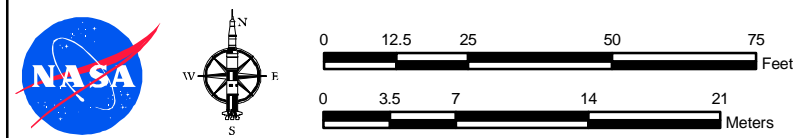
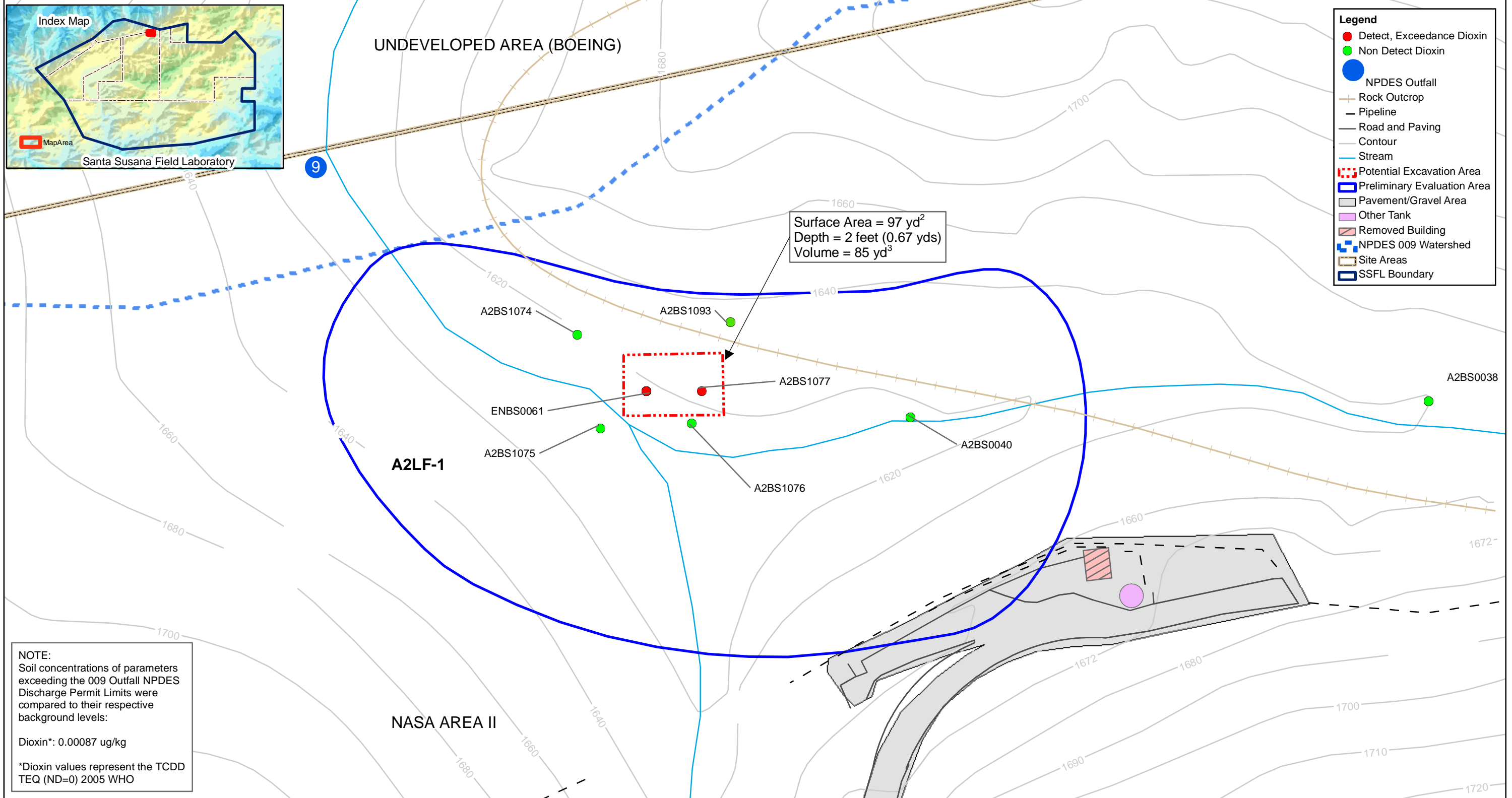


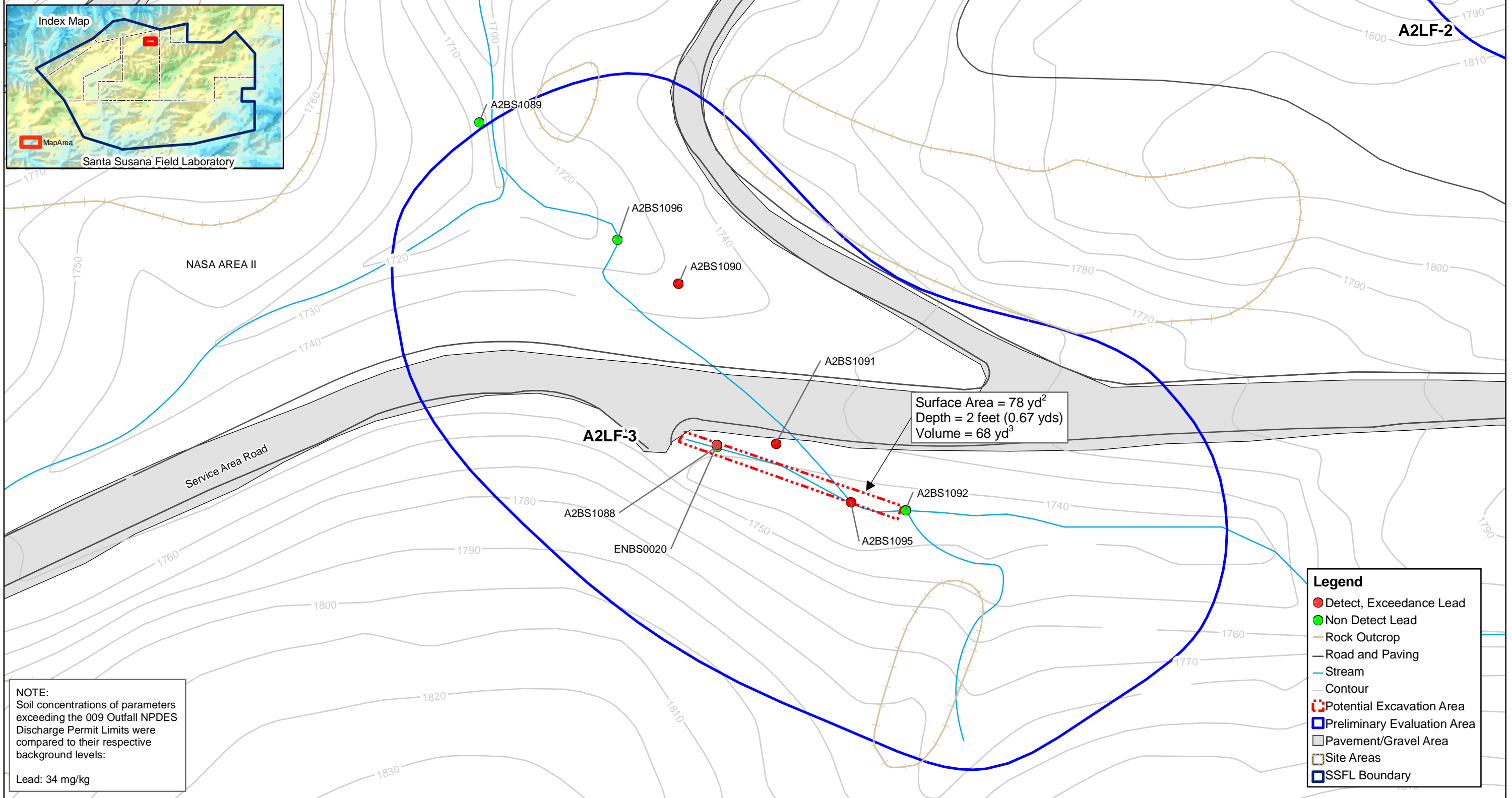
28-APR-2009
Drawn By:
Aberla Cooney
D. Scott Stevens

Figure 1-7
Western Outfall 009
Preliminary ISRA Evaluation Areas
Santa Susana Field Laboratory



28-AUG-2009
Drawn By:
Alberta Cooley
D. Scott Stevens

Figure 1
A2LF-1 Proposed Excavation Area
Interim Source Removal Action
Western Outfall 009
NASA, Santa Susana Field Laboratory



NOTE:
 Soil concentrations of parameters exceeding the 009 Outfall NPDES Discharge Permit Limits were compared to their respective background levels:
 Lead: 34 mg/kg

Legend

- Detect, Exceedance Lead
- Non Detect Lead
- Rock Outcrop
- Road and Paving
- Stream
- Contour
- ▭ Potential Excavation Area
- ▭ Preliminary Evaluation Area
- ▭ Pavement/Gravel Area
- ▭ Site Areas
- ▭ SSFL Boundary

1-SEPT-2009
 Drawn By:
 Alberta Cooley
 D. Scott Stevens

Figure 2
 A2LF- 3 Proposed Excavation Area
 Interim Source Removal Action
 Western Outfall 009
 NASA, Santa Susana Field Laboratory

**A2LF-1 Analytical Results
(Page 1 of 1)**

DRAFT

Sample ID	Sample Date	Sample Depth	Refusal?	Soil Type	Results in µg/kg
					Dioxin*
A2BS0040S001	2-Jan-07	0.1 - 0.5'	Unknown	Unknown	0.00024
A2BS1074S001	2-Apr-09	0 - 0.5'	Yes - 1.5'. Target TD was 5'.	Silty Sand (SM)	0.00065
A2BS1075S001	2-Apr-09	0 - 0.5'	Yes - 0.5'. Target TD was 5'.	Silty Sand (SM)	0.00029
A2BS1076S001	2-Apr-09	0 - 0.5'	Yes - 1.3'. Target TD was 5'.	Poorly Graded Sand with Silt (SP-SM)	0.00053
A2BS1077S001	2-Apr-09	2 - 2.5'	Yes - 2.5'. Target TD was 6'.	Silty Sand (SM)	0.0080
A2BS1093S001	16-Jun-09	0 - 0.5'	No	Silty Sand (SM)	0.00032
ENBS0061S001	16-Sep-08	0.25 - 0.75'	Unknown	Unknown	0.0025
<i>2005 Background Comparison Concentration</i>					<i>0.00087</i>

Notes:

Sample exceeds the 2005 background comparison concentration (MWH, 2005)

* - dioxin values represent the TCDD toxicity equivalent (TEQ) (ND=0) 2005 World Health Organization (WHO)

A2LF-3 Analytical Results
(Page 1 of 1)

DRAFT

Sample ID	Sample Date	Sample Depth	Refusal?	Soil Type	Results in mg/kg			
					Cadmium	Copper	Lead	Mercury
A2BS1088S001	3-Apr-09	3 - 3.5'	Yes - 3.5'. Target TD was 5'.	Sand (SP)	--	--	10.2	--
A2BS1089S001	2-Apr-09	0 - 0.25'	Yes - 1'. Target TD was 5'.	Gravelly Sand (GP)	--	--	8.44	--
A2BS1090S001	2-Apr-09	0 - 0.25'	No	Silty Sand (SM)	--	--	67.6	--
A2BS1090S002	2-Apr-09	4.75 - 5'	No	Clayey Sand (SC)	--	--	12.1	--
A2BS1091S001	3-Apr-09	0 - 0.25'	No	Silty Sand (SM)	--	--	33.3	--
A2BS1091S002	3-Apr-09	4.75 - 5'	No	Silty Sand (SM)	--	--	241	--
A2BS1092S001	2-Apr-09	0 - 0.25'	No	Silty Sand (SM)	--	--	11.7	--
A2BS1092S002	2-Apr-09	4.75 - 5'	No	Sand (SP)	--	--	2.9	--
A2BS1095S001	16-Jun-09	0 - 0.5'	No	Sandy Silt (ML)	--	--	338	--
A2BS1095S002	16-Jun-09	4.5 - 5'	No	Poorly Graded Sand (SP)	--	--	25.6	--
A2BS1096S001	16-Jun-09	0 - 0.25'	No	Sandy Silt (ML)	--	--	16	--
ENBS0020S001	20-Aug-08	0.5 - 0.9'	Unknown	Unknown	0.25	8.7	44.8	0.013
ENBS0020S001SP	20-Aug-08	0.5 - 0.9'	Unknown	Unknown	0.27	11	140	0.023 J
2005 Background Comparison Concentration					1	29	34	0.09

Notes:

Sample Exceeds the 2005 Background Comparison Concentration (MWH, 2005)

J - Result is estimated

mg/kg - milligrams per kilogram

--" - not analyzed

**Supplemental Table 4-5
 Outfall 009 ISRA Area Summary
 A2LF-1 and A2LF-3 ISRA Areas**

August 2009

Site Name	ISRA COCs Exceeding Background Comparison Concentrations ¹	Surface Area, Approximate Depth of Exceedance, and <i>Ex Situ</i> Volume Estimate ²	Remedial Action	ISRA Soil Remediation Goals
A2LF-1	Dioxins	SA = 97 yd ² Depth = 2 feet (0.67 yds) Volume = 85 cy	Excavation	Dioxins = 3 pg/g
A2LF-3	Lead	SA = 78 yd ² Depth = 2 feet (0.67 yds) Volume = 68 cy	Excavation	Lead = 34 mg/kg

General Notes:

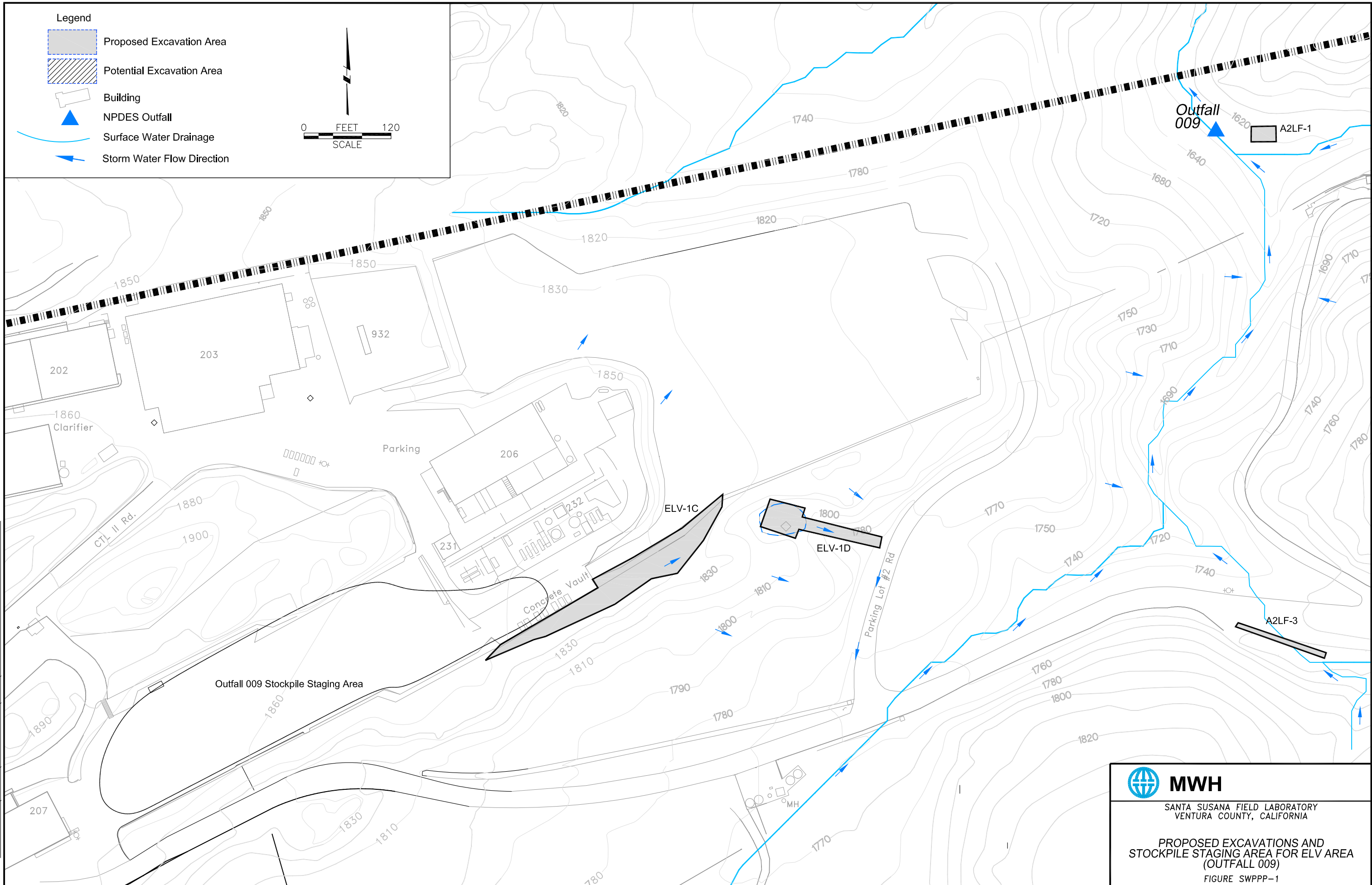
1 - Background comparison concentration (MWH, 2005):

- Lead: 34 mg/kg
- Dioxin: 0.87 pg/g

2 - Ex-Situ Volume Assumes 30% fluff of *ex situ* soils

- "--" - not applicable
- cy - cubic yards
- mg/kg - milligrams per kilogram
- pg/g - picograms per gram
- SA - Surface Area
- yds - yards
- yd² - square yards

FILE: CAD\MUEBKE\BOEING SANTA SUSANA SWPPP\ELV EXCAVATION AREAS 9.11.09



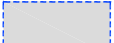
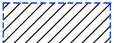



SANTA SUSANA FIELD LABORATORY
VENTURA COUNTY, CALIFORNIA

PROPOSED EXCAVATIONS AND
STOCKPILE STAGING AREA FOR ELV AREA
(OUTFALL 009)

FIGURE SWPPP-1

FILE: CADMLUEBKE\BOEING SANTA SUSANA SWPPP\ELV EXCAVATION AREAS 9_11_09

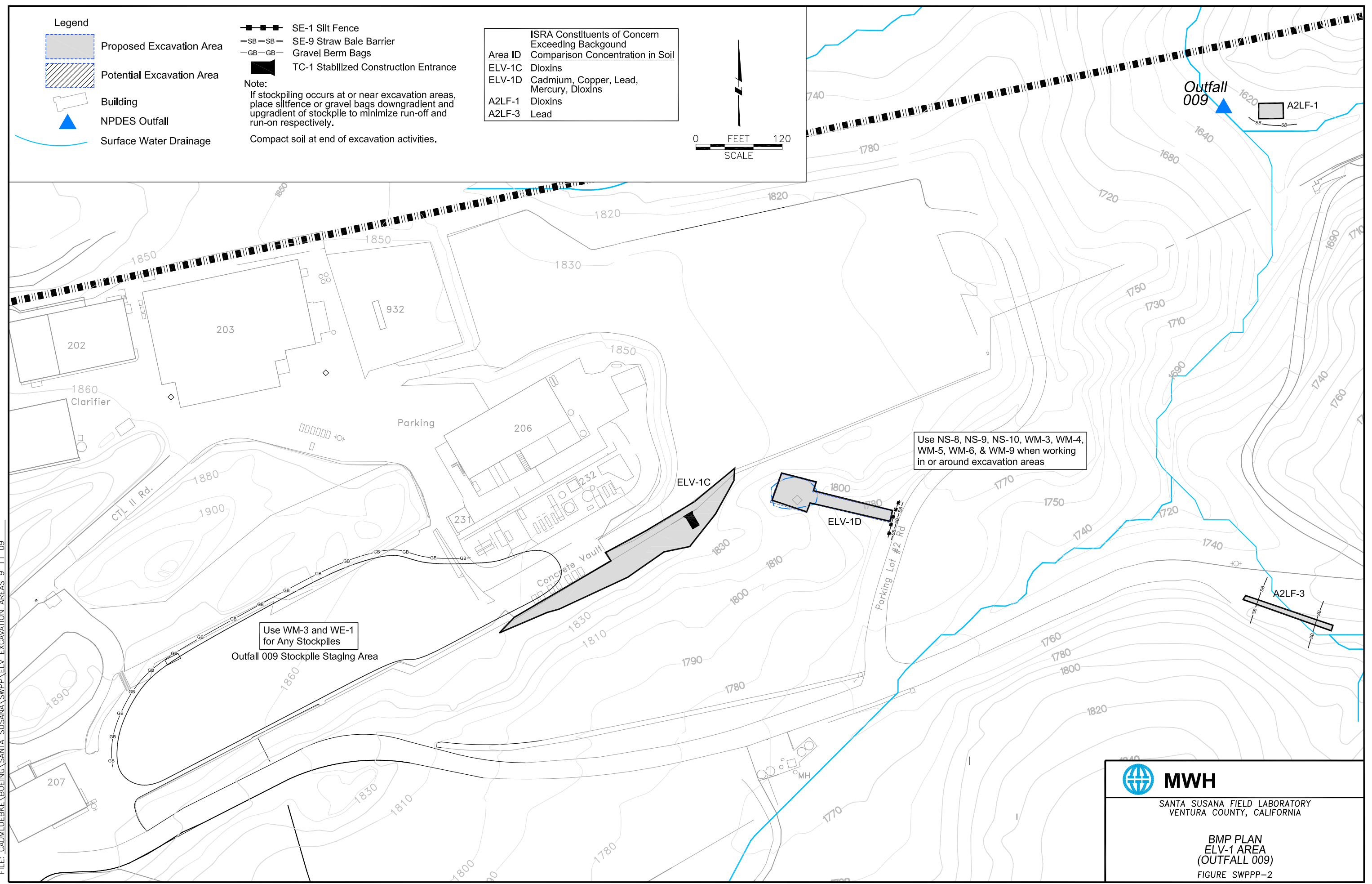
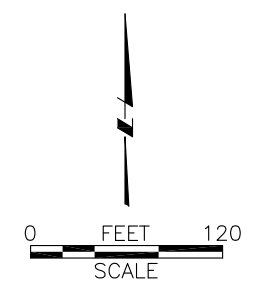
Legend

-  Proposed Excavation Area
-  Potential Excavation Area
-  Building
-  NPDES Outfall
-  Surface Water Drainage

-  SE-1 Silt Fence
-  SE-9 Straw Bale Barrier
-  Gravel Berm Bags
-  TC-1 Stabilized Construction Entrance

Note:
 If stockpiling occurs at or near excavation areas, place siltfence or gravel bags downgradient and upgradient of stockpile to minimize run-off and run-on respectively.
 Compact soil at end of excavation activities.


Area ID	ISRA Constituents of Concern Exceeding Background Comparison Concentration in Soil
ELV-1C	Dioxins
ELV-1D	Cadmium, Copper, Lead, Mercury, Dioxins
A2LF-1	Dioxins
A2LF-3	Lead



Use NS-8, NS-9, NS-10, WM-3, WM-4, WM-5, WM-6, & WM-9 when working in or around excavation areas

Use WM-3 and WE-1 for Any Stockpiles

Outfall 009 Stockpile Staging Area



MWH

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 VENTURA COUNTY, CALIFORNIA

**BMP PLAN
 ELV-1 AREA
 (OUTFALL 009)
 FIGURE SWPPP-2**