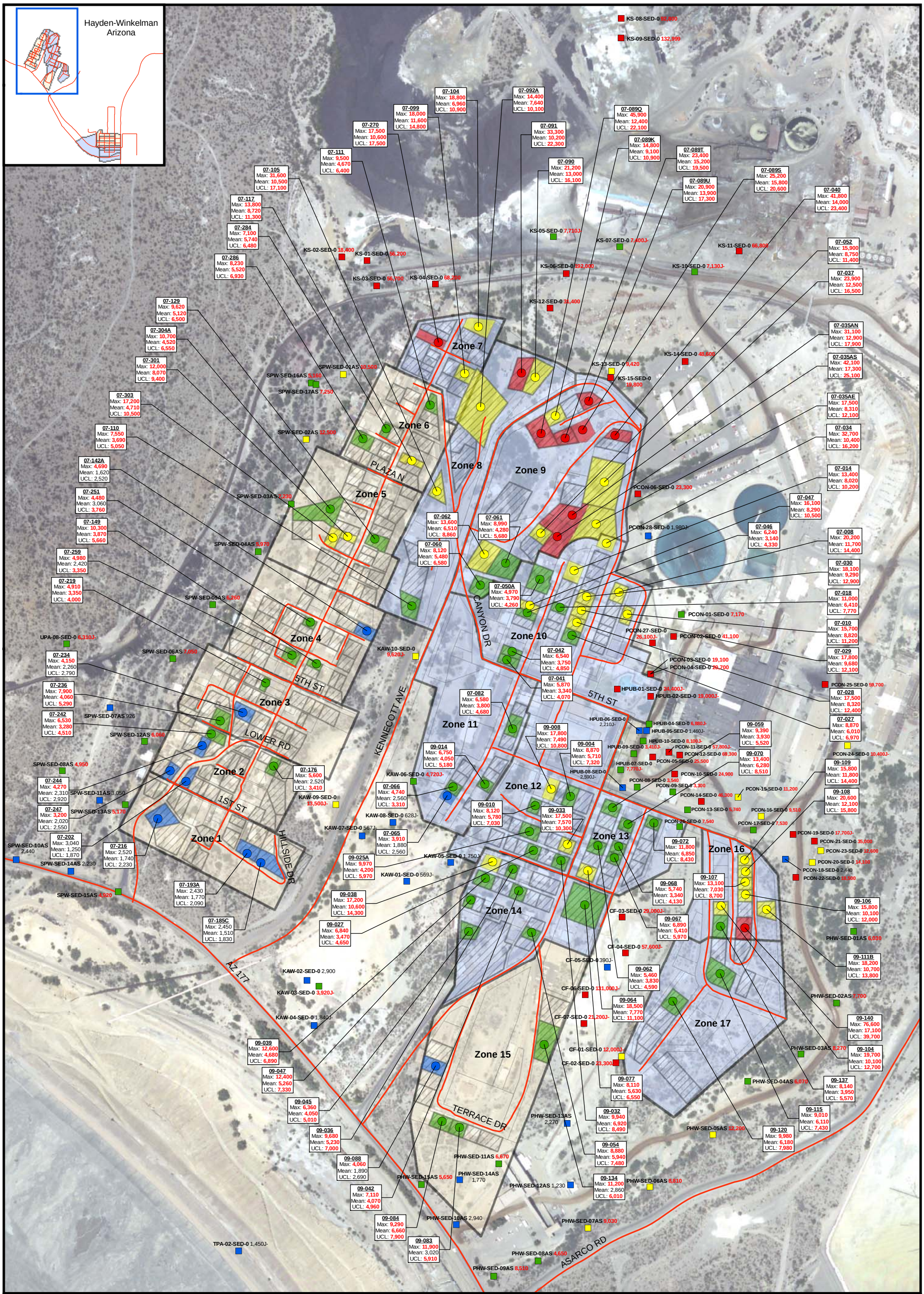


Legend

Sample Location/ Concentration Range Color Key

- 0 - 3,100 mg/kg
- 3,101 - 8,699 mg/kg
- 8,700 - 17,100 mg/kg
- > 17,100 mg/kg

Shape Key

- Residential Sample
- Non-residential Sample

- Parcel with Habitable Housing
- Parcel Boundary
- Approximate Parcel Subdivision for Sampling
- Road

Parcel Zones

- Category 1
- Category 2

Notes:

[1] 09-084 = Parcel ID
[2] All Parcel IDs consist of a '101-' prefix
[3] Max = Maximum Concentration
[4] Mean = Arithmetic Mean Concentration
[5] UCL = 95% Upper Confidence Limit
[6] 95% UCL was used for color key designation
[7] Cu = Copper
[8] J- = Estimated value, biased low
[9] mg/kg = milligrams per kilogram
[10] R-SRL = Residential Soil Remediation Level
[11] All concentrations are in mg/kg
[12] Soil concentrations in **RED** exceed Arizona-R-SRLs
[13] Arizona R-SRL for Cu = 3,100 mg/kg
[14] If a duplicate sample was collected, the higher concentration of the two is posted.
[15] For Arithmetic Mean and 95% UCL, values based on 9 samples per parcel.
[16] Aerial Source: Environmental Protection Agency, 2004.

N W E S

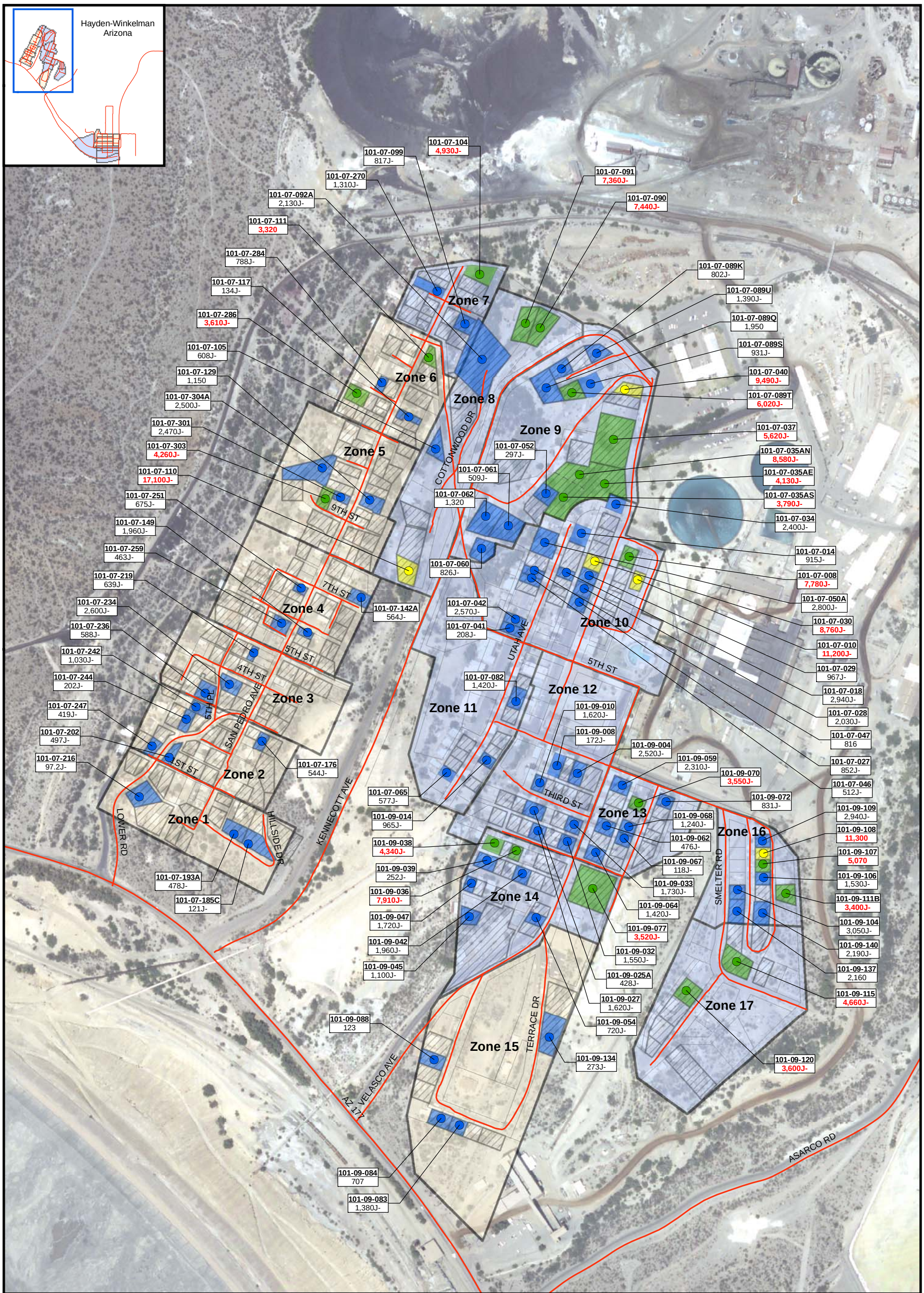
0 212.5 425 850 Feet

FIGURE 4-14
RESIDENTIAL AND NON-RESIDENTIAL SURFACE SOIL LABORATORY RESULTS FOR COPPER
HAYDEN, ARIZONA
ASARCO, LLC Hayden Plant Site
Hayden, Arizona
The data on this figure are derived from tables 4-4, 4-5, 4-6, 4-7, 4-8, and D-1.

DRAFT

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\ASARCO\MAPFILES\03_FINAL\FIG4-14_RES_SURFACESOILLABRESULTS_HAYDEN_COPPER_NONRES.MXD TJW 7/24/2008 13:37:48



Legend

Sample Location/ Concentration Range Color Key

- 0 - 3,100 mg/kg
- 3,101 - 8,699 mg/kg
- 8,700 - 17,100 mg/kg
- > 17,100 mg/kg*

Shape Key

- Residential Sample

- Parcel with Habitable Housing
- Parcel Boundary
- Approximate Parcel Subdivision for Sampling
- Road

Parcel Zones

- Category 1
- Category 2

Notes:

[1] 101-09-084 = Parcel ID
[2] Cu = Copper
[3] J- = Estimated value, biased low
[4] mg/kg = milligrams per kilogram
[5] R-SRL = Residential Soil Remediation Level

[6] All concentrations are in mg/kg
[7] Soil concentrations in **RED** exceed Arizona-R-SRLs
[8] Arizona R-SRL for Cu = 3,100 mg/kg
[9] If a duplicate sample was collected, the higher concentration of the two is posted.
[10] * = Copper concentrations do not exceed 17,100 mg/kg

[11] Aerial Source: Environmental Protection Agency, 2004.

N W E S

0 200 400 800 Feet

FIGURE 4-15
RESIDENTIAL SUBSURFACE SOIL LABORATORY RESULTS FOR COPPER HAYDEN, ARIZONA

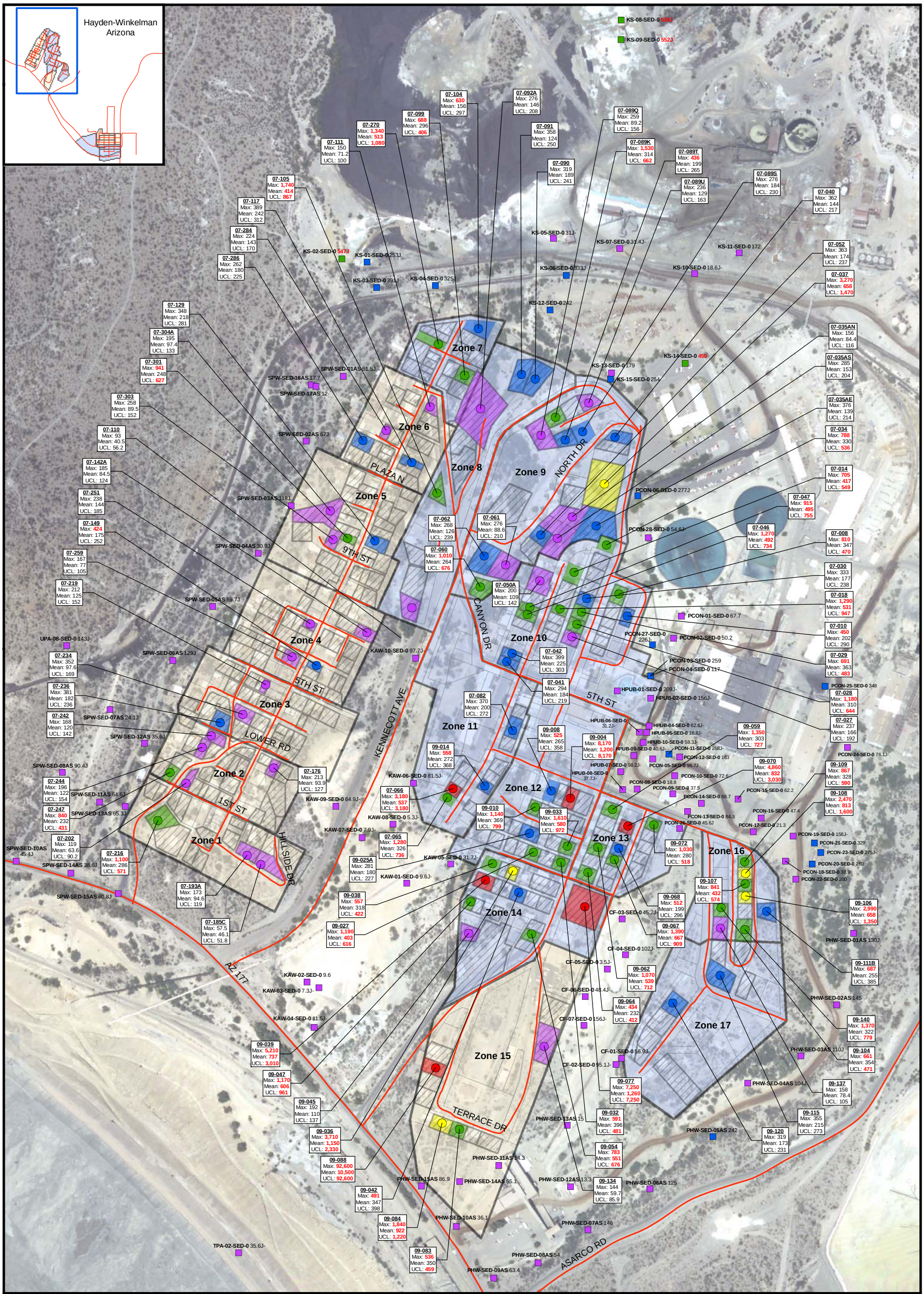
ASARCO, LLC Hayden Plant Site
Hayden, Arizona

The data on this figure are derived from tables 4-9 and E-1.

DRAFT

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\ASARCO\MAPFILES\03_FINAL\FIG4-15_RES_SUBSURFACESOILLABRESULTS_HAYDEN_COPPER.MXD TJW 7/24/2008 14:12:55



Legend

Sample Location/ Concentration Range Color Key

- 0 - 212 mg/kg
- 213 - 400 mg/kg
- 401 - 1,199 mg/kg
- 1,200 - 2,400 mg/kg
- > 2,400 mg/kg

Shape Key

- Residential Sample
- Non-residential Sample

- Parcel with Habitable Housing
- Parcel Boundary
- Approximate Parcel Subdivision for Sampling
- Road

Parcel Zones

- Category 1
- Category 2

Notes:

1. 09-084 = Parcel ID
2. All Parcel IDs consist of a '101-' prefix
3. Max = Maximum Concentration
4. Mean = Arithmetic Mean Concentration
5. UCL = 95% Upper Confidence Limit
6. 95% UCL was used for color key designation
7. Pb = Lead
8. J = Estimated value
9. J- = Estimated value, biased low
10. mg/kg = milligrams per kilogram
11. R-SRL = Residential Soil Remediation Level
12. All concentrations are in mg/kg
13. Soil concentrations in **RED** exceed Arizona-R-SRLs
14. Arizona R-SRL for Pb = 400 mg/kg
15. If a duplicate sample was collected, the higher concentration of the two is posted.
16. For Arithmetic Mean and 95% UCL, values based on 9 samples per parcel.
17. Aerial Source: Environmental Protection Agency, 2004.

N W E S

0 212.5 425 850 Feet

FIGURE 4-16
RESIDENTIAL AND NON-RESIDENTIAL SURFACE SOIL LABORATORY RESULTS FOR LEAD
HAYDEN, ARIZONA

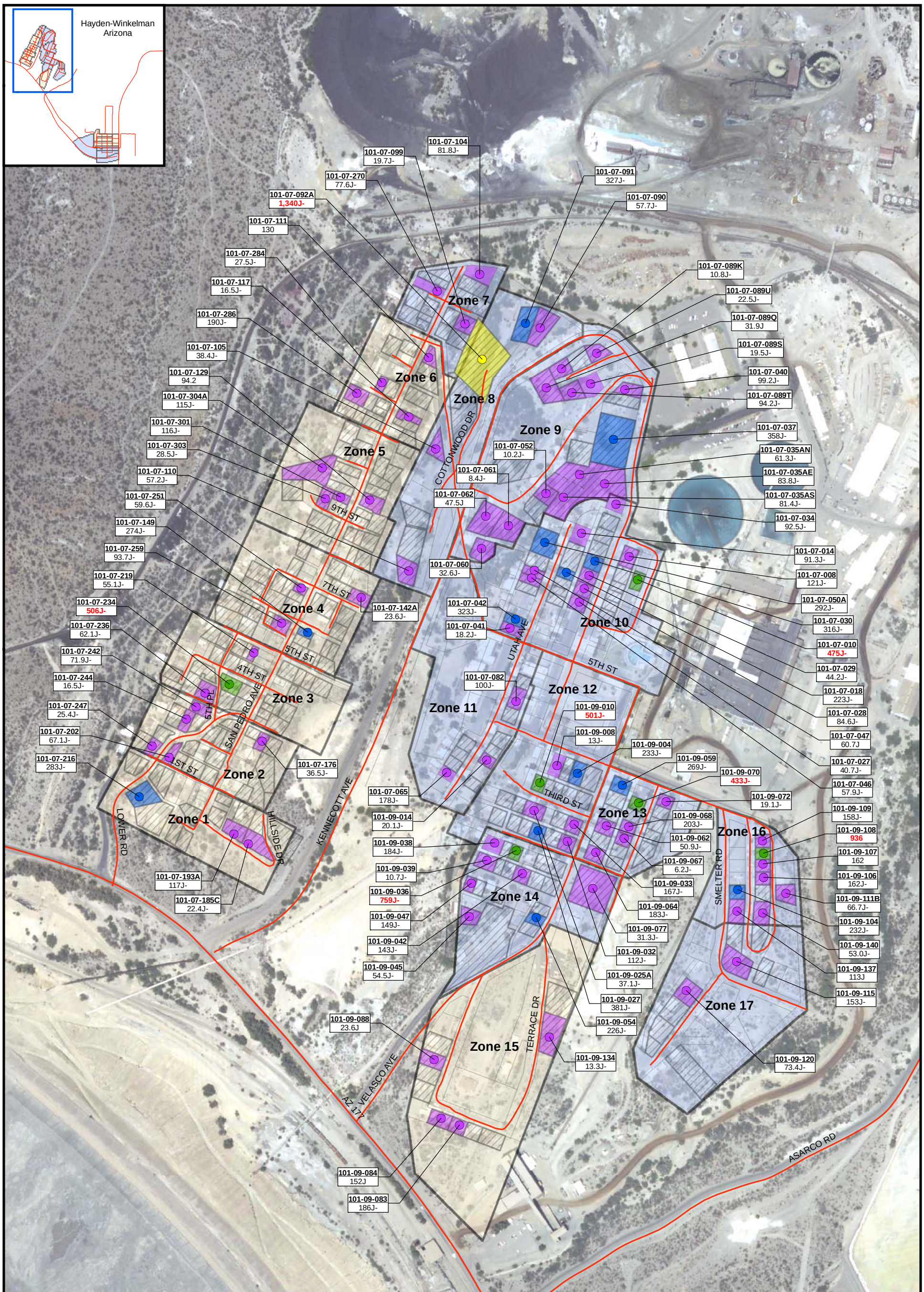
ASARCO, LLC Hayden Plant Site
Hayden, Arizona

The data on this figure are derived from tables 4-4, 4-5, 4-6, 4-7, 4-8, and D-1.

DRAFT

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\ASARCO\MAPFILES\03_FINAL\FIG4-16_RES_SURFACESOILLABRESULTS_HAYDEN_LEAD_NONRES.MXD TJW 7/25/2008 13:43:42



Legend

Sample Location/ Concentration Range Color Key

- 0 - 212 mg/kg
- 213 - 400 mg/kg
- 401 - 1,199 mg/kg
- 1,200 - 2,400 mg/kg
- > 2,400 mg/kg*

Shape Key

- Residential Sample

- Parcel with Habitable Housing
- Parcel Boundary
- Approximate Parcel Subdivision for Sampling
- Road

Parcel Zones

- Category 1
- Category 2

Notes:

[1] 101-09-084 = Parcel ID
[2] Pb = Lead
[3] J = Estimated value
[4] J- = Estimated value, biased low
[5] mg/kg = milligrams per kilogram
[6] R-SRL = Residential Soil Remediation Level

[7] All concentrations are in mg/kg
[8] Soil concentrations in **RED** exceed Arizona-R-SRLs
[9] Arizona R-SRL for Pb = 400 mg/kg
[10] If a duplicate sample was collected, the higher concentration of the two is posted.
[11] * = Lead concentrations do not exceed 2,400 mg/kg

[12] Aerial Source: Environmental Protection Agency, 2004.

N W E S

0 200 400 800 Feet

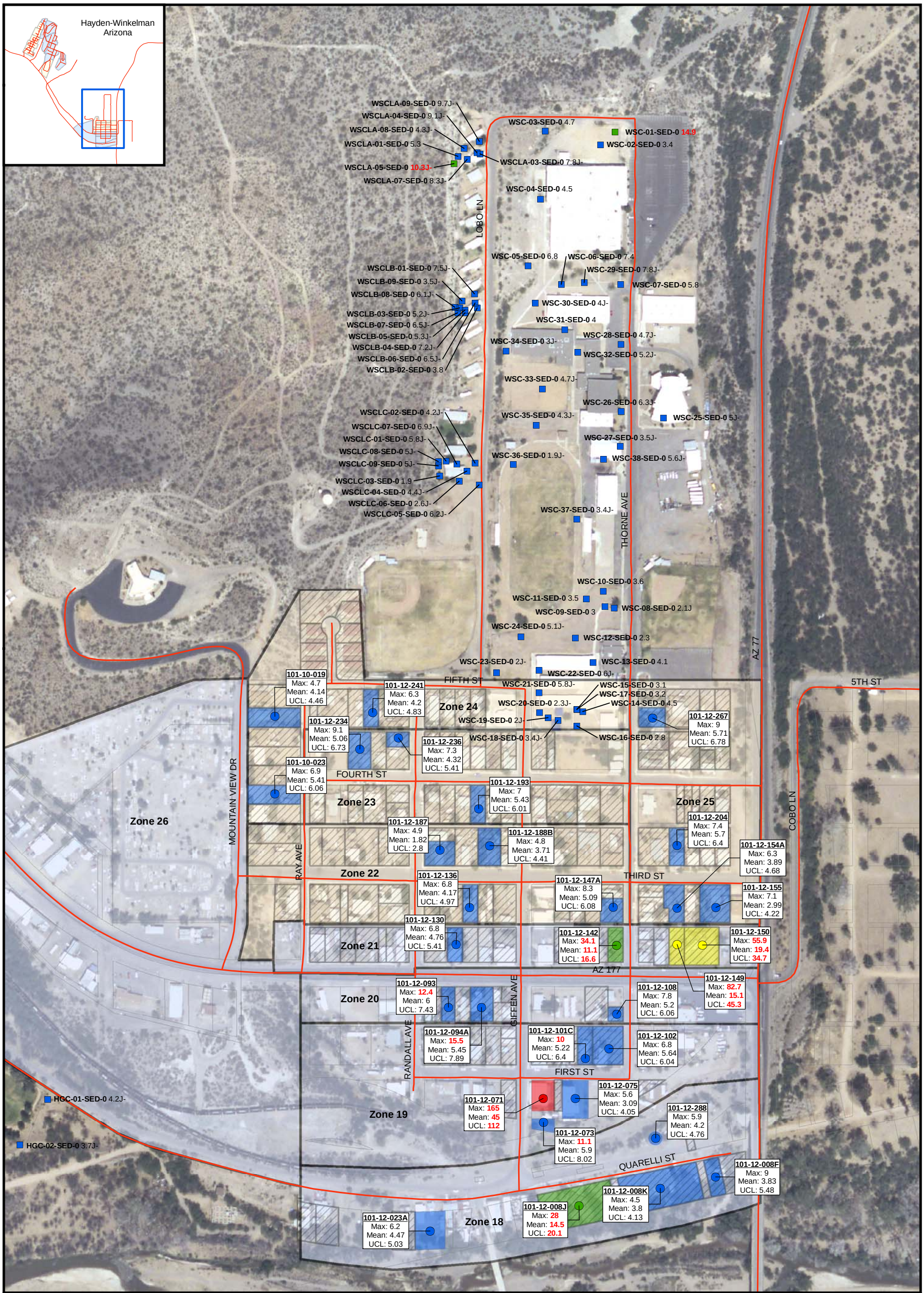
FIGURE 4-17
RESIDENTIAL SUBSURFACE SOIL LABORATORY RESULTS FOR LEAD
HAYDEN, ARIZONA
ASARCO, LLC Hayden Plant Site
Hayden, Arizona

The data on this figure are derived from tables 4-9 and E-1.

DRAFT

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\ASARCO\MAPFILES\03_FINAL\FIG4-17_RES_SUBSURFACESOILLABRESULTS_HAYDEN_LEAD.MXD TJW 7/25/2008 14:18:50



Legend

Sample Location/ Concentration Range Color Key

- 1 - 10 mg/kg
- 10.1 - 25.9 mg/kg
- 26 - 47.9 mg/kg
- > 48 mg/kg

Shape Key

- Residential Sample
- Non-residential Sample

- Parcel with Habitable Housing
- Parcel Boundary
- Road

Parcel Zones

- Category 1
- Category 2

Notes:

[1] 101-12-023A = Parcel ID
[2] Max = Maximum Concentration
[3] Mean = Arithmetic Mean Concentration
[4] UCL = 95% Upper Confidence Limit
[5] 95% UCL was used for color key designation
[6] As = Arsenic
[7] J = Estimated value
[8] J- = Estimated value, biased low
[9] mg/kg = milligrams per kilogram
[10] R-SRL = Residential Soil Remediation Level
[11] All concentrations are in mg/kg
[12] Soil concentrations in **RED** exceed Arizona-R-SRLs
[13] Arizona R-SRL for As = 10 mg/kg
[14] If a duplicate sample was collected, the higher concentration of the two is posted.
[15] For Arithmetic Mean and 95% UCL, values based on 9 samples per parcel.
[16] Aerial Source: Environmental Protection Agency, 2004.

N W E S

0 150 300 600 Feet

FIGURE 4-18
RESIDENTIAL AND NON-RESIDENTIAL SURFACE SOIL LABORATORY RESULTS FOR ARSENIC WINKELMAN, ARIZONA

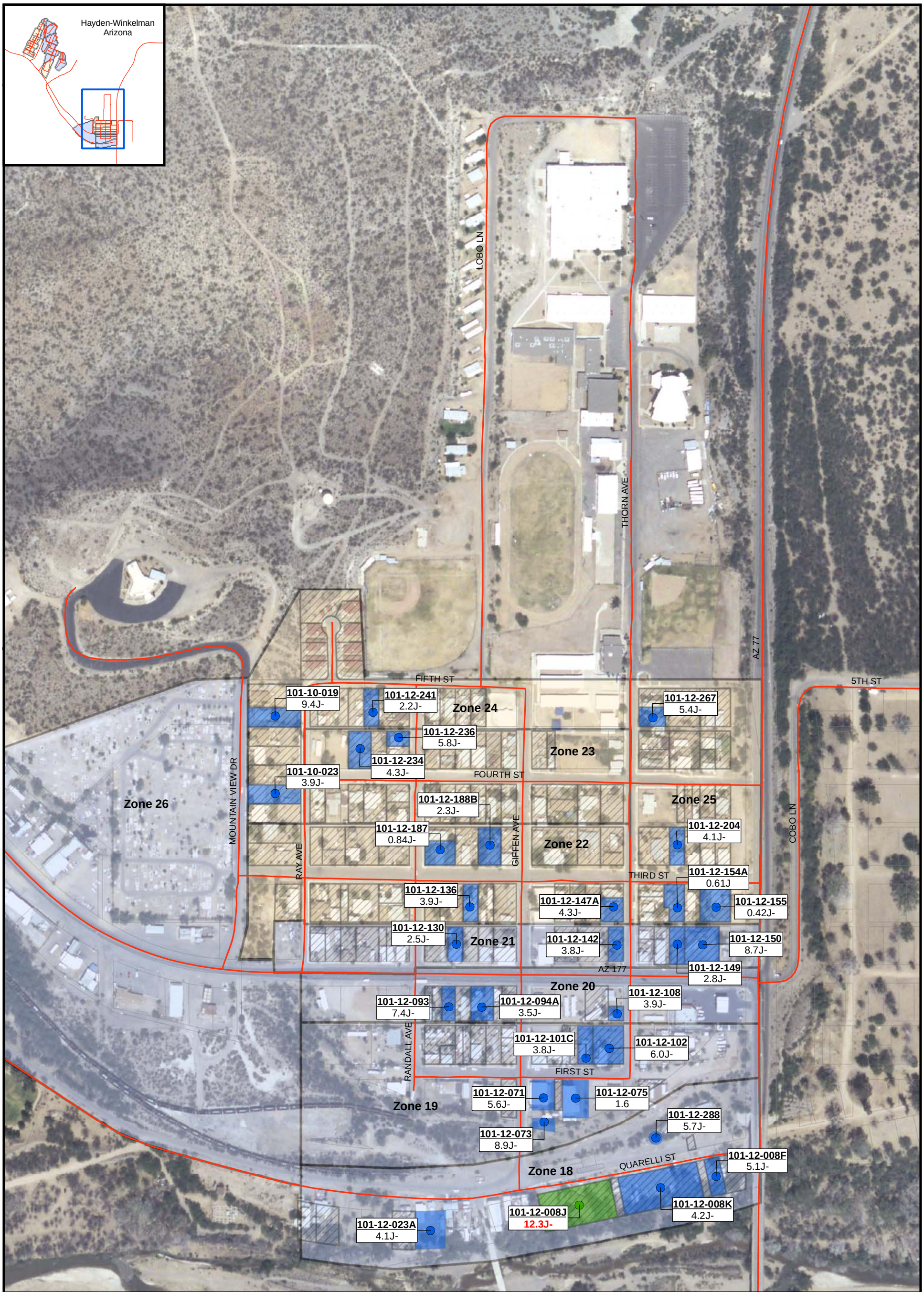
ASARCO, LLC Hayden Plant Site
Hayden, Arizona

The data on this figure are derived from tables 4-6, 4-10, and D-1.

DRAFT

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\ASARCO\MAPFILES\03_FINAL\FIG4-18_RES_SURFACESOILLABRESULTS_WINKELMAN_ARSENIC_NONRES.MXD TJW 7/25/2008 13:48:38



Legend

Sample Location/ Concentration Range Color Key

- 1 - 10 mg/kg
- 10.1 - 25.9 mg/kg
- 26 - 47.9 mg/kg*
- > 48 mg/kg*

Shape Key

- Residential Sample

- Parcel with Habitable Housing
- Parcel Boundary
- Road

Parcel Zones

- Category 1
- Category 2

Notes:

[1] 101-12-023A = Parcel ID
[2] As = Arsenic
[3] J = Estimated value
[4] J- = Estimated value, biased low
[5] mg/kg = milligrams per kilogram
[6] R-SRL = Residential Soil Remediation Level
[7] All concentrations are in mg/kg
[8] Soil concentrations in **RED** exceed Arizona-R-SRLs
[9] Arizona R-SRL for As = 10 mg/kg
[10] If a duplicate sample was collected, the higher concentration of the two is posted.
[11] * = Arsenic concentrations do not exceed 25.9 mg/kg
[12] Aerial Source: Environmental Protection Agency, 2004.

N W E S

0 150 300 600 Feet

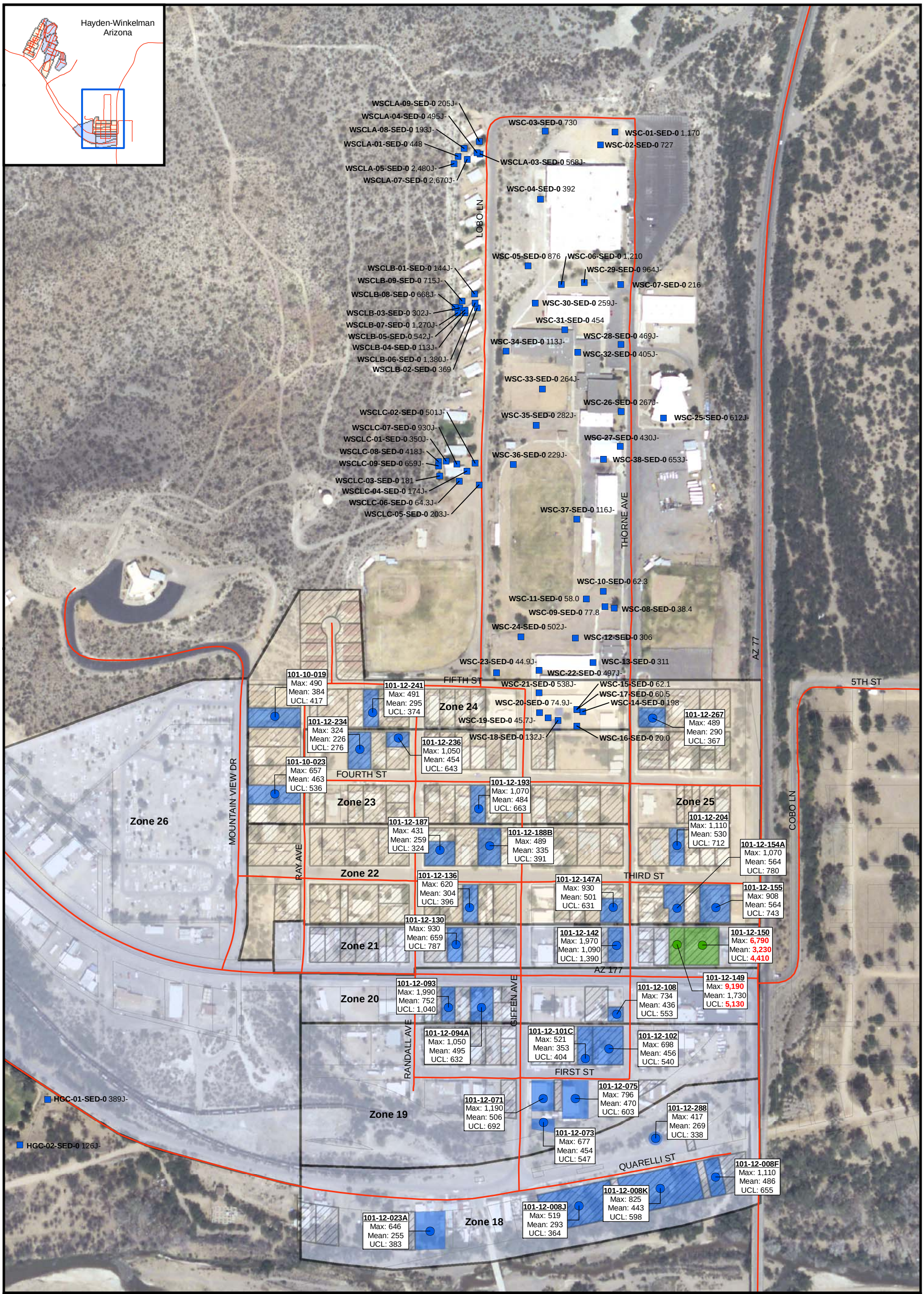
FIGURE 4-19
RESIDENTIAL SUBSURFACE SOIL LABORATORY RESULTS FOR ARSENIC
WINKELMAN, ARIZONA
ASARCO, LLC Hayden Plant Site
Hayden, Arizona

The data on this figure are derived from tables 4-11 and E-2.

DRAFT

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\ASARCO\MAPFILES\03_FINAL\FIG4-19_RES_SUBSURFACESOILLABRESULTS_WINKELMAN_ARSENIC.MXD TJW 7/25/2008 14:23:32



Legend

Sample Location/ Concentration Range Color Key

- 0 - 3,100 mg/kg
- 3,101 - 8,699 mg/kg
- 8,700 - 17,100 mg/kg*
- > 17,100 mg/kg*

Shape Key

- Residential Sample
- Non-residential Sample

- Parcel with Habitable Housing
- Parcel Boundary
- Road

Parcel Zones

- Category 1
- Category 2

Notes:

[1] 101-12-023A = Parcel ID
[2] Max = Maximum Concentration
[3] Mean = Arithmetic Mean Concentration
[4] UCL = 95% Upper Confidence Limit
[5] 95% UCL was used for color key designation
[6] Cu = Copper
[7] J- = Estimated value, biased low
[8] mg/kg = milligrams per kilogram
[9] R-SRL = Residential Soil Remediation Level
[10] All concentrations are in mg/kg
[11] Soil concentrations in **RED** exceed Arizona-R-SRLs
[12] Arizona R-SRL Cu = 3,100 mg/kg
[13] If a duplicate sample was collected, the higher concentration of the two is posted.
[14] * = Copper concentrations do not exceed 8,699 mg/kg
[15] For Arithmetic Mean and 95% UCL, values based on 9 samples per parcel.
[16] Aerial Source: Environmental Protection Agency, 2004.

N W E S

0 150 300 600 Feet

FIGURE 4-20
RESIDENTIAL AND NON-RESIDENTIAL SURFACE SOIL LABORATORY RESULTS FOR COPPER
WINKELMAN, ARIZONA
ASARCO, LLC Hayden Plant Site
Hayden, Arizona
The data on this figure are derived from tables 4-6, 4-10, and D-1.

DRAFT

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\ASARCO\MAPFILES\03_FINAL\FIG4-20_RES_SURFACESOILLABRESULTS_WINKELMAN_COPPER_NONRES.MXD TJW 7/25/2008 13:57:00