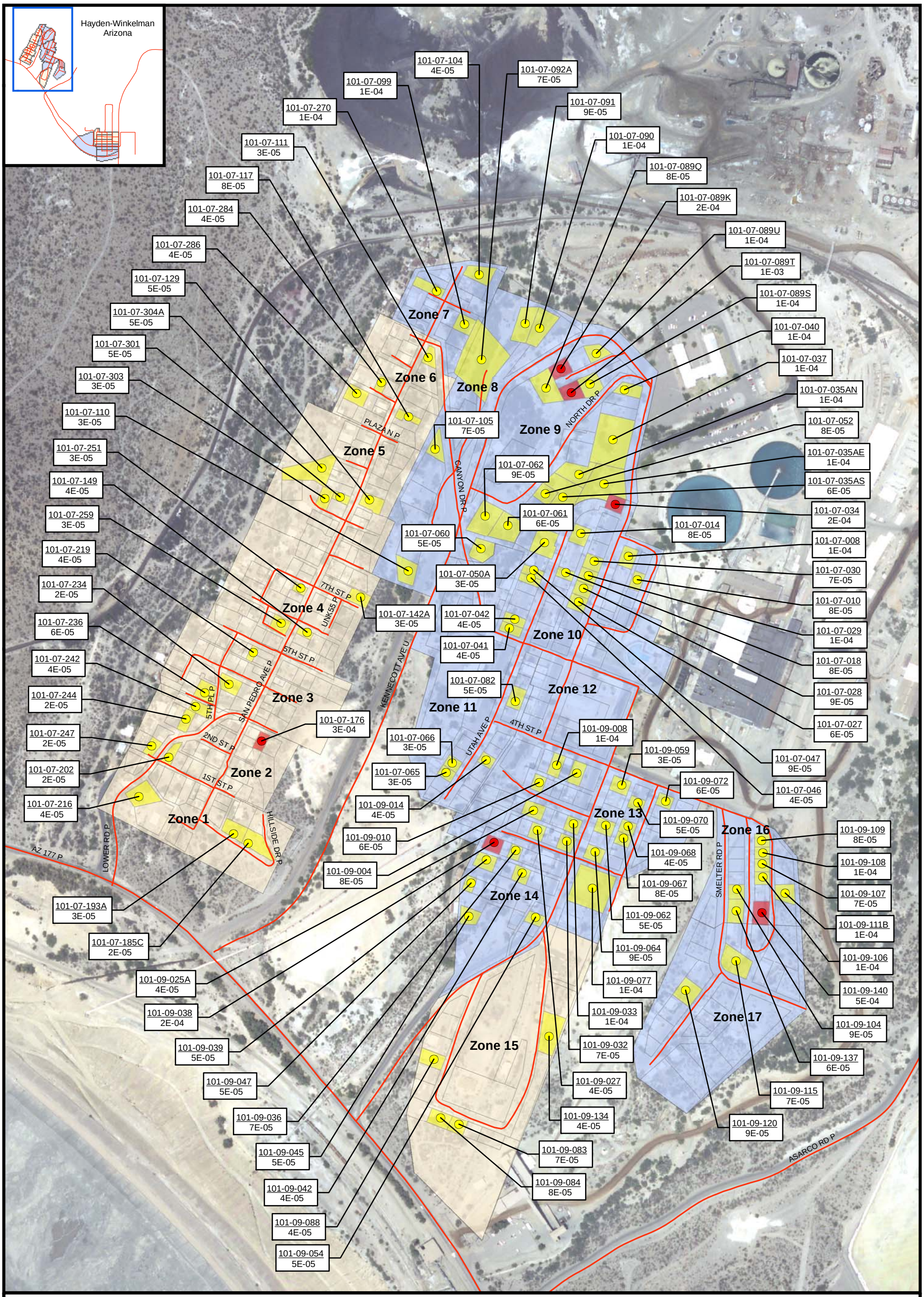


Legend

Sample Locations/ Risk Levels Color Key

- <1E-06
- 1E-06 to 1E-04
- >1E-04
- Roads

Parcel Zones

- Category 1
- Category 2

N W E S

0 200 400 800 Feet

Notes:
[1] Sample Parcel ID = 101-07-176
[2] Aerial Source: ESRI I3 Imagery Prime World 2D dataset, April 26, 1992 & June 17, 2005.

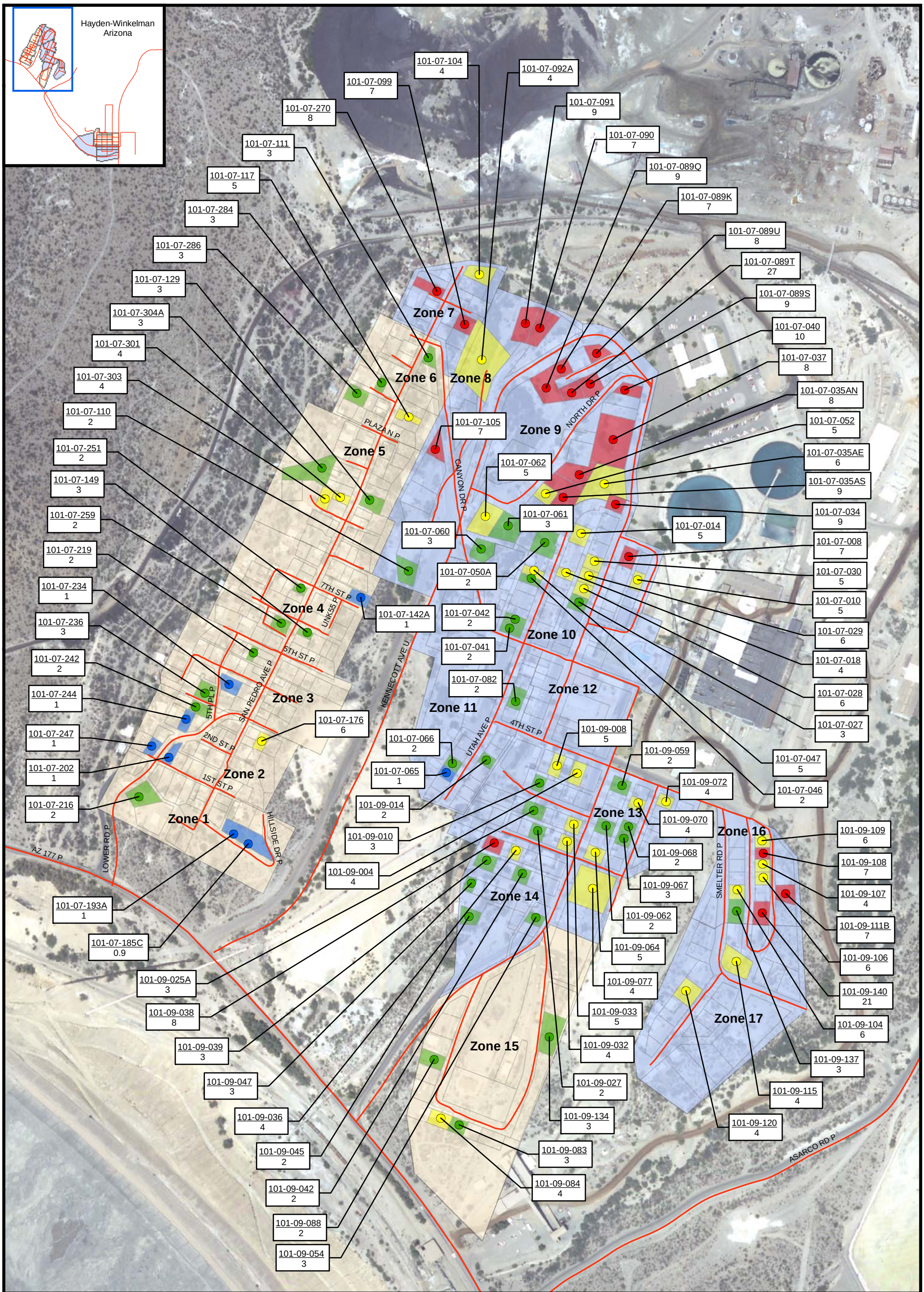
FIGURE 6-1
RESIDENTIAL CANCER RISKS DUE TO EXPOSURE TO ARSENIC IN SURFACE SOIL, HAYDEN, ARIZONA

ASARCO, LLC Hayden Plant Site
Hayden, Arizona

DRAFT

CH2MHILL

\\PHOENIX\GROUPS\C&IS\GIS_LIBRARY\ASARCO\MAPFILES\02_PRE-FINAL\RISK_ASSESSMENT\FIG6-1_HAYDEN_ADULTCHILD_CANCER.MXD TJW 4/4/2008 15:22:10



Legend

Sample Locations/ Hazard Levels Color Key

- Does not exceed 1
- >1 to 3
- >3 to 6
- >6
- Roads

Parcel Zones

- Category 1
- Category 2

N W E S

0 200 400 800 Feet

Notes:

[1] Sample Parcel ID = 101-07-176

[2] Aerial Source: ESRI I3 Imagery Prime World 2D dataset, April 26, 1992 & June 17, 2005.

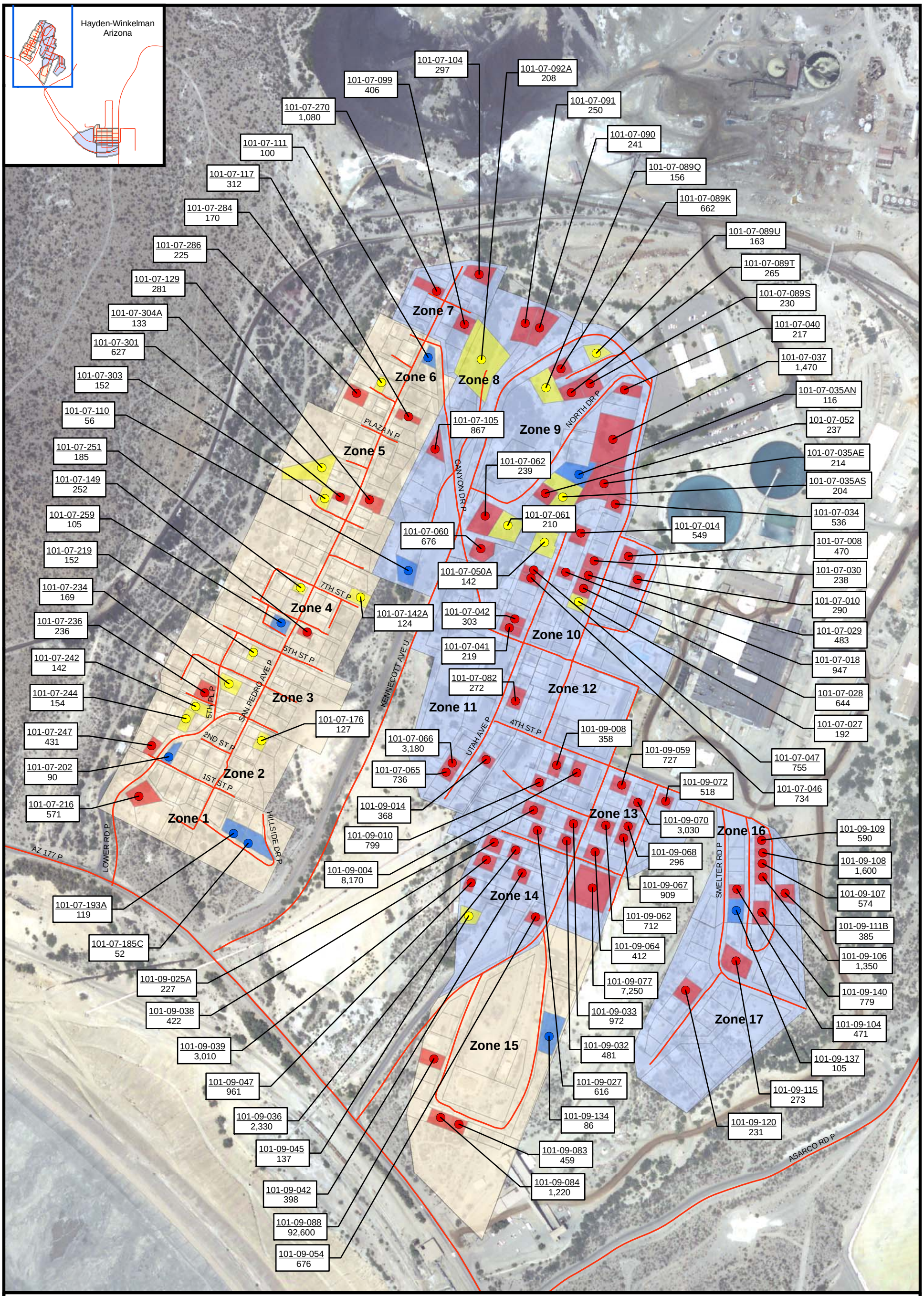
FIGURE 6-2
RESIDENTIAL NONCANCER HAZARD INDICES DUE TO EXPOSURE TO ARSENIC AND COPPER IN SURFACE SOIL, HAYDEN, ARIZONA

ASARCO, LLC Hayden Plant Site
Hayden, Arizona

DRAFT

CH2MHILL

\\PHOENIX\GROUPS\C&IS\GIS_LIBRARY\ASARCO\MAPFILES\02_PRE-FINAL\RISK_ASSESSMENT\FIG6-2_HAYDEN_CHILD_NONCANCER_HAZARD_ALT.MXD TJW 4/4/2007 13:10:42



Legend

Sample Location/ EPC Levels Color Key

- Does not exceed 122 mg/kg
- >122 to 212 mg/kg
- >212 mg/kg
- Roads

Parcel Zones

- Category 1
- Category 2

Notes:

[1] Sample Parcel ID = 101-07-176.
[2] Site-Specific Lead Screening Values Including Homegrown Produce Pathway is 122 mg/kg.
[3] Site-Specific Lead Screening Value Excluding Homegrown Produce Pathway is 212 mg/kg.
[4] EPC = Exposure Point Concentrations.
[5] All Concentrations are Shown in mg/kg.
[6] Aerial Source: ESRI I3 Imagery Prime World 2D dataset, April 26, 1992 & June 17, 2005.

N W E S

0 200 400 800 Feet

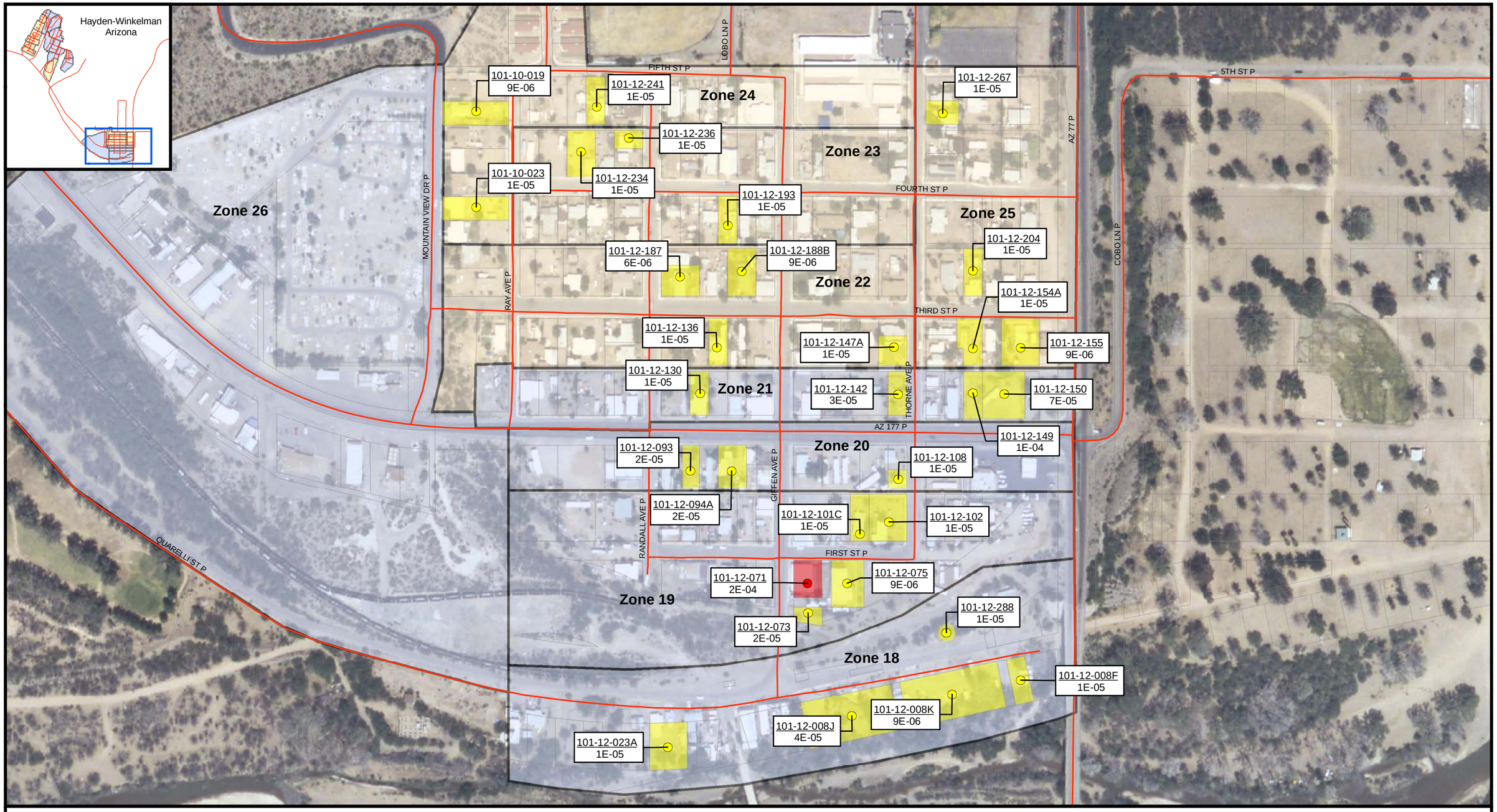
FIGURE 6-3
COMPARISON OF LEAD EXPOSURE POINT CONCENTRATIONS TO SITE-SPECIFIC LEAD SCREENING VALUES, HAYDEN, ARIZONA

ASARCO, LLC Hayden Plant Site
Hayden, Arizona

DRAFT

CH2MHILL

\\PHOENIX\GROUPS\C&IS\GIS_LIBRARY\ASARCO\MAPFILES\02_PRE-FINAL\RISK_ASSESSMENT\FIG6-3_HAYDEN_LEAD_EPC.MXD TJW 4/4/2007 13:10:29



Legend

Sample Locations/ Risk Levels Color Key

- <1E-06
- 1E-06 to 1E-04
- >1E-04

Roads

Parcel Zones

- Category 1
- Category 2

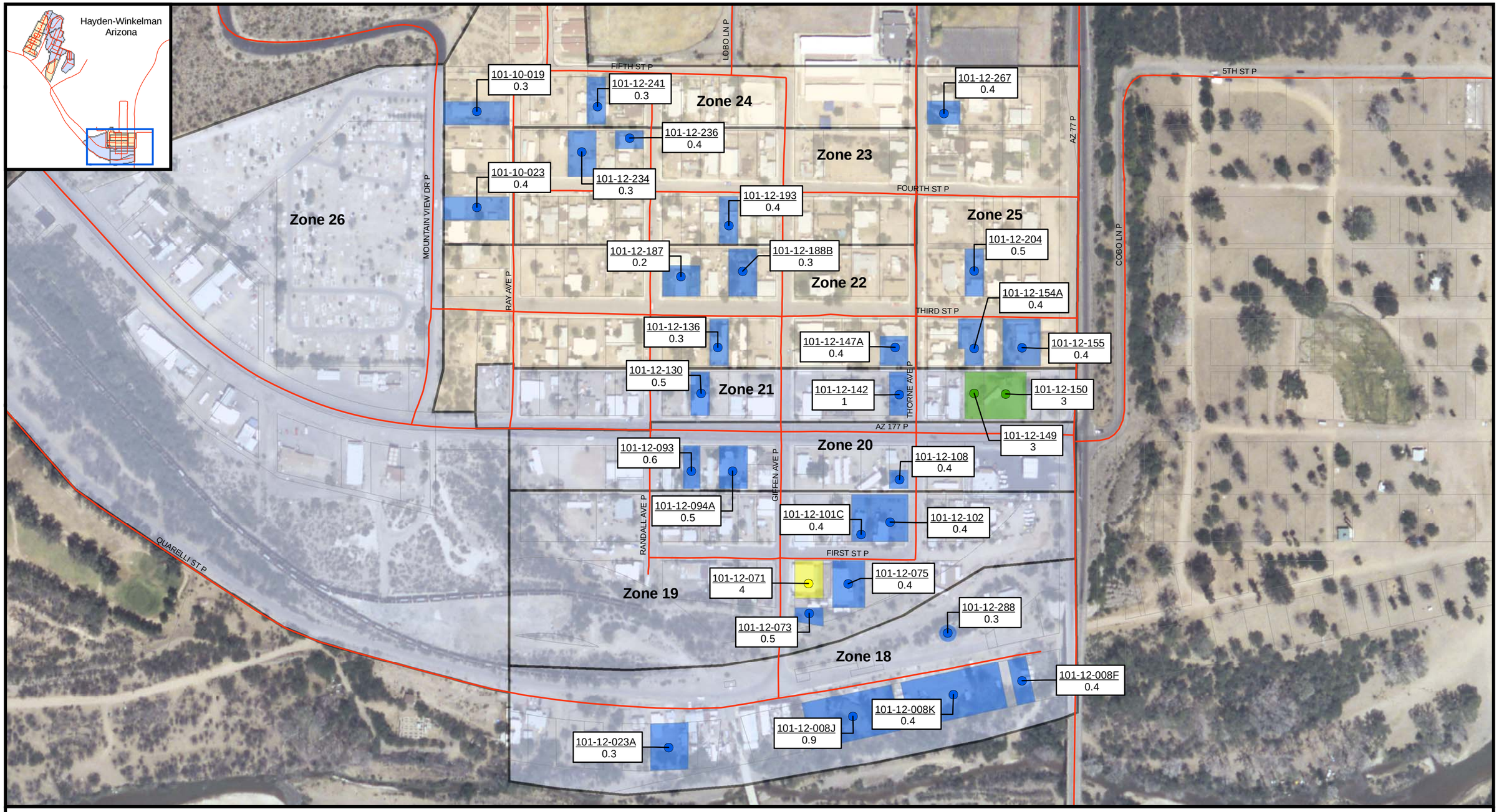
N W E S

0 125 250 500 Feet

Notes:
[1] Sample Parcel ID = 101-12-267
[2] Aerial Source: ESRI I3 Imagery Prime World 2D dataset, June 17, 2005.

FIGURE 6-4
RESIDENTIAL CANCER RISKS DUE TO EXPOSURE TO ARSENIC IN SURFACE SOIL, WINKELMAN, ARIZONA
ASARCO, LLC Hayden Plant Site
Hayden, Arizona
DRAFT
CH2MHILL

\\PHOENIX\GROUPS\C&IS\GIS_LIBRARY\ASARCO\MAPFILES\02_PRE-FINAL\RISK_ASSESSMENT\FIG6-4_WINKELMAN_ADULTCHILD_CANCER.MXD TJW 4/4/2007 15:20:27



Legend

Sample Locations/ Hazard Levels Color Key

- Does not exceed 1
- >1 to 3
- >3 to 6
- >6

Roads

Parcel Zones

- Category 1
- Category 2

N W E S

0 125 250 500 Feet

Notes:

[1] Sample Parcel ID = 101-12-267

[2] Aerial Source: ESRI I3 Imagery Prime World 2D dataset, June 17, 2005.

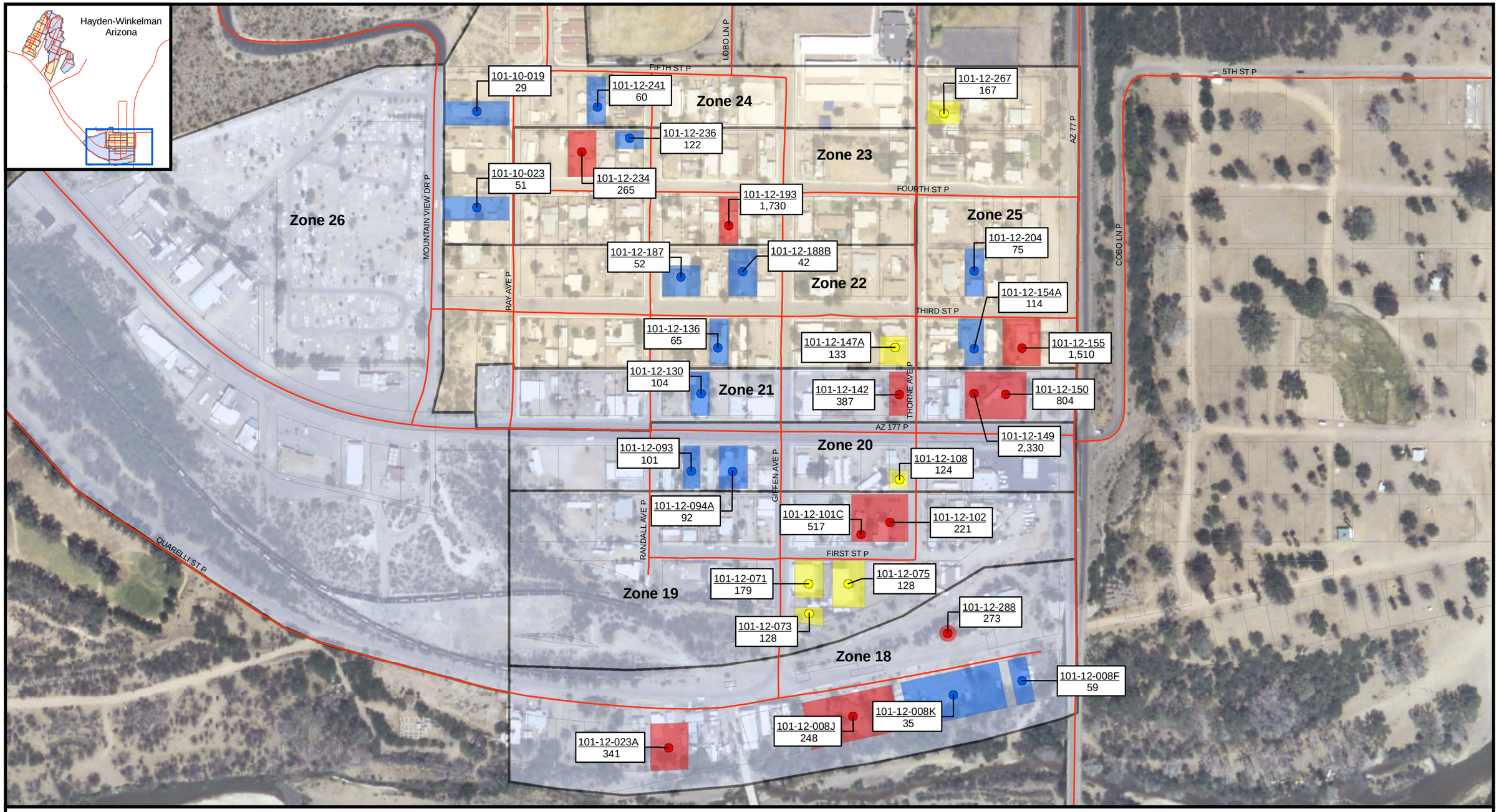
FIGURE 6-5
RESIDENTIAL NONCANCER HAZARD INDICES DUE TO ARSENIC AND COPPER IN SURFACE SOIL, WINKELMAN, ARIZONA

ASARCO, LLC Hayden Plant Site
Hayden, Arizona

DRAFT

CH2MHILL

\\PHOENIX\GROUPS\C&IS\GIS_LIBRARY\ASARCO\MAPFILES\02_PRE-FINAL\RISK_ASSESSMENT\FIG6-5_WINKELMAN_CHILD_NONCANCER_HAZARD_ALT.MXD TJW 4/4/2007 15:20:27



Legend

Sample Location/ EPC Levels Color Key

- Does not exceed 122 mg/kg
- >122 to 212 mg/kg
- >212 mg/kg

Roads

Parcel Zones

- Category 1
- Category 2

Notes:

[1] Sample Parcel ID = 101-12-267.
[2] Site-Specific Lead Screening Values Including Homegrown Produce Pathway is 122 mg/kg.
[3] Site-Specific Lead Screening Values Excluding Homegrown Produce Pathway is 212 mg/kg.
[4] EPC = Exposure Point Concentrations.
[5] All Concentrations are shown in mg/kg.
[6] Aerial Source: ESRI I3 Imagery Prime World 2D dataset, June 17, 2005.

N W E S

0 125 250 500 Feet

FIGURE 6-6
COMPARISON OF LEAD EXPOSURE POINT CONCENTRATIONS TO SITE-SPECIFIC LEAD SCREENING VALUES, WINKELMAN, ARIZONA

ASARCO, LLC Hayden Plant Site
Hayden, Arizona

DRAFT

CH2MHILL

\\PHOENIX\GROUPS\C&IS\GIS_LIBRARY\ASARCO\MAPFILES\02_PRE-FINAL\RISK_ASSESSMENT\FIG6-6_WINKELMAN_LEAD_EPC.MXD TJW 4/4/2007 15:20:27

Legend

Sample Location/ Arsenic Concentration Range Color Key

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

Shape Key

- Nonresidential Sample

Nonresidential Grouping/ Risk Level Color Key

- <1E-06
- 1E-06 to 1E-04
- >1E-04

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

Parcel Zones

- Category 1
- Category 2

N W E S

0 250 500 1,000 Feet

Aerial Source: Environmental Protection Agency, 2004.

FIGURE 6-7
NONRESIDENTIAL CANCER RISKS DUE TO EXPOSURE TO ARSENIC IN SURFACE SOIL - HAYDEN AND ASARCO PROPERTIES EXPOSURE AREAS

ASARCO, LLC Hayden Plant Site
Hayden, Arizona

DRAFT

CH2MHILL

\\MADISON\GROUPS\EMS\GIS_LIBRARY\ASARCO\MAPFILES\02_PRE-FINAL\RISK_ASSESSMENT\CANCER_FIGURES\FIG6-7_NONRES_ADULTCHILD_CANCER_AS_HAYDEN.MXD TJW 5/28/2008 15:29:22