
Supplemental Information  
RWQCB Pre-Certification Notification

cc: Mr. Dana Cole, RWQCB (without attachments)  
Dr. L. B. Nye, RWQCB  
Ms. Cassandra Owens, RWQCB  
Ms. Valerie Carrillo, RWQCB (without attachments)  
Mr. Glenn Jaffe, MWH