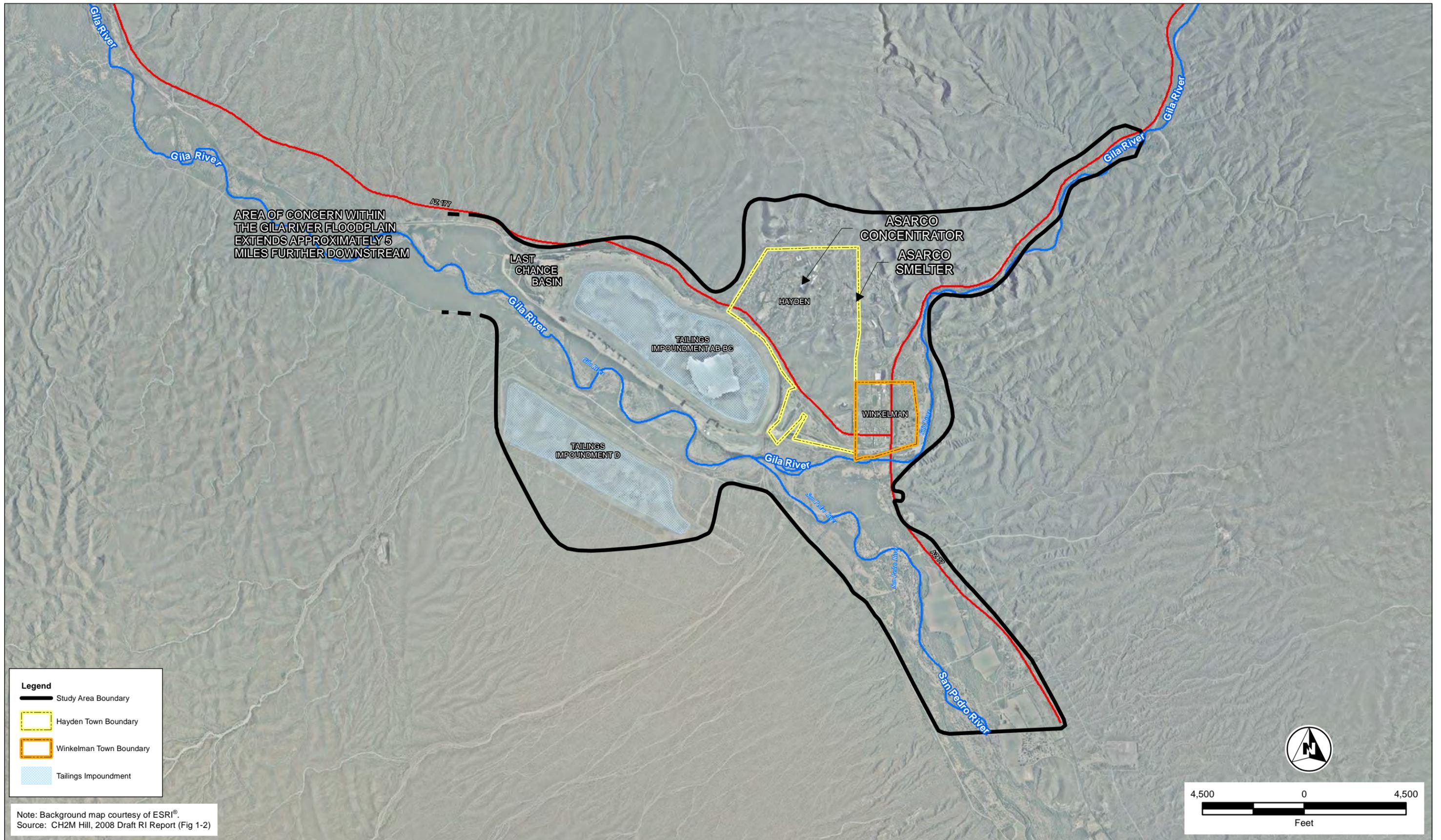


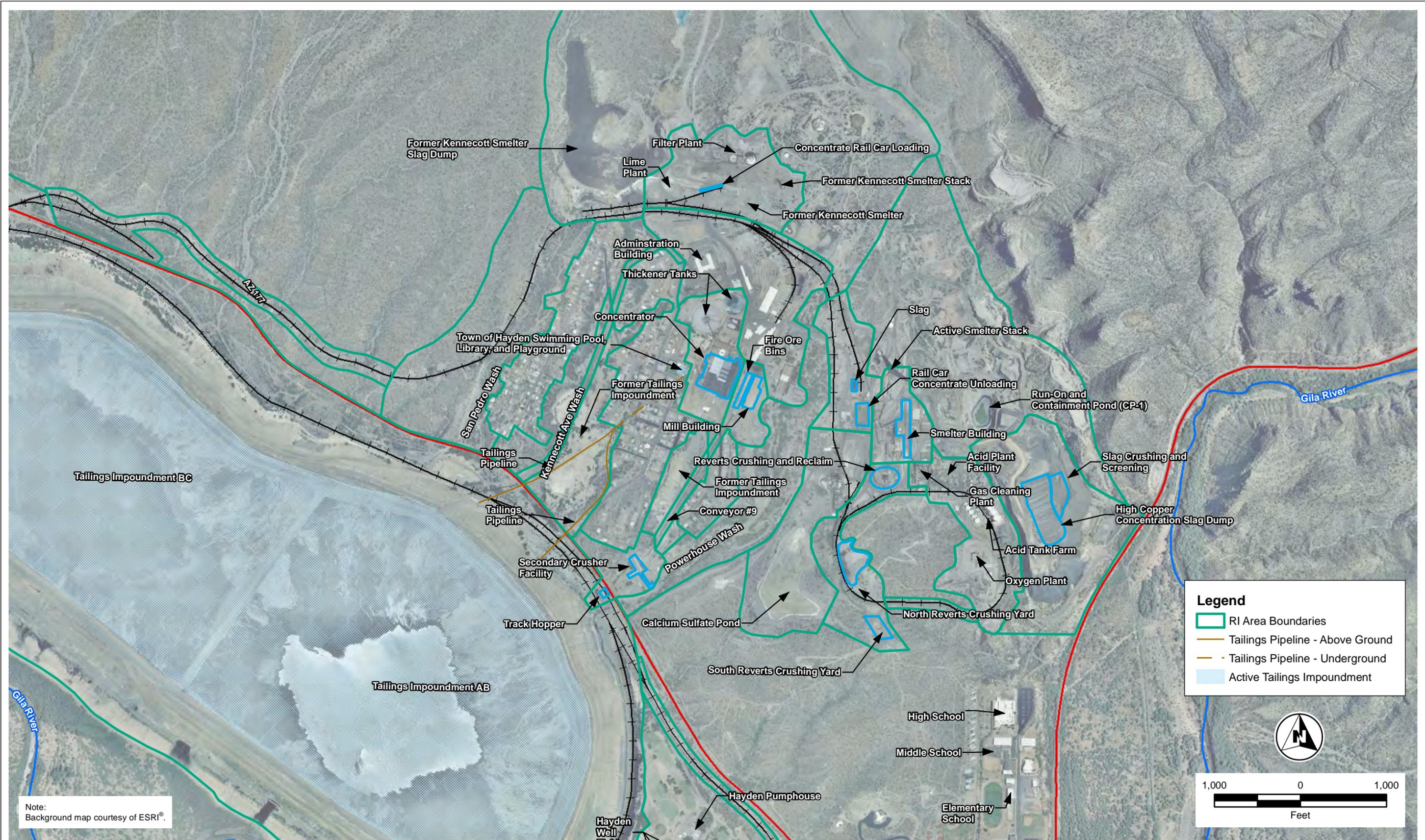
Source: CH2MHill



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

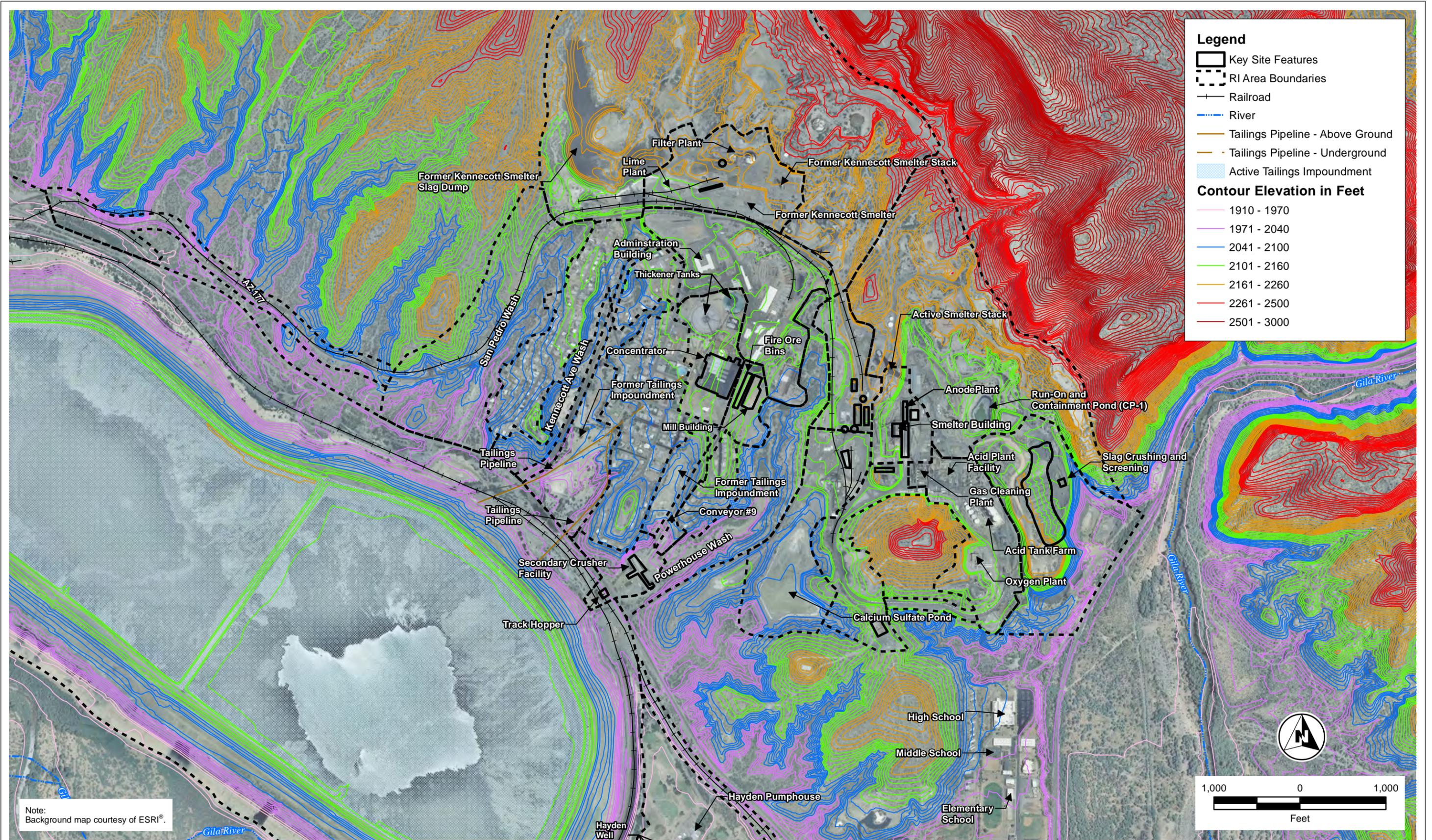
Figure 2-1
 ASARCO Vicinity Map





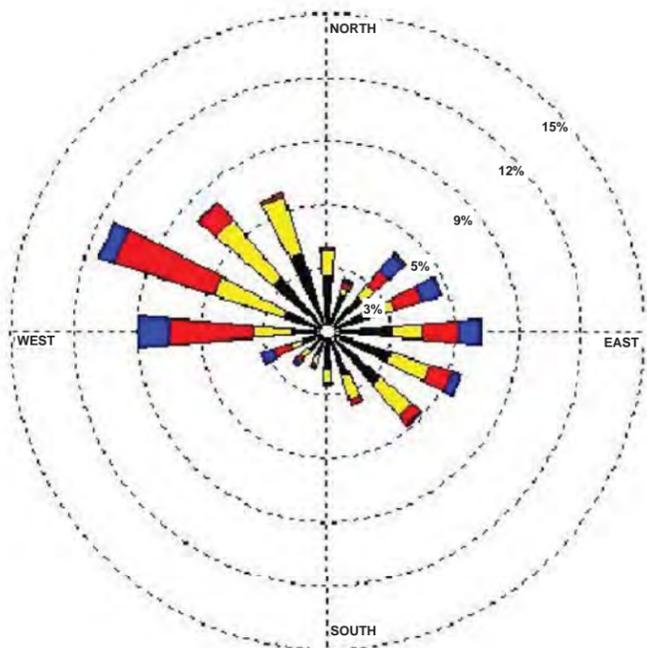
ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 2-3
 Key Features of Study Area

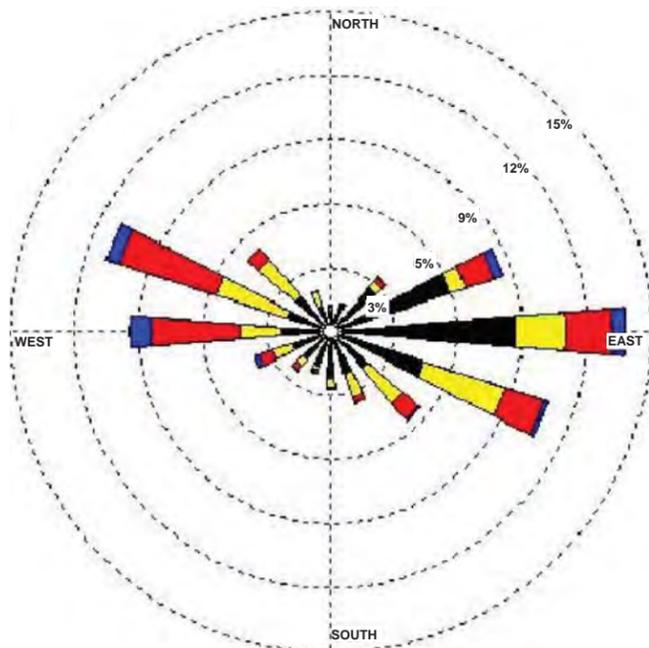


ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

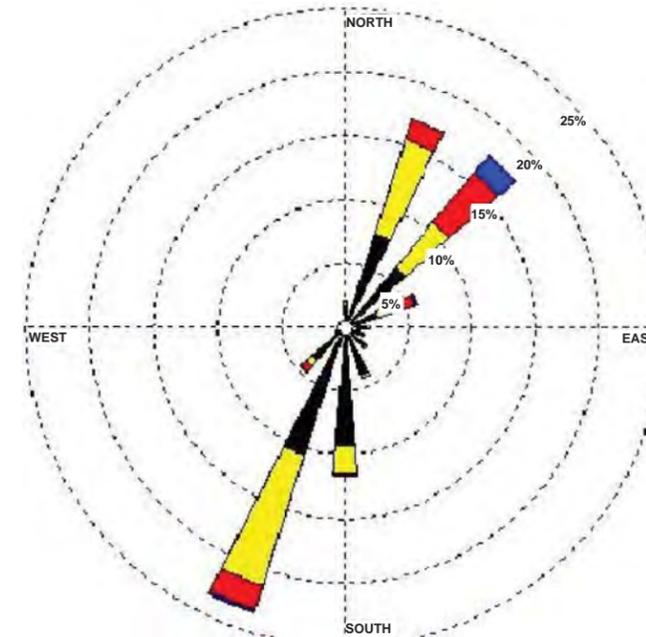
Figure 2-4
 Key Features of Study Area
 with Topographic Contours



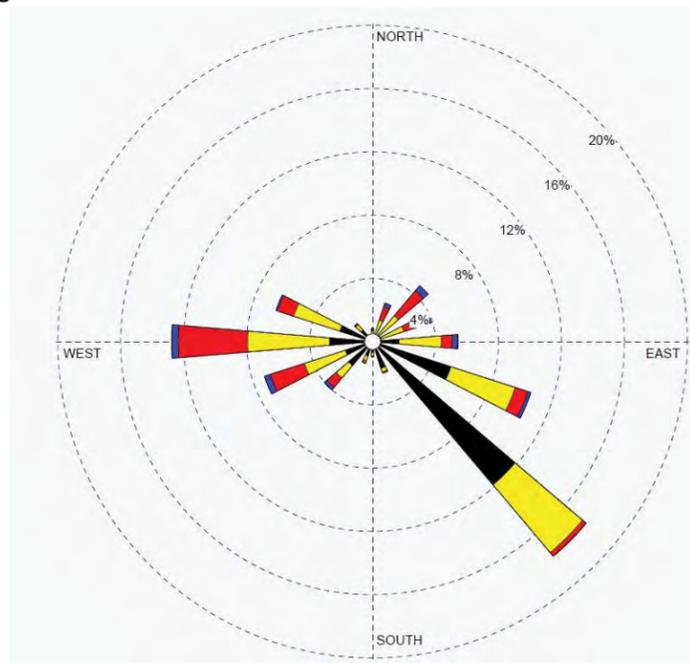
Hayden Junction Station ¹
 Calms: 13.32%
 Average Wind Speed: 4.81 mph
 Total Count: 43,675 hours



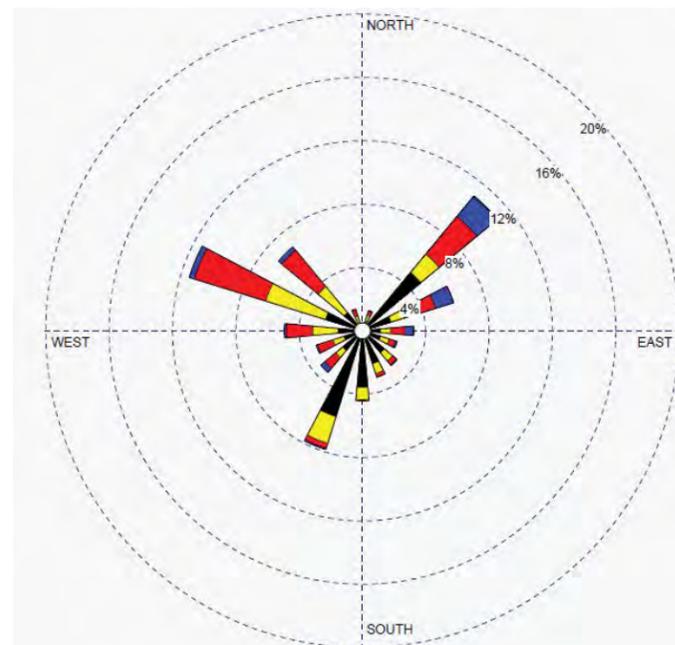
Montgomery Ranch Station ¹
 Calms: 14.53%
 Average Wind Speed: 5.41 mph
 Total Count: 42,140 hours



Globe Highway Station ¹
 Calms: 5.06%
 Average Wind Speed: 2.11 mph
 Total Count: 43,771 hours



Hayden Station ²
 Calms: 12.17%
 Average Wind Speed: 5.03 mph
 Total Count: 59,165 (readings every 1/2 hour)



Winkelman Station ²
 Calms: 19.00%
 Average Wind Speed: 4.71 mph
 Total Count: 62,906 (readings every 1/2 hour)

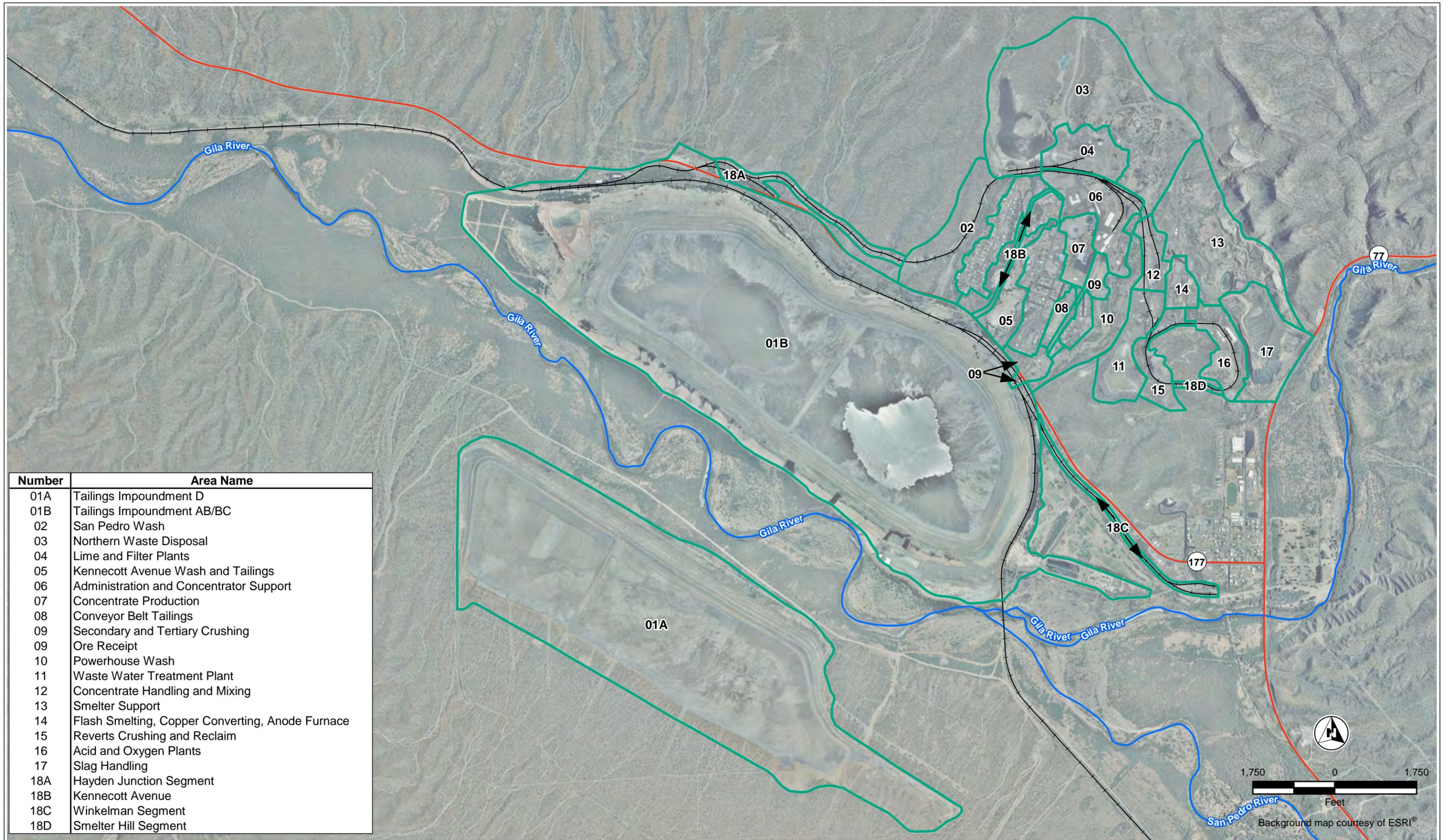
Legend

- Wind Speed (mph)
- ≥ 28.83
 - 19.70 - 28.83
 - 12.75 - 19.70
 - 8.05 - 12.75
 - 4.70 - 8.05
 - 1.12 - 4.70

Notes:

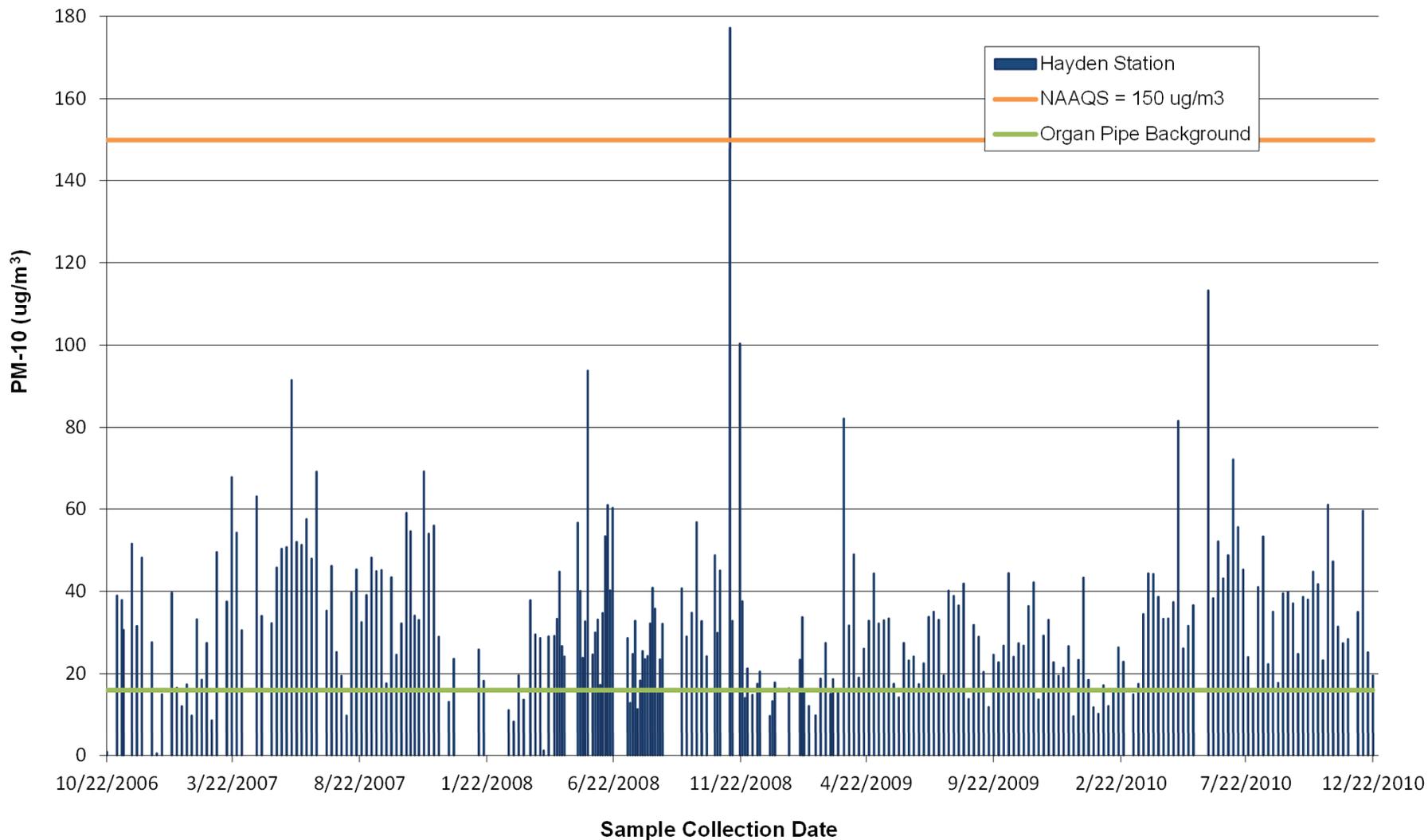
- ¹ Data provided by ASARCO for period of January 1, 2000 through December 31, 2004
- ² Data collected by EPA for period of January 1, 2007 through December 31, 2010
- ³ mph = miles per hour
- ⁴ Calms ≤ 1 mph
- ⁵ Wind direction toward center

Note:
 Wind Roses are presented using different percentage scales.



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 2-6
 Overview of RI Areas

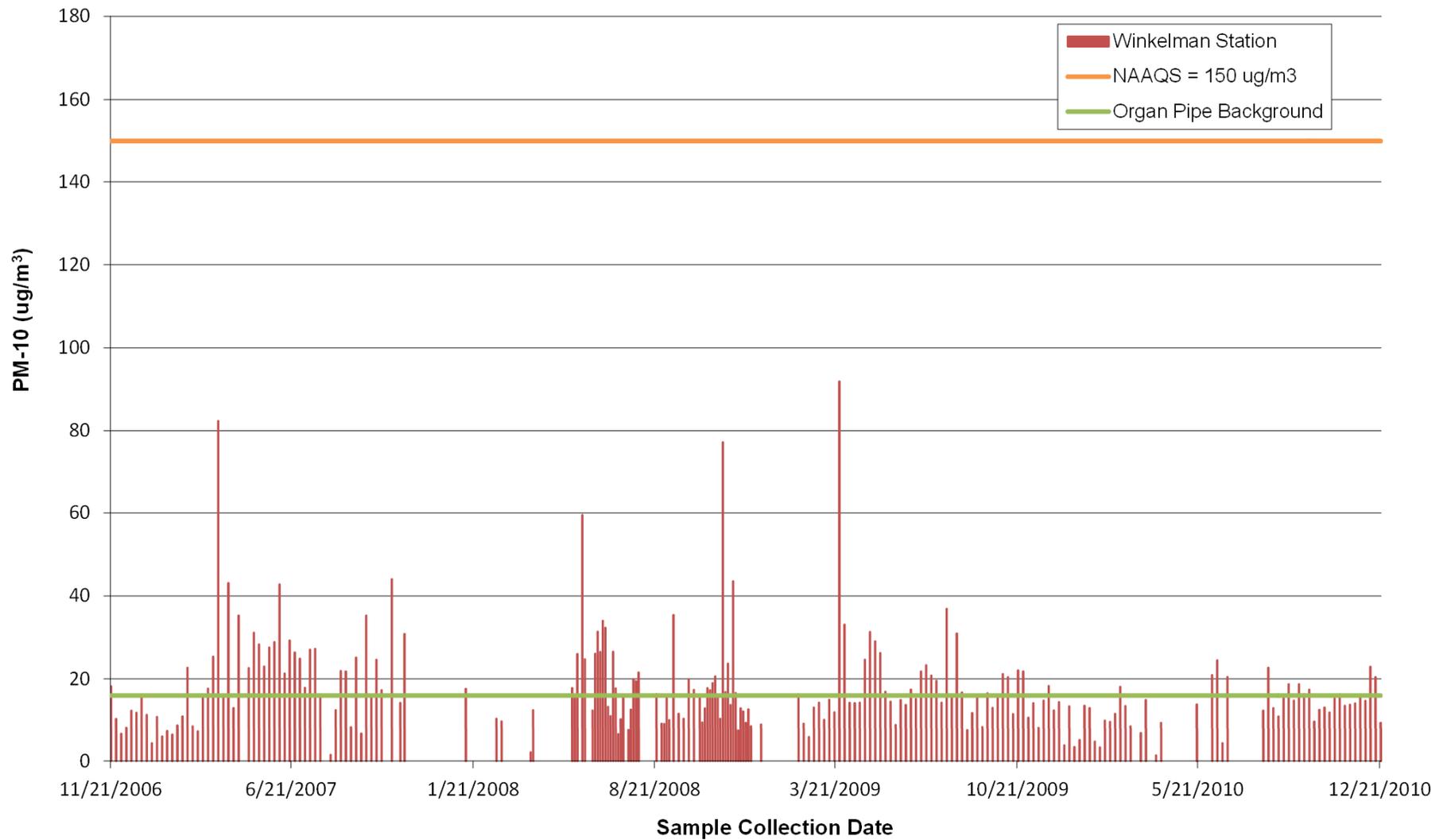


Notes:
 NAAQS = National Ambient Air Quality Standards
 ug/m³ = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-1
 24 Hour Ambient Air PM₁₀
 Results - Hayden Station
 October 2006-December 2010

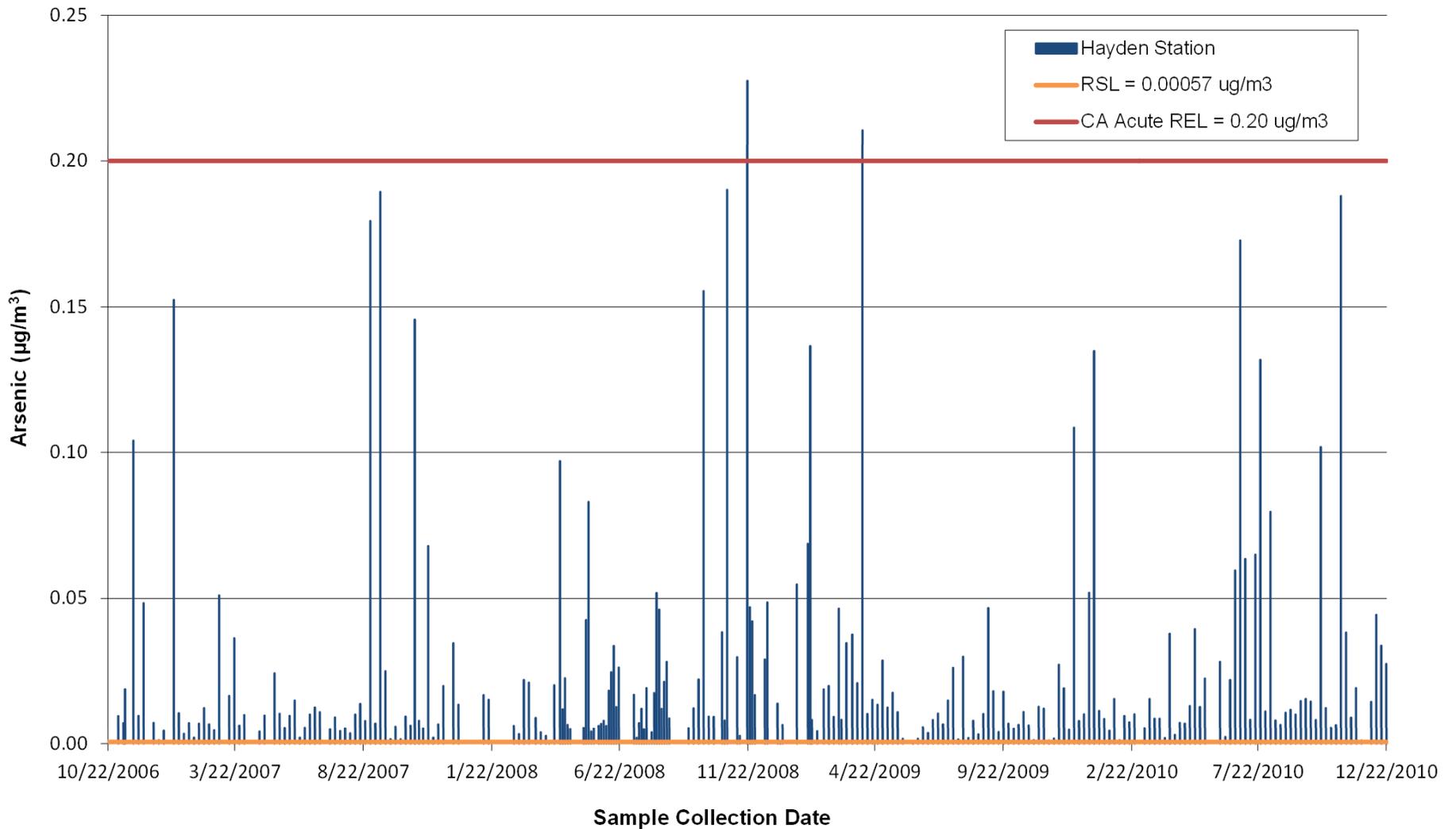


Notes:
 NAAQS = National Ambient Air Quality Standards
 ug/m³ = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-2
 24-Hour Ambient Air PM₁₀
 Results - Winkelman Station
 November 2006-December 2010

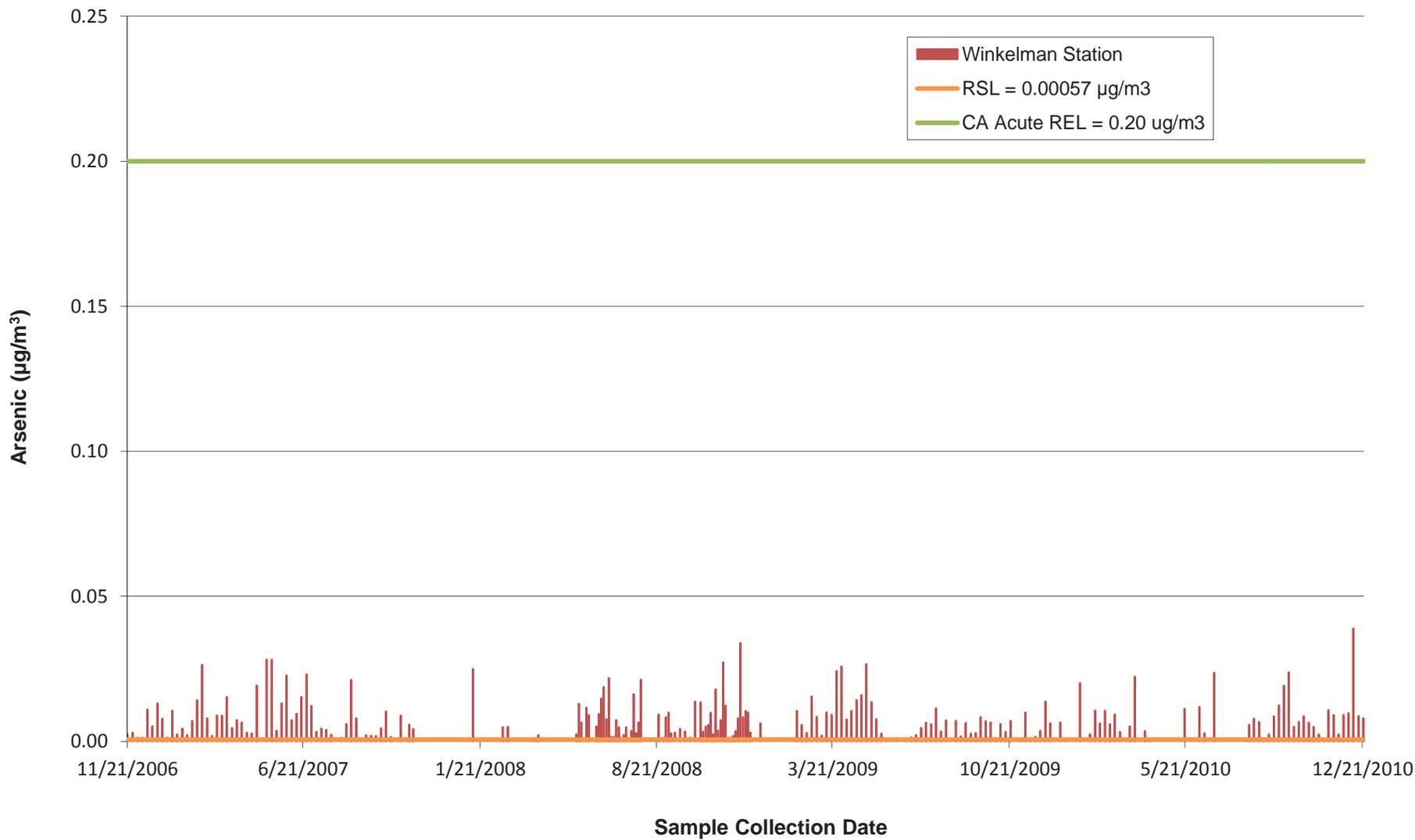


Notes:
 RSL = Regional Screening Level
 ug/m3 = micrograms per cubic meter



ASARCO, LLC Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-3
 24-Hour Ambient Air Arsenic
 Results - Hayden Station
 October 2006-December 2010

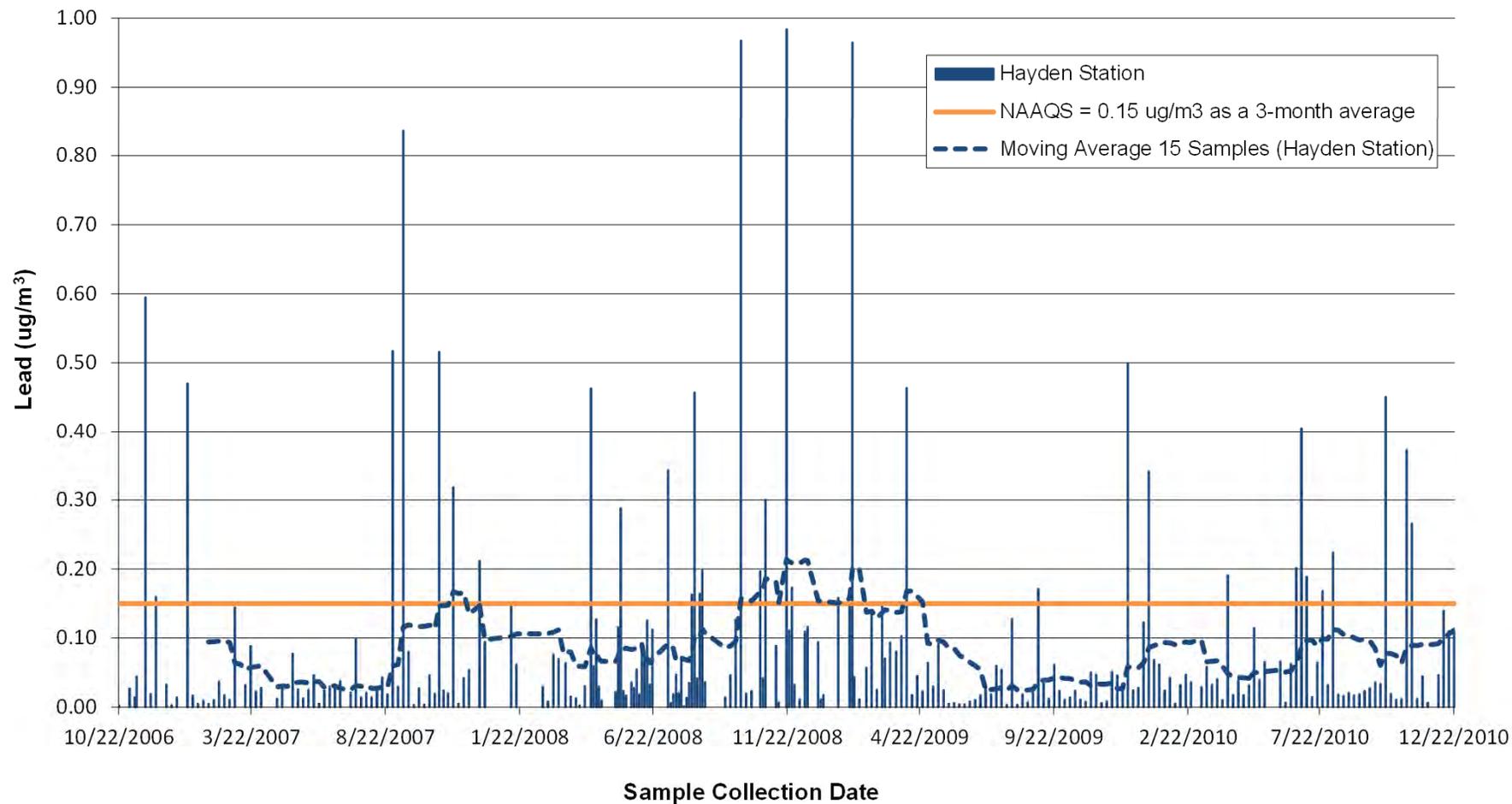


Notes:
 REL = Reference Exposure Level
 RSL = Regional Screening Level
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter



ASARCO, LLC Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-4
 24-Hour Ambient Air Arsenic
 Results - Winkelman Station
 November 2006-December 2010

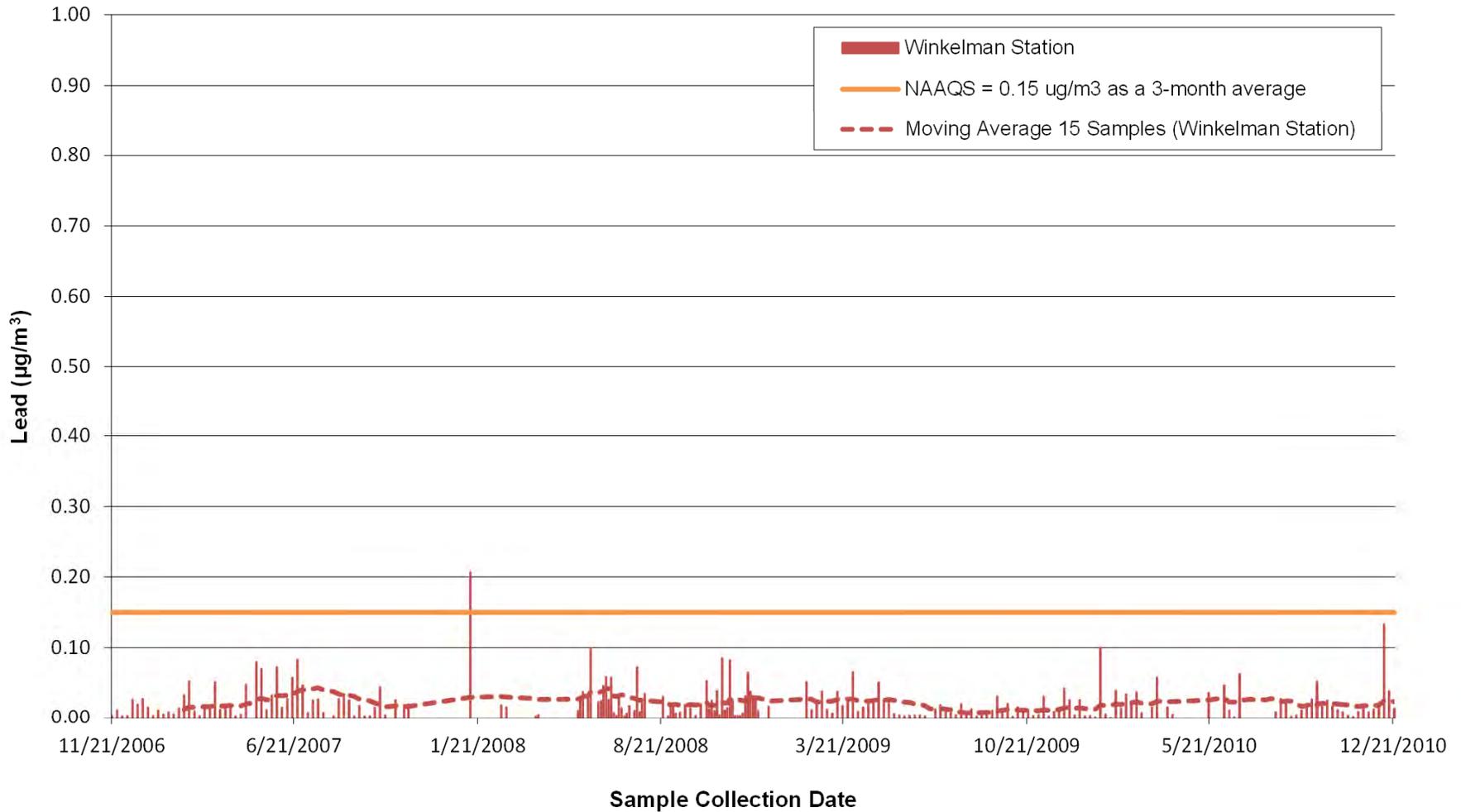


Notes:
 NAAQS - National Ambient Air Quality Standards
 ug/m3 = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-5
 24-Hour Ambient Air Lead Data
 Results - Hayden Station
 October 2006-December 2010

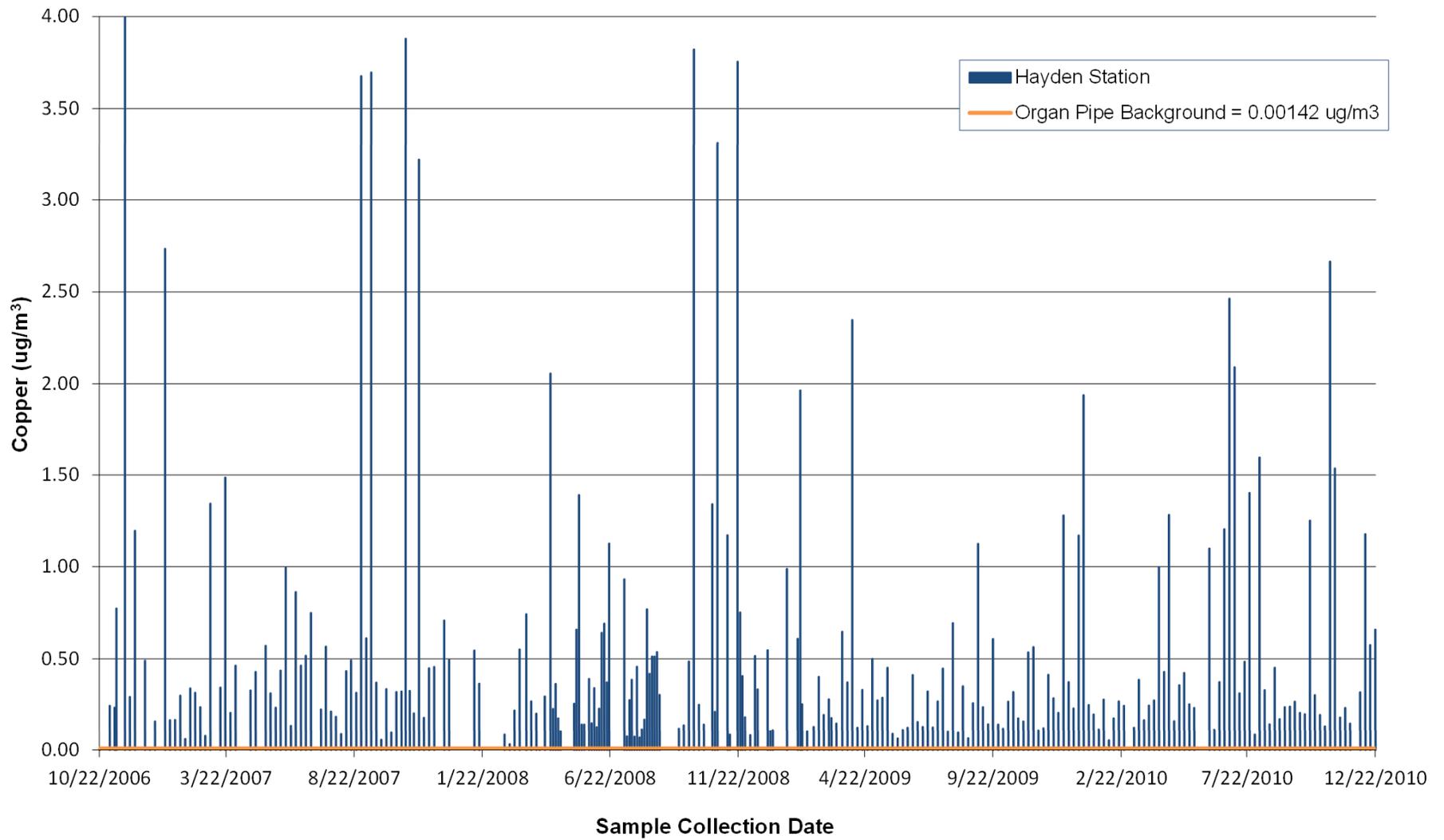


Notes:
 NAAQS - National Ambient Air Quality Standards
 ug/m3 = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-6
 24 Hour Ambient Air Lead Data
 Results - Winkelman Station
 November 2006-December 2010

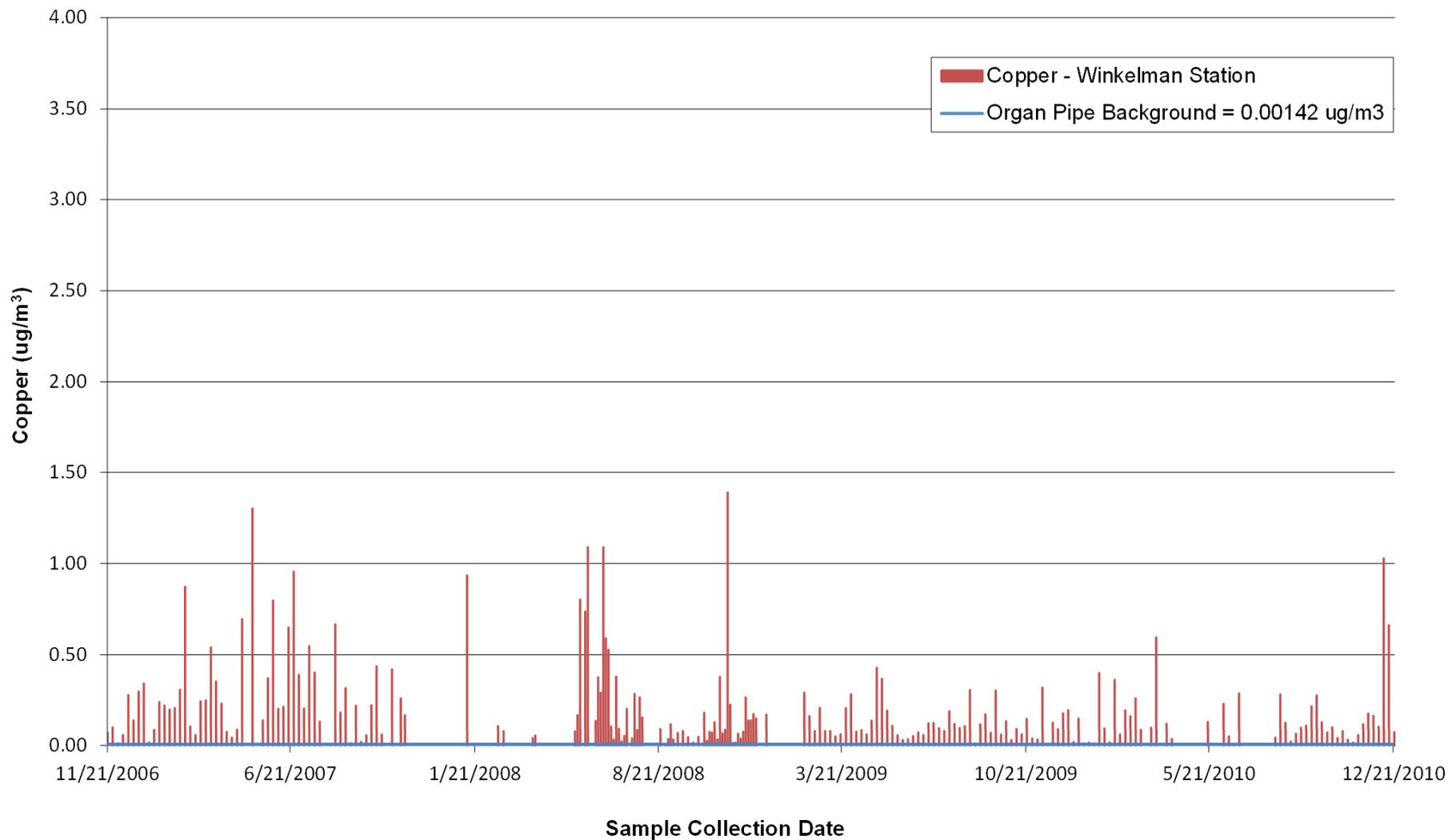


Notes:
 ug/m3 = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-7
 24 Hour Ambient Air Copper
 Results - Hayden Station
 October 2006-December 2010

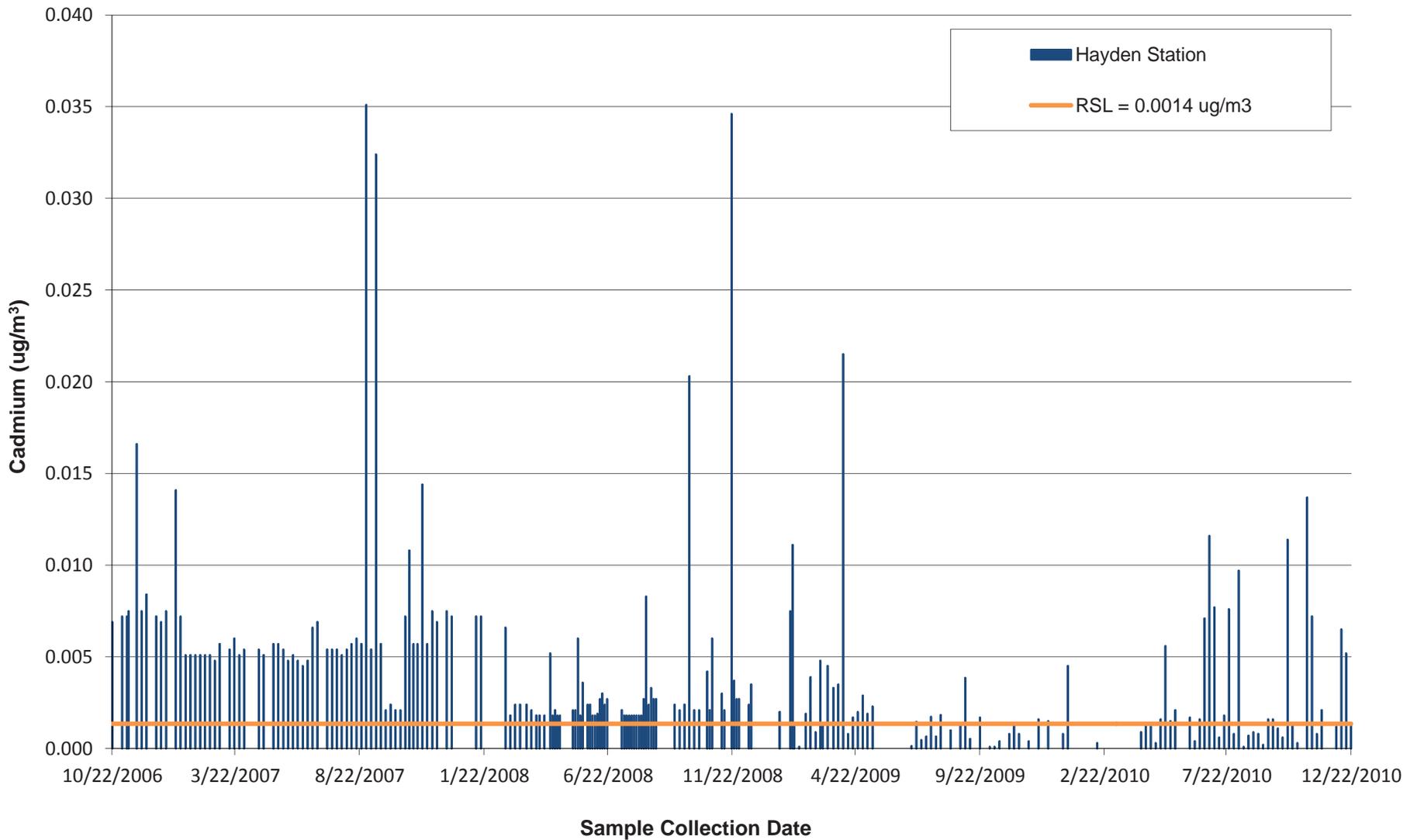


Notes:
 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-8
 24 Hour Ambient Air Copper
 Results - Winkelman Station
 November 2006-December 2010

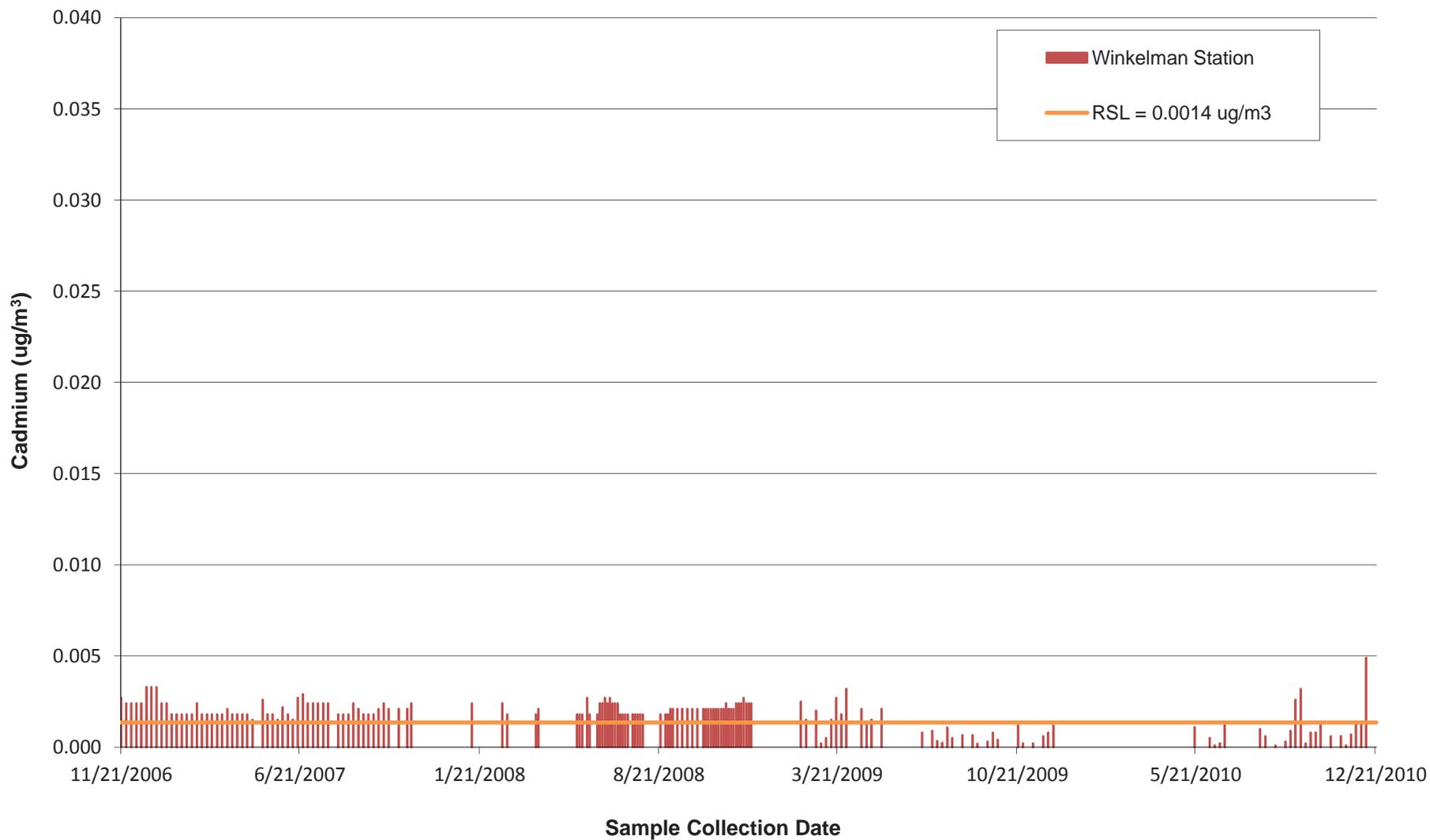


Notes:
 RSL = regional screening level
 ug/m3 = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-9
 24-Hour Ambient Air Cadmium
 Results - Hayden Station
 October 2006-December 2010

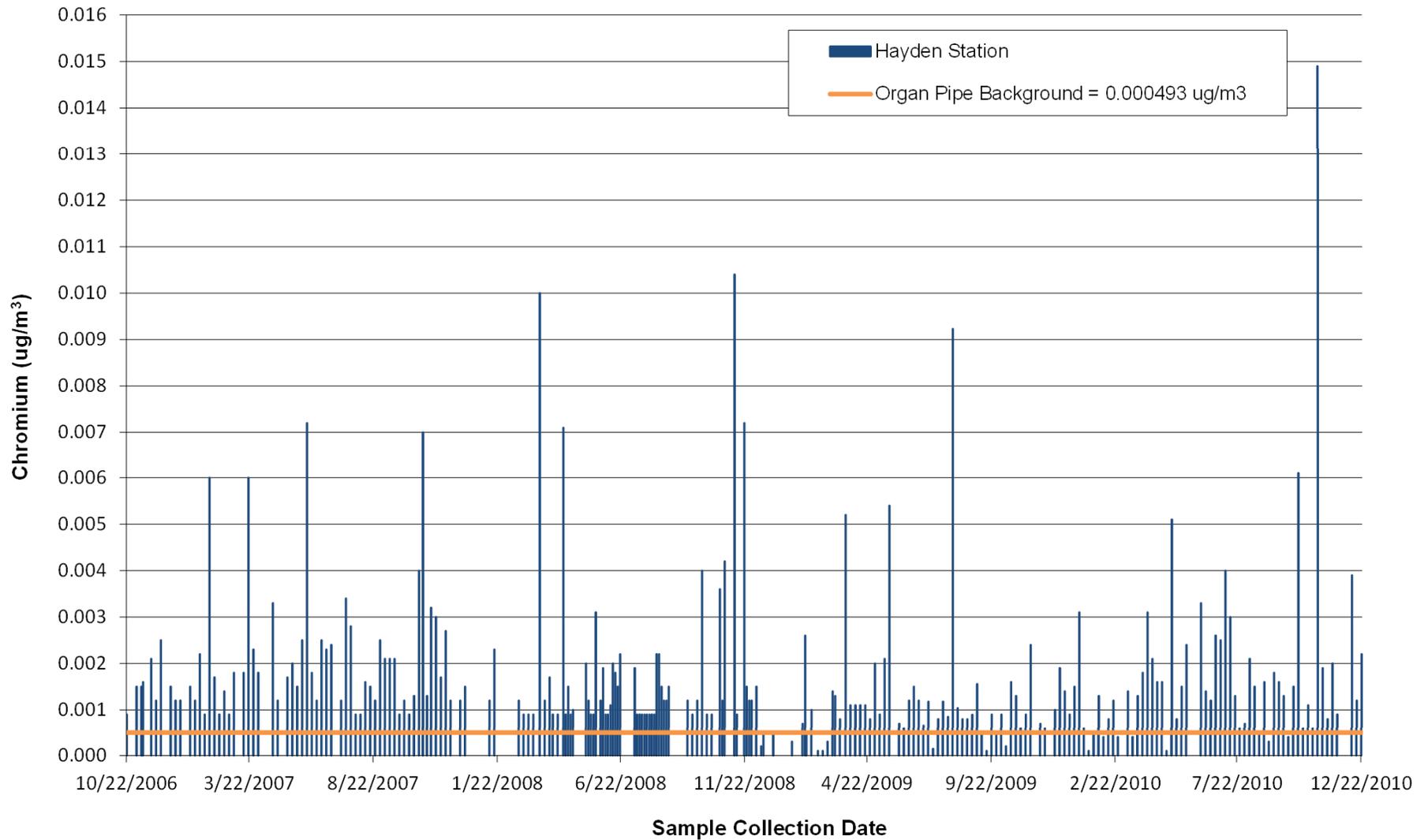


Notes:
 RSL = regional screening level
 ug/m3 = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-10
 24-Hour Ambient Air Cadmium
 Results - Winkelman Station
 November 2006-December 2010

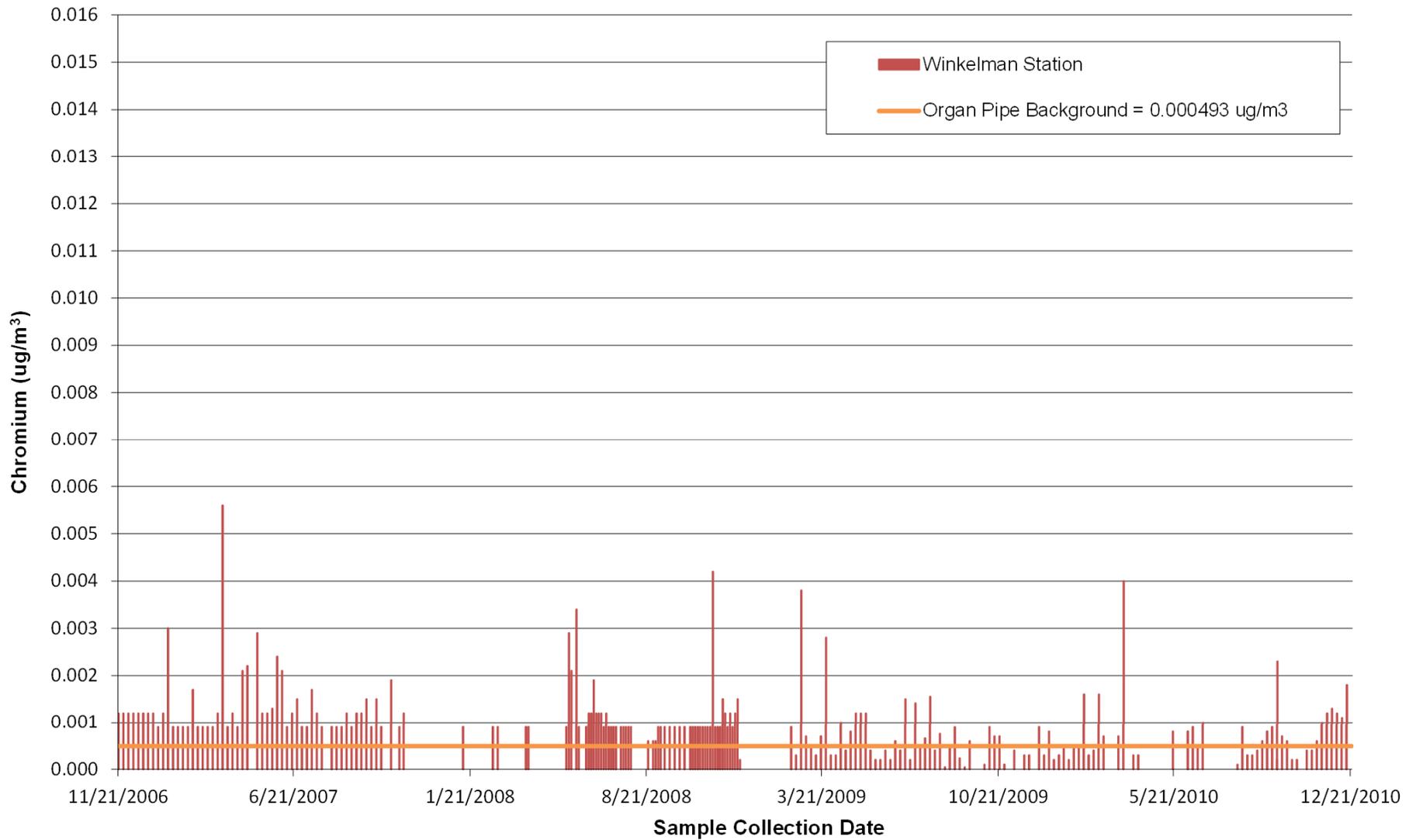


Notes:
 ug/m3 = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-11
 24-Hour Ambient Air Chromium
 Results - Hayden Station
 October 2006-December 2010



Notes:
 ug/m3 = micrograms per cubic meter



ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 Hayden, Arizona

Figure 3-12
 24-Hour Ambient Air Chromium
 Results - Winkelman Station
 November 2006-December 2010

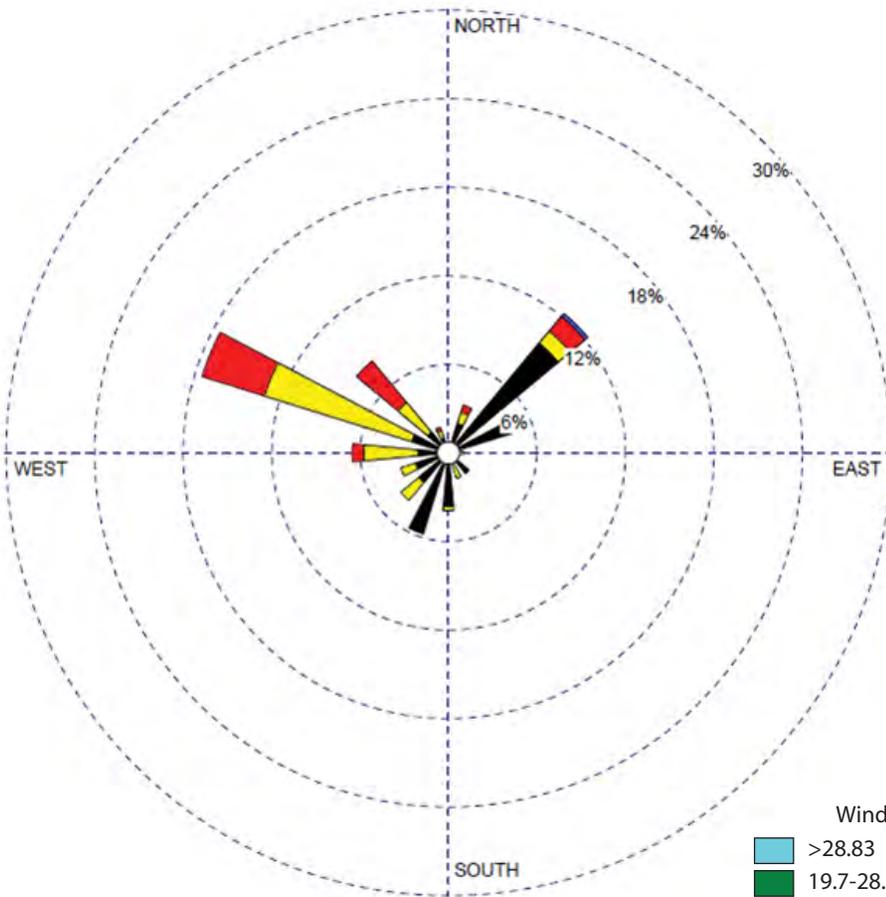


Figure 3-13A

Winkelman Station – High Arsenic, Copper & Lead
 1/14, 2/7, 2/13, 3/21, 9/23, 11/22, 12/10, 12/28, 2010
 Calms: 20.61%
 Average Wind Speed: 3.52 mph
 Total Count: 384 (30 minute averages)

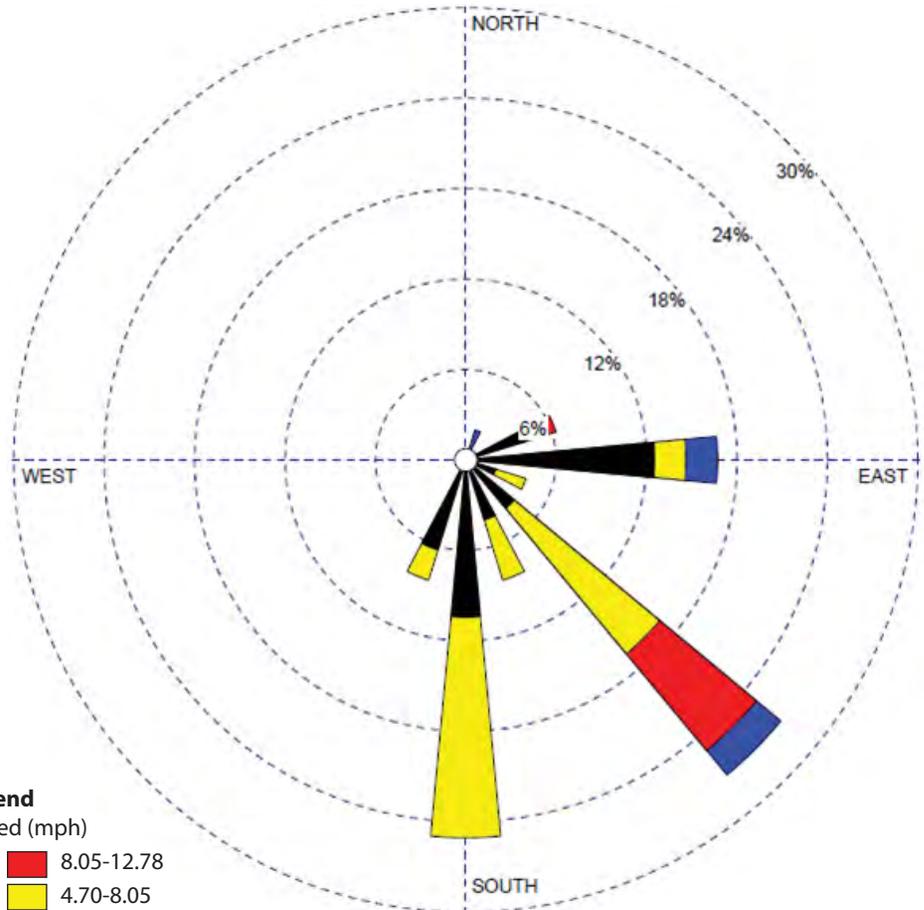
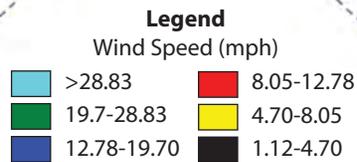


Figure 3-13B

Winkelman Station –Low Arsenic, Copper & Lead – 8/24/2010
 Calms: 2.08%
 Average Wind Speed: 4.91 mph
 Total Count: 48 (30 minute averages)



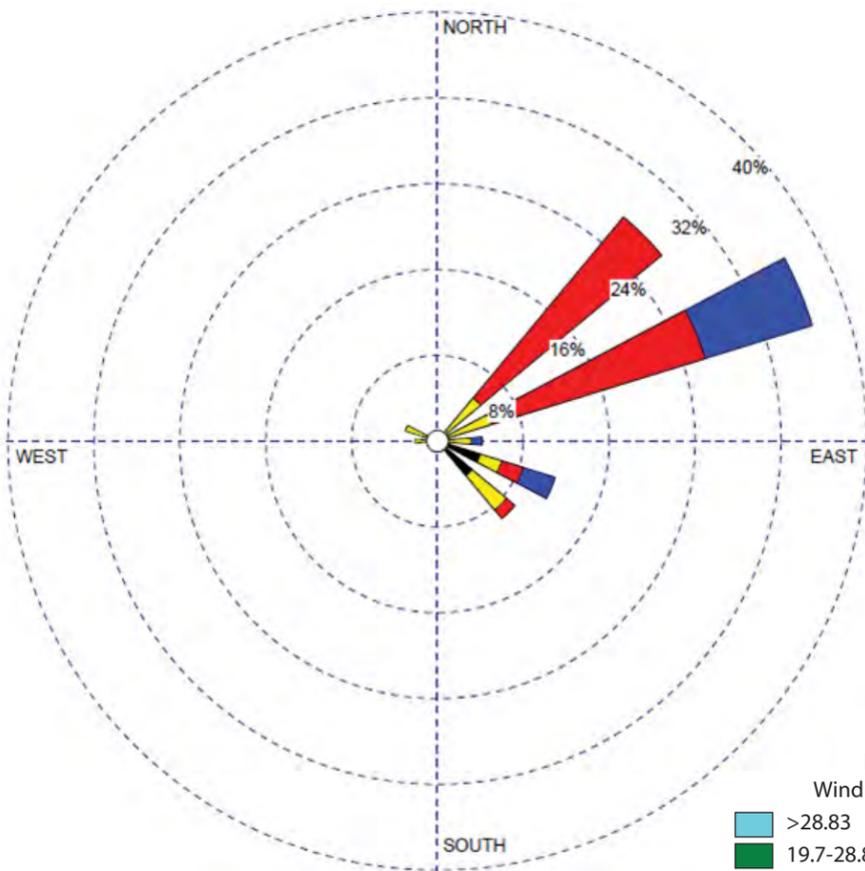


Figure 3-14A

Hayden Station – High Arsenic, Copper,
Cadmium & Chromium - 7/1/2010 & 10/29/2010
Calms: 4.17%
Average Wind Speed: 8.54 mph
Total Count: 96 (30 minute averages)

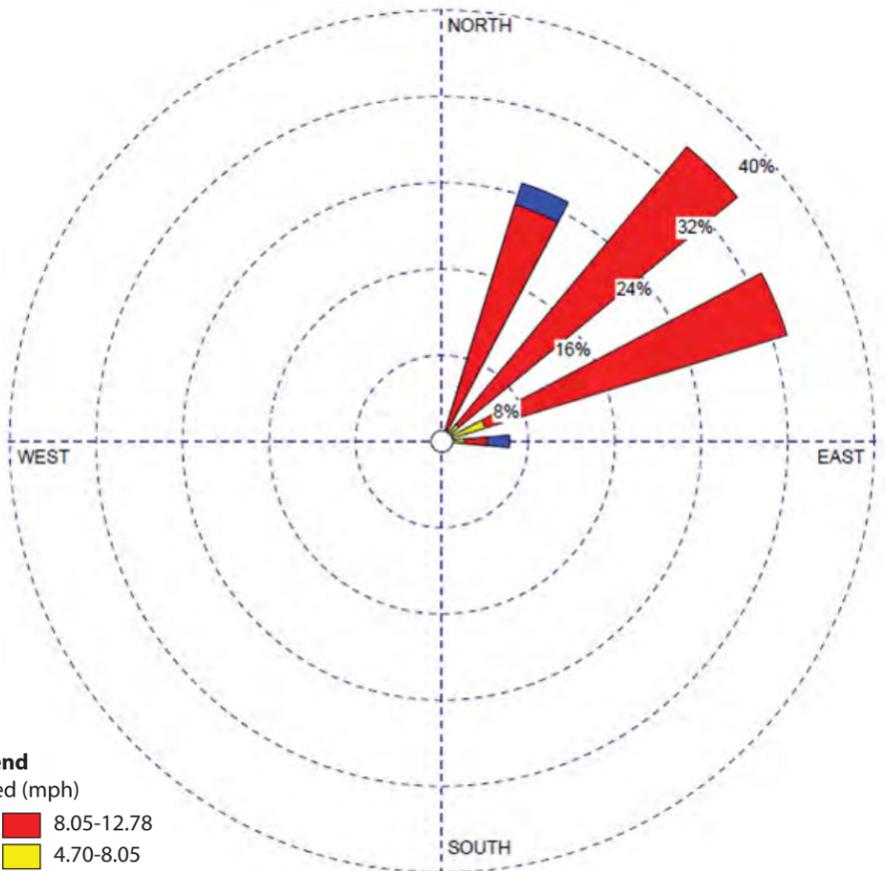


Figure 3-14B

Hayden Station – High Arsenic, Copper & Lead
1/8/2010
Calms: 0.00%
Average Wind Speed: 10.59 mph
Total Count: 48 (30 minute averages)

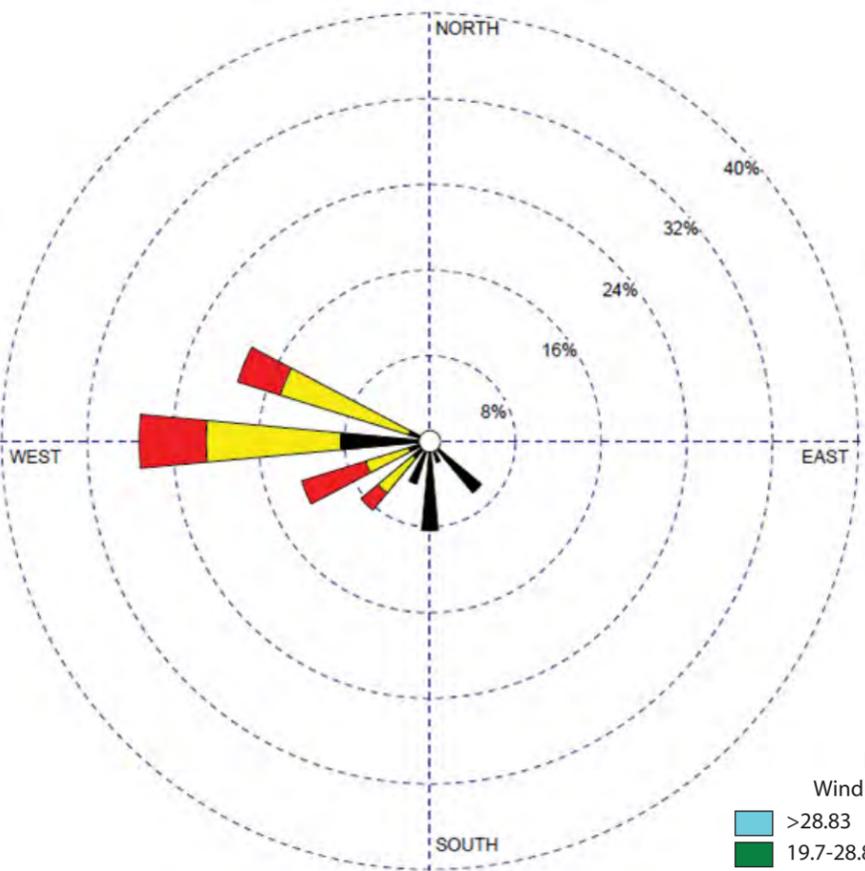
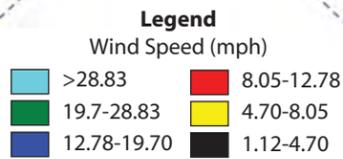


Figure 3-14C

Hayden Station – Low Arsenic, Cadmium & Lead
11/22/2010
Calms: 12.50%
Average Wind Speed: 4.82 mph
Total Count: 48 (30 minute averages)

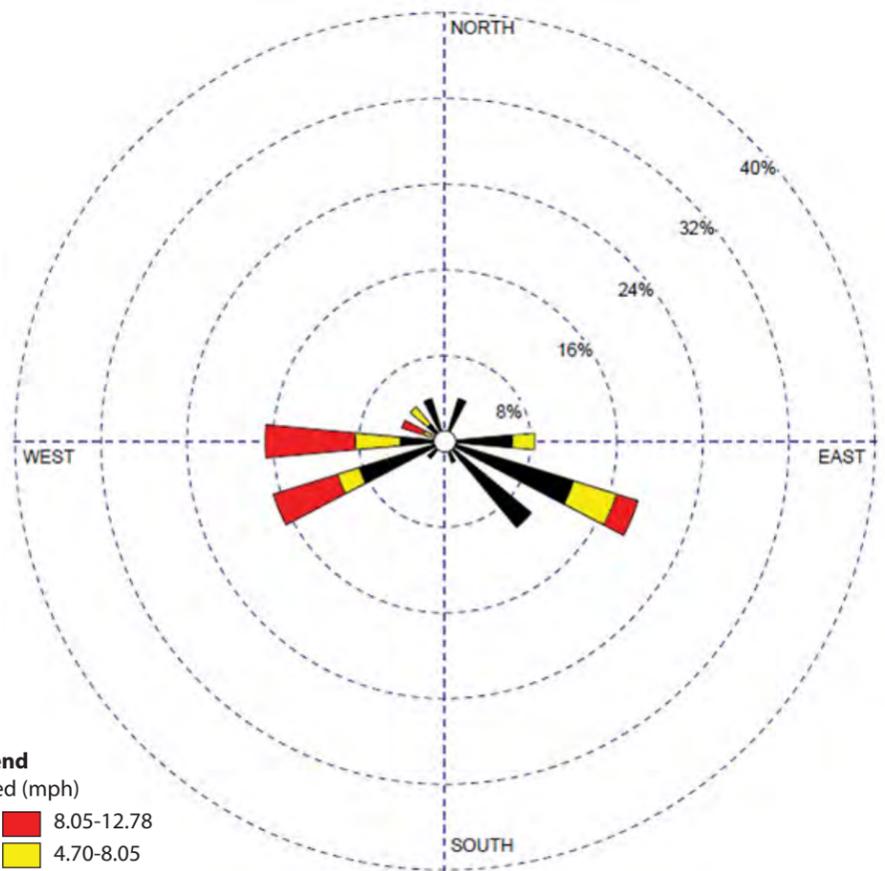
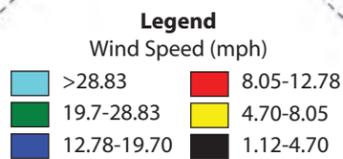
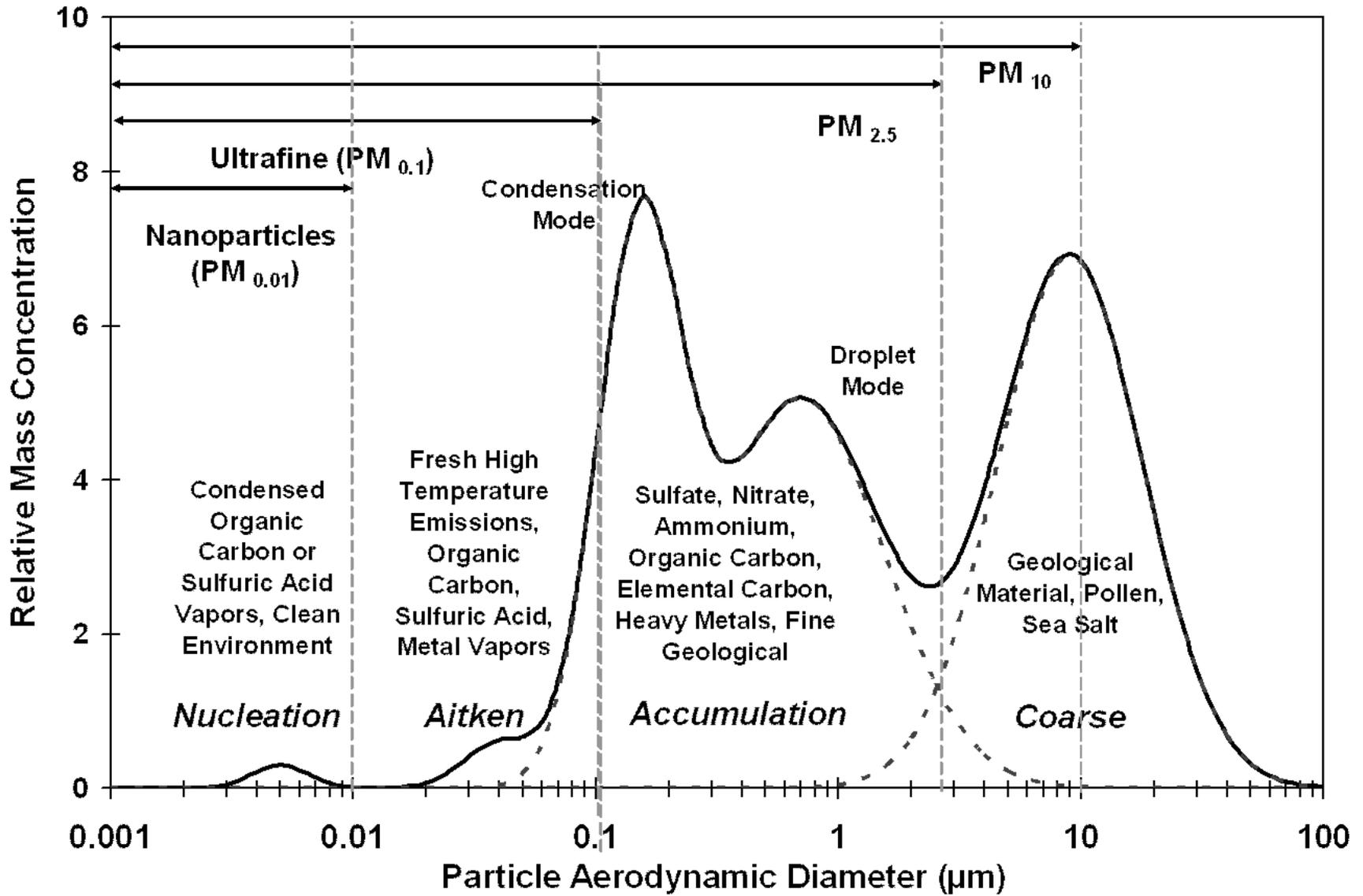


Figure 3-14D

Hayden Station – Low Arsenic, Copper & Lead
2/7/2010
Calms: 8.33%
Average Wind Speed: 4.30 mph
Total Count: 48 (30 minute averages)





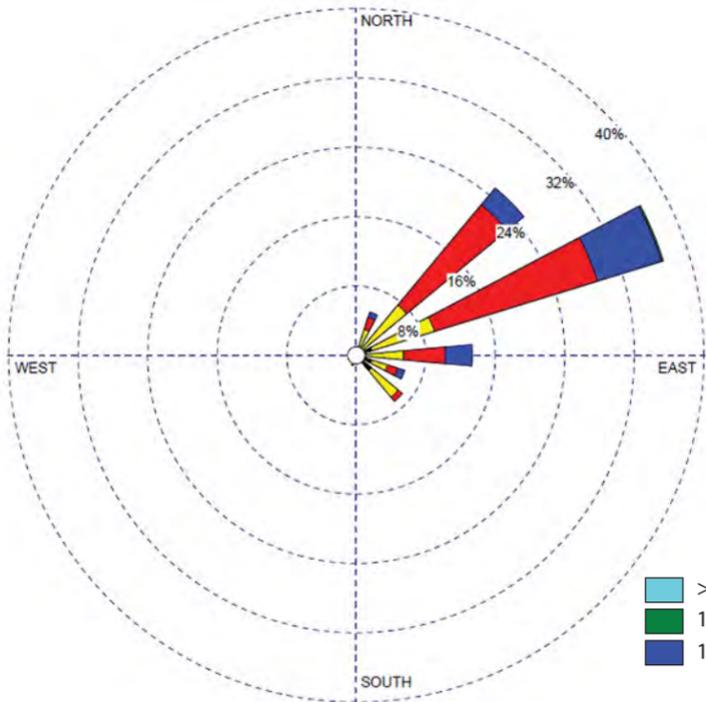


Figure 3-16A

Hayden Station – Top 10 High Arsenic Days
 Calms: 1.67%
 Average Wind Speed: 8.92 mph
 Total Count: 480 (30 minute averages)

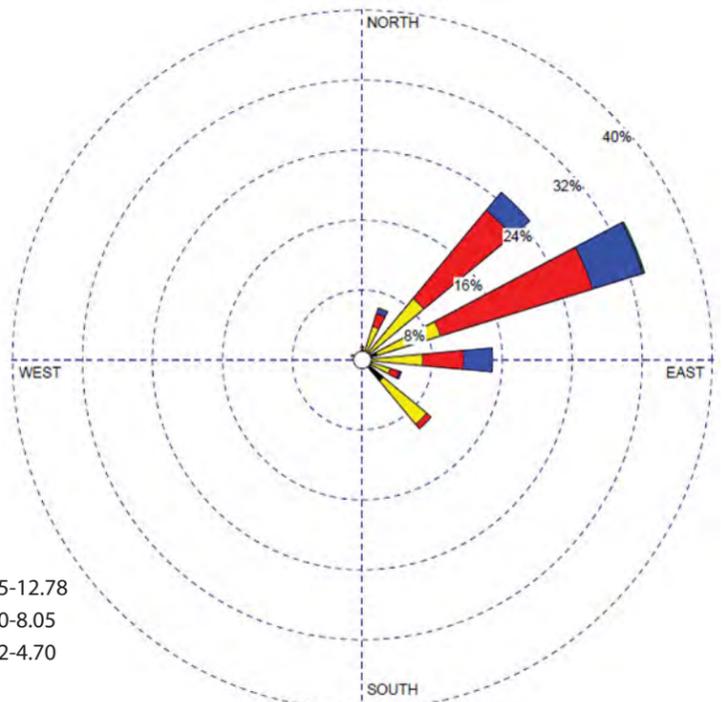
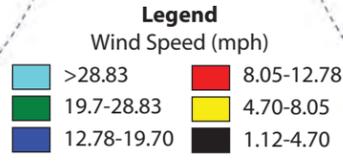


Figure 3-16B

Hayden Station – Top 10 High Copper Days
 Calms: 0.89%
 Average Wind Speed: 8.63 mph
 Total Count: 451 (readings every 1/2 hour)
 Partial MET Data available for 11/7/07

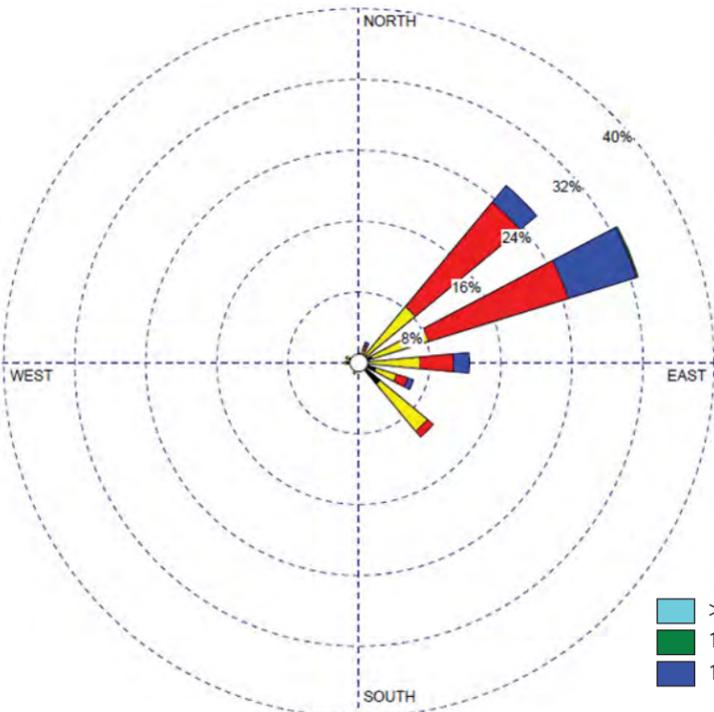


Figure 3-16C

Hayden Station – Top 10 High Cadmium Days
 Calms: 1.77%
 Average Wind Speed: 8.41 mph
 Total Count: 451 (30 minute averages)
 Partial MET Data available for 11/7/07

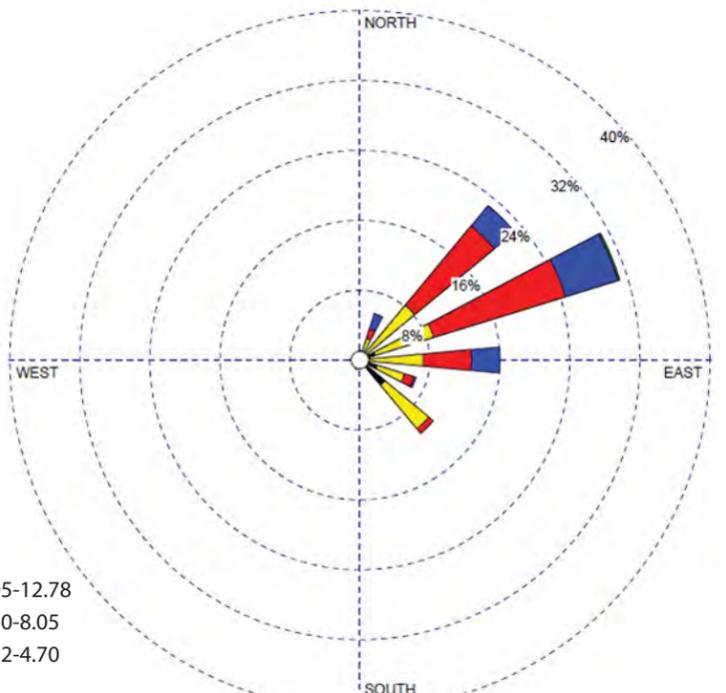
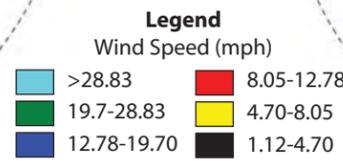


Figure 3-16D

Hayden Station – Top 10 High Lead Days
 Calms: 0.93%
 Average Wind Speed: 8.46 mph
 Total Count: 432 (30 minute averages)
 MET Data not available 2/4/09 – Windrose represents 9 days

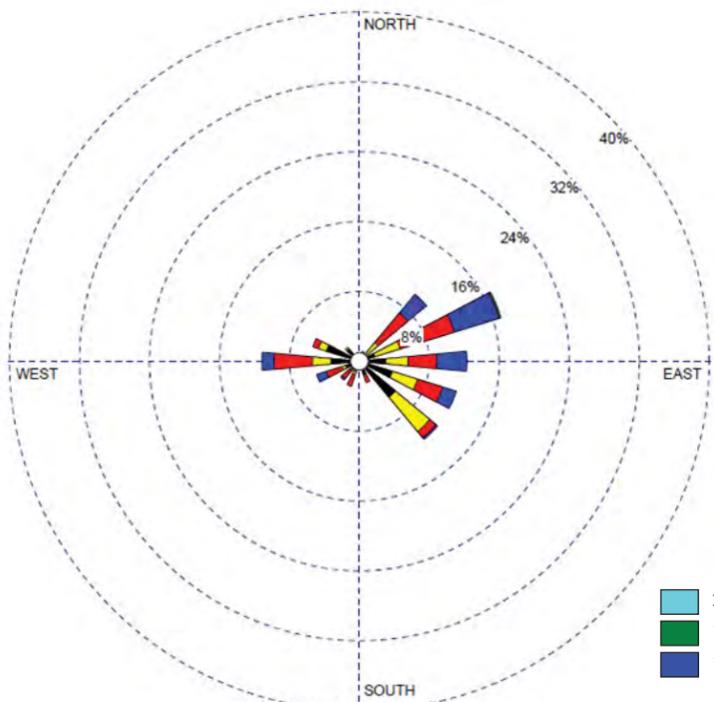


Figure 3-16E

Hayden Station – Top 10 High Chromium Days
 Calms: 3.70%
 Average Wind Speed: 7.58 mph
 Total Count: 432 (30 minute averages)
 MET data not available 4/12/08-Windrose represents 9 days

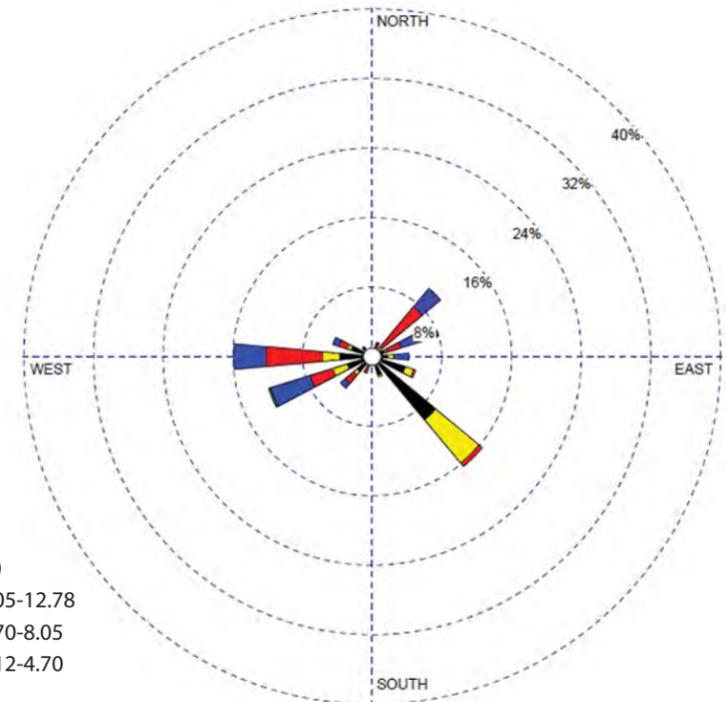
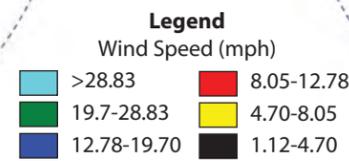


Figure 3-16F

Hayden Station – Top 10 High PM10 Days
 Calms: 9.93%
 Average Wind Speed: 7.16 mph
 Total Count: 403 (30 minute averages)
 Partial MET Data available 11/7/07 ;
 MET data not available 5/22/08-Windrose represents 9 days

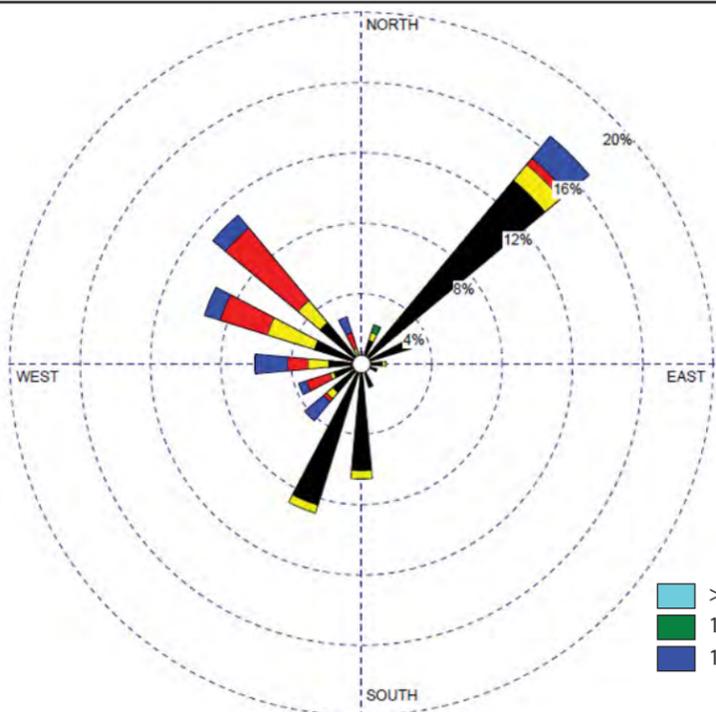


Figure 3-17A

Winkelman Station – Top 10 High Arsenic Days

Calms: 19.81%

Average Wind Speed: 4.42 mph

Total Count: 429 (30 minute averages)

MET Data not available 2/19/07-Windrose represents 9 days

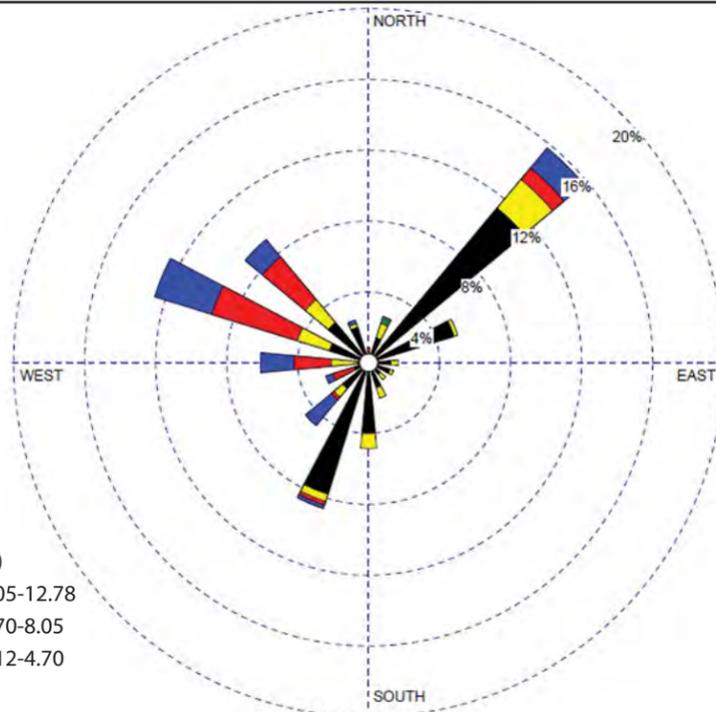
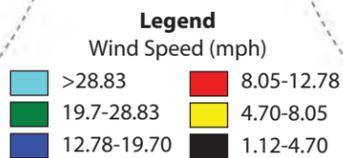


Figure 3-17B

Winkelman Station – Top 10 High Chromium Days

Calms: 18.24%

Average Wind Speed: 4.82 mph

Total Count: 477 (30 minute averages)

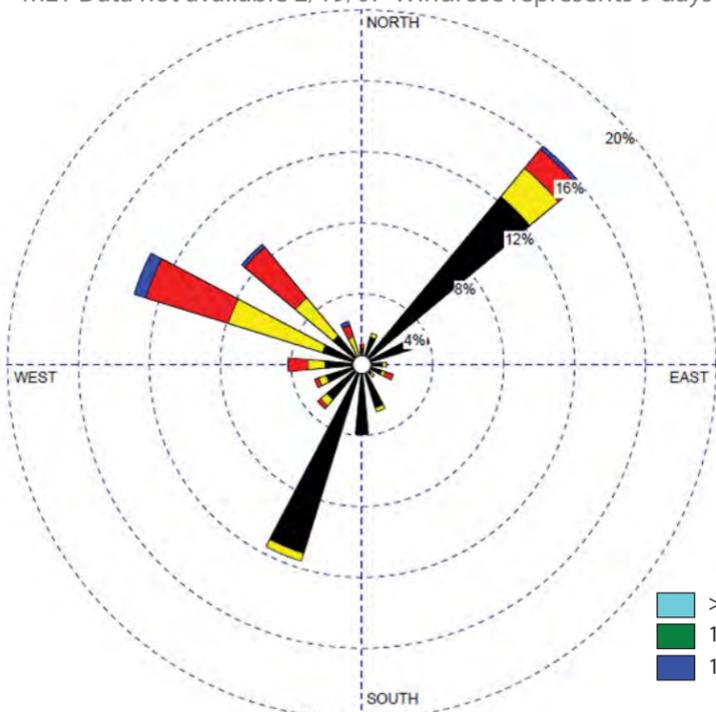


Figure 3-17C

Winkelman Station – Top 10 High Cadmium Days

Calms: 19.68%

Average Wind Speed: 3.72 mph

Total Count: 432 (30 minute averages)

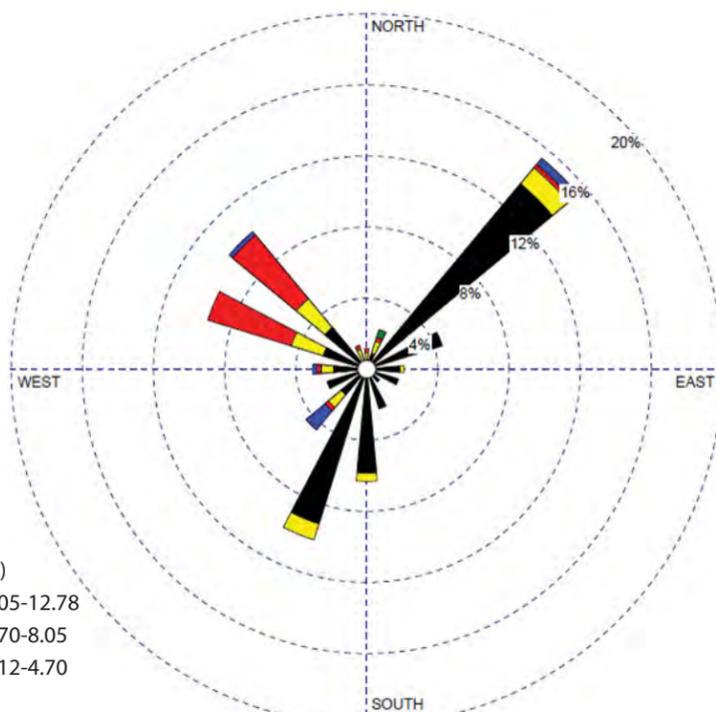
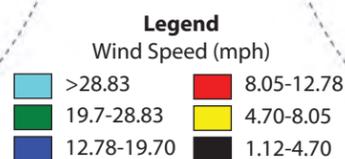


Figure 3-17D

Winkelman Station – Top 10 High Lead Days

Calms: 22.61%

Average Wind Speed: 3.51 mph

Total Count: 429 (30 minute averages)

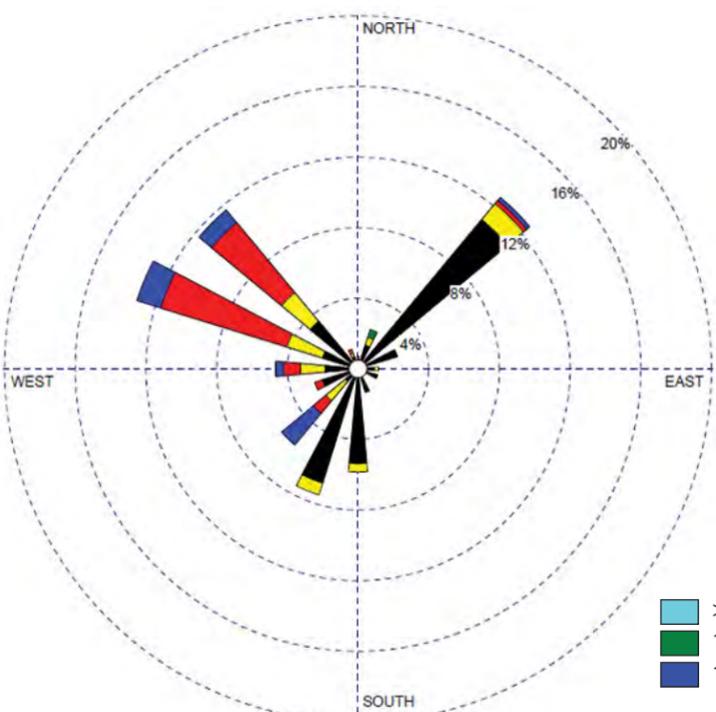


Figure 3-17E

Winkelman Station – Top 10 High Copper Days

Calms: 25.87%

Average Wind Speed: 4.19 mph

Total Count: 429 (30 minute averages)

MET Data not available 2/19/07-Windrose represents 9 days

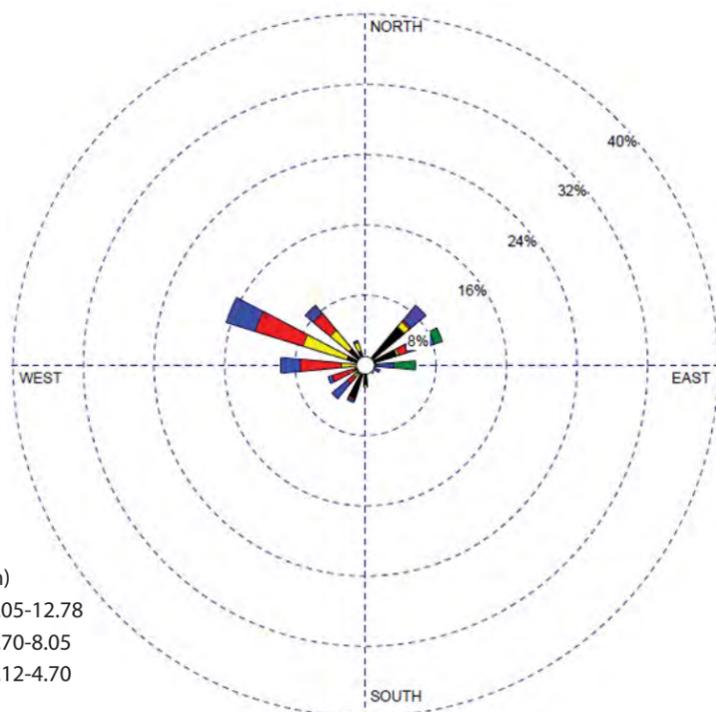
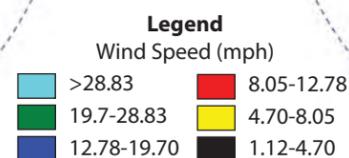


Figure 3-17F

Winkelman Station – Top 10 High PM10 Days

Calms: 17.49%

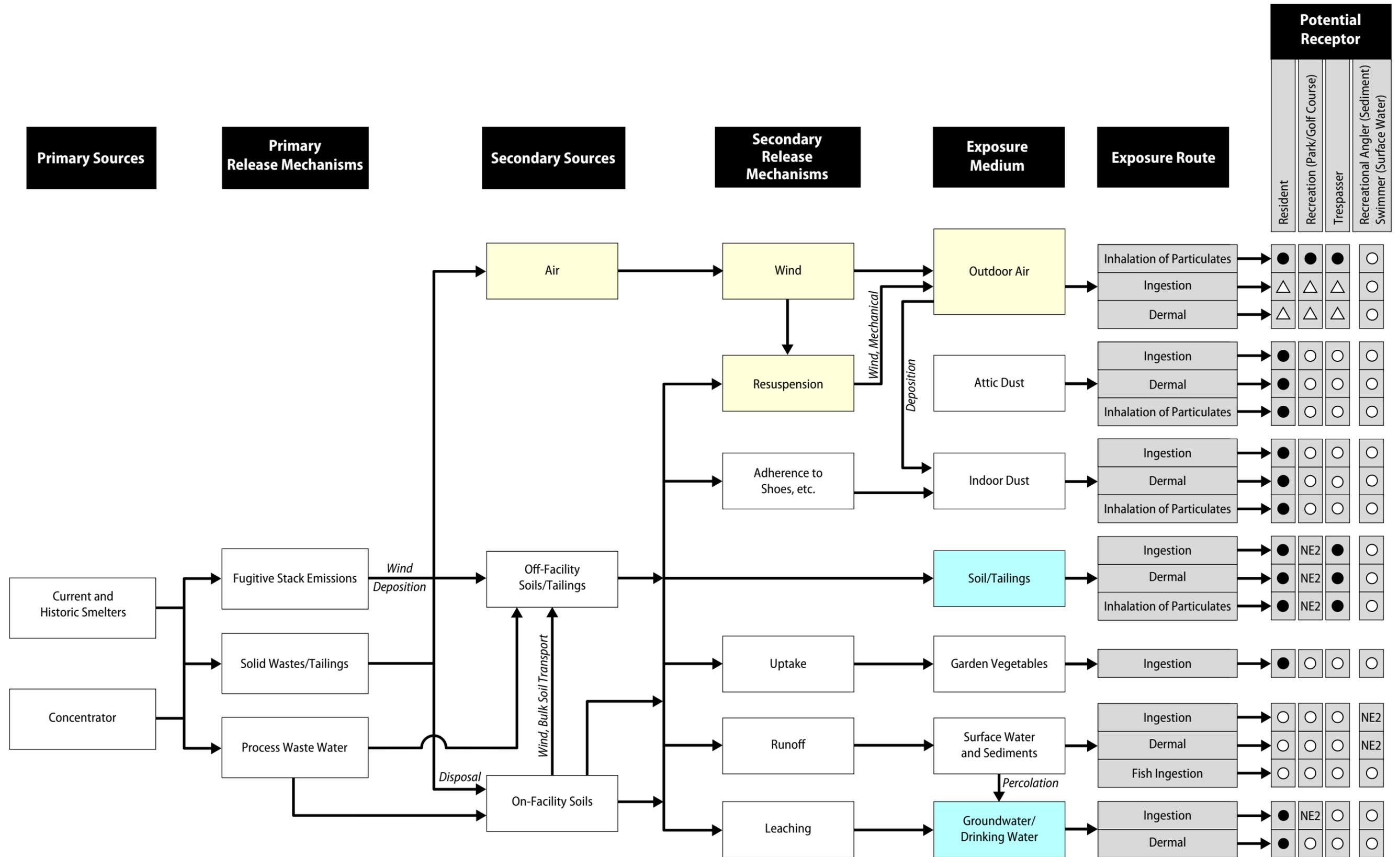
Average Wind Speed: 7.00 mph

Total Count: 406 (30 minute averages)

Partial MET data available 9/12/08;

MET data not available 4/8/07- Windrose represents 9 days

Z:\0020 TO 19 RS - ASARCO Hayden\18.0 GIS-Graphics\HumanHealth_Exposures_Pathway.ai



● Potentially complete pathway.

○ Incomplete pathway.

△ Potentially complete, but judged to be a minor contributor. Will not be quantitatively evaluated.

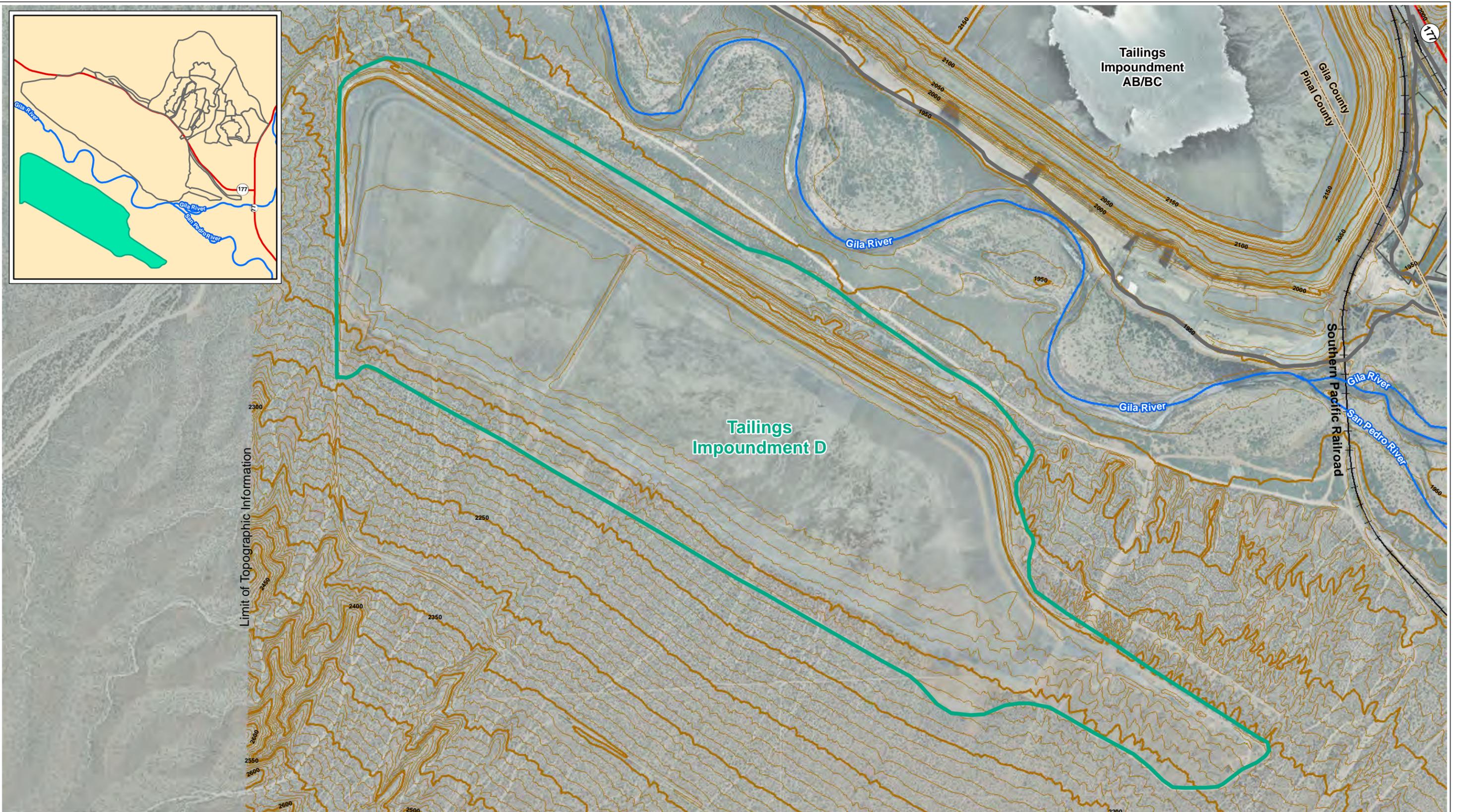
Yellow box: Addressed Under Work Plan, Part 1 of 2 (Air)

Cyan box: Addressed Under Work Plan, Part 2 of 2 (Soil, Water, and Sediment)

NE2 = Not Evaluated. Baseline human health risks are within EPA risk management range.



Figure 4-1
Conceptual Site Model Diagram for Human Exposures
 ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 Hayden, Arizona



- Other RI Area Boundaries
- Area #1A, Tailings Impoundment D
- Features
- River
- Road
- Railroads
- County Boundary



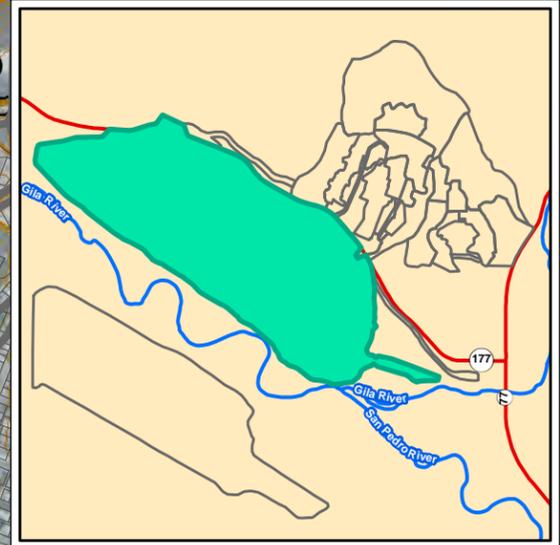
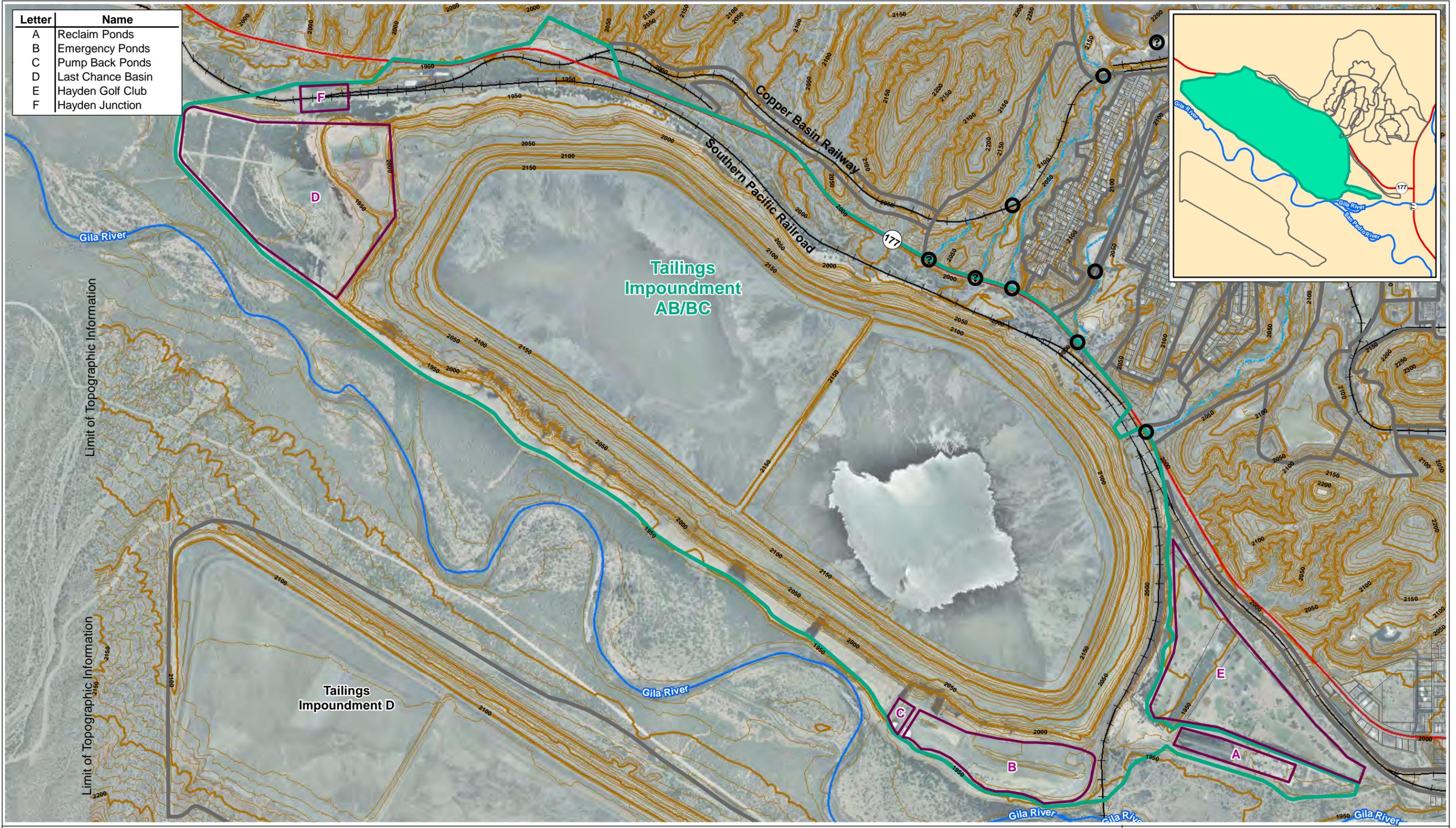
Contour interval = 10 feet



Figure 4-2A
Features of Area #1A, Tailings Impoundment D
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona

Aerial photography courtesy of ESRI®, dated May 1, 2009. Topography from CH2M Hill (2008).

Letter	Name
A	Reclaim Ponds
B	Emergency Ponds
C	Pump Back Ponds
D	Last Chance Basin
E	Hayden Golf Club
F	Hayden Junction



Other RI Area Boundaries	Drainage Underpass (Unknown)	River	Road
Area #1B, Tailings Impoundment AB/BC	Drainage Underpass	Thalweg (Approximate)	Railroads
Features			

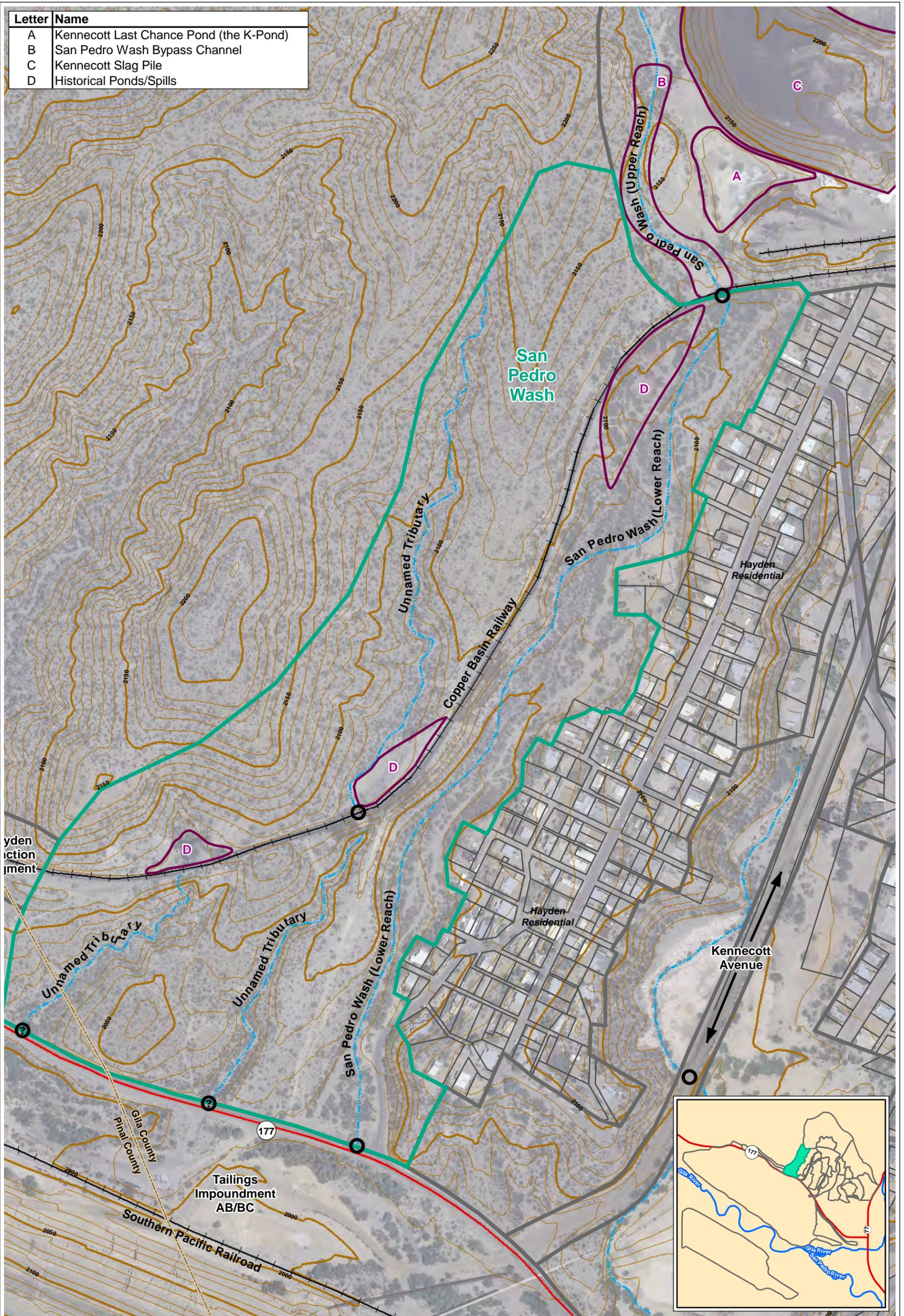
Aerial photography courtesy of ESRI®, dated May 1, 2009.
Topography from CH2M Hill (2008).

1,000 0 1,000
 Feet
 Contour interval = 10 feet

Figure 4-2B
Features of Area #1B, Tailings Impoundment AB/BC
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona

Innovative Technical Solutions, Inc. A Gilbane Company

Letter	Name
A	Kennecott Last Chance Pond (the K-Pond)
B	San Pedro Wash Bypass Channel
C	Kennecott Slag Pile
D	Historical Ponds/Spills



- Other RI Area Boundaries
- Area #2, San Pedro Wash
- Features
- Thalweg (Approximate)
- Drainage Underpass (Unknown)
- Drainage Underpass
- County Boundary
- Railroads
- Road

Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).

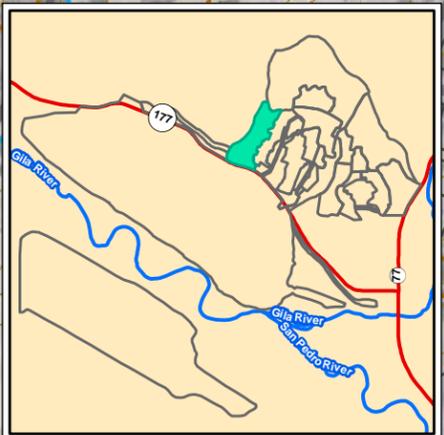
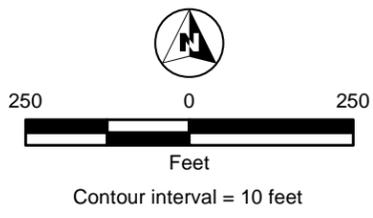
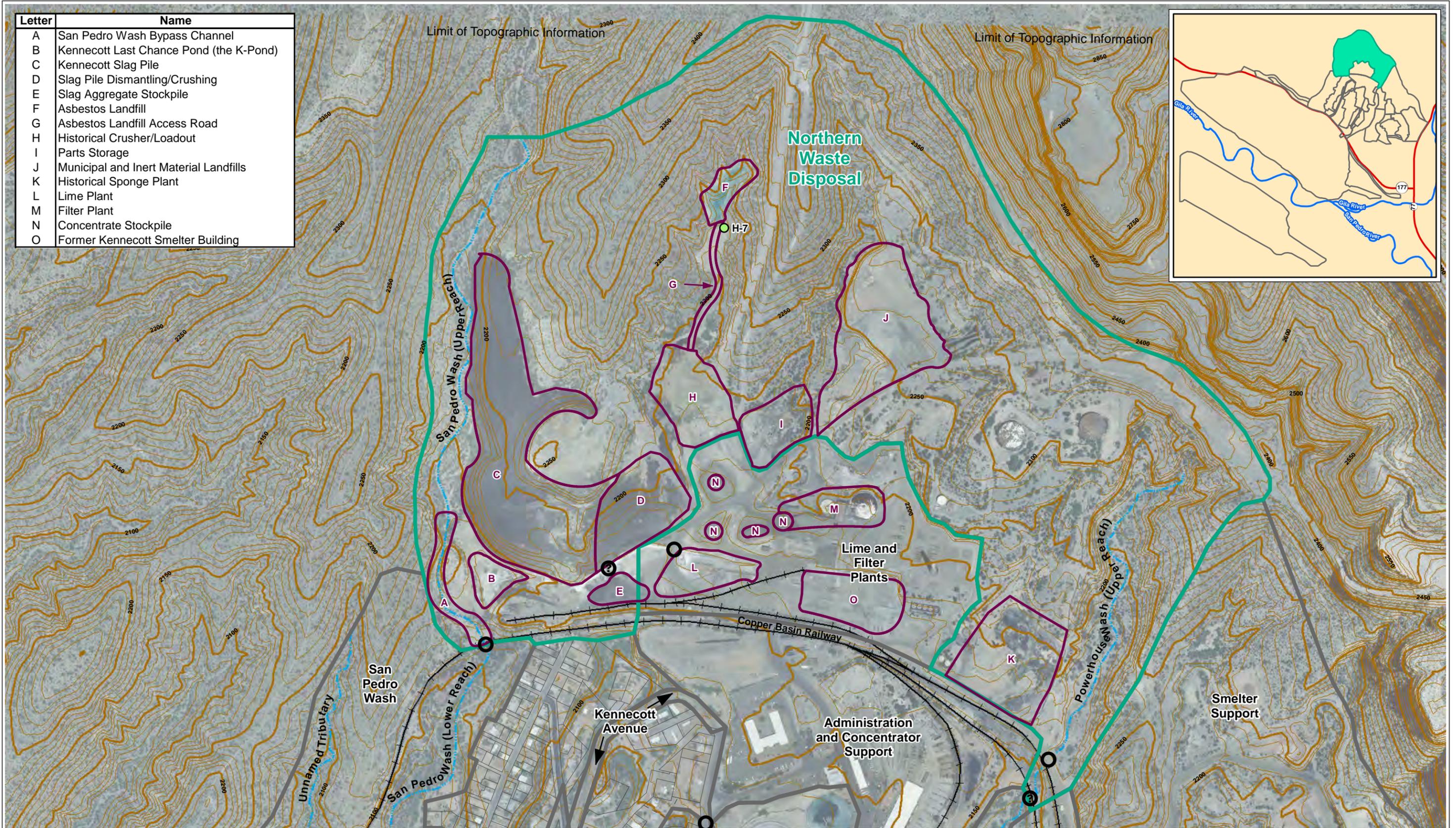


Figure 4-3
Features of Area #2, San Pedro Wash
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona
 Innovative Technical Solutions, Inc.
 A Gilbane Company

Letter	Name
A	San Pedro Wash Bypass Channel
B	Kennecott Last Chance Pond (the K-Pond)
C	Kennecott Slag Pile
D	Slag Pile Dismantling/Crushing
E	Slag Aggregate Stockpile
F	Asbestos Landfill
G	Asbestos Landfill Access Road
H	Historical Crusher/Loadout
I	Parts Storage
J	Municipal and Inert Material Landfills
K	Historical Sponge Plant
L	Lime Plant
M	Filter Plant
N	Concentrate Stockpile
O	Former Kennecott Smelter Building



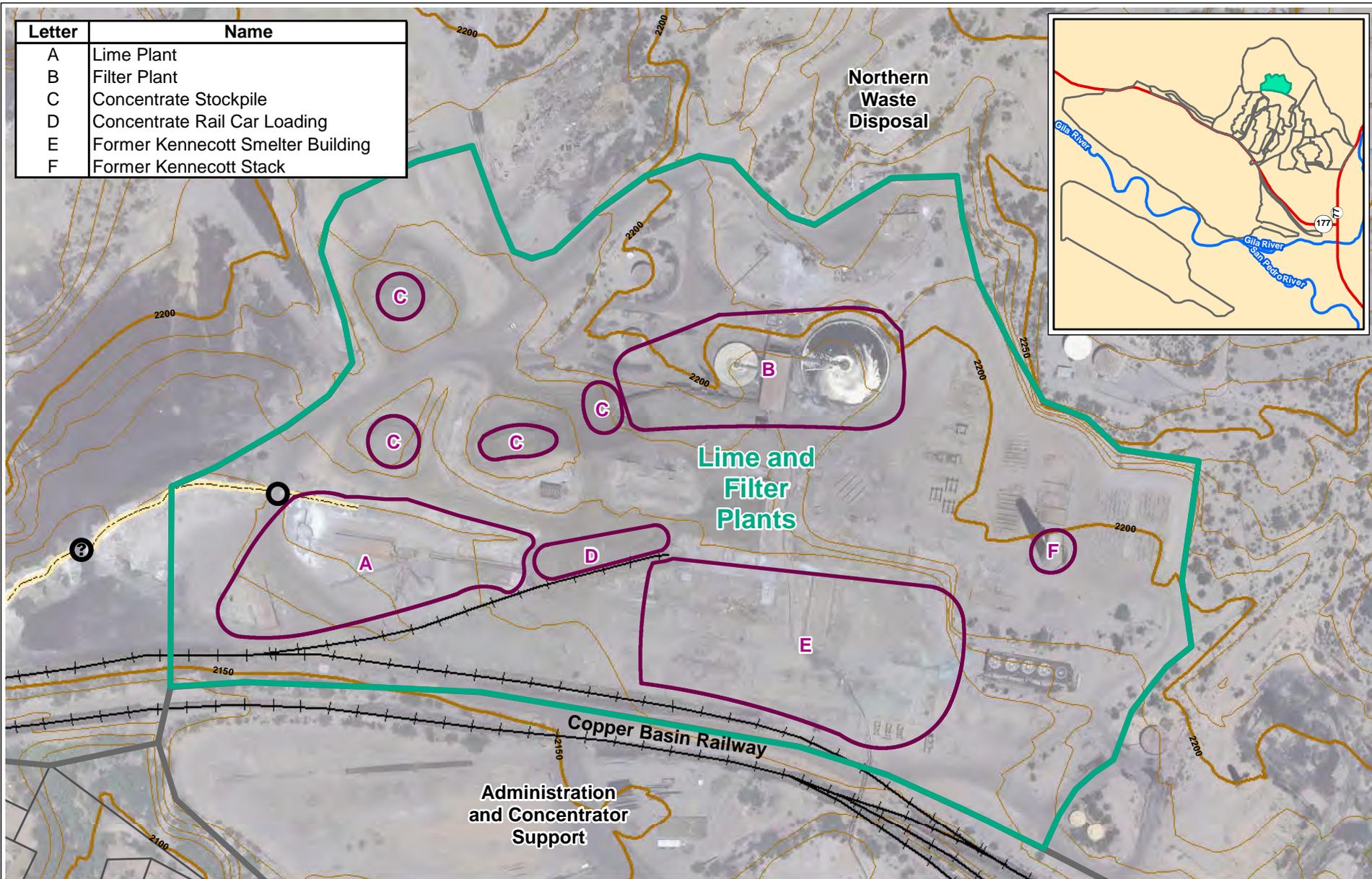
Other RI Area Boundaries	Drainage Underpass (Unknown)	Thalweg (Approximate)
Area #3, Northern Waste Disposal	Drainage Underpass	Railroads
Features	Existing Well	

Aerial photography courtesy of ESRI®, dated May 1, 2009. Topography from CH2M Hill (2008).
 Contour interval = 10 feet

ITSI Innovative Technical Solutions, Inc.
 A Gilbane Company

Figure 4-4
Features of Area #3, Northern Waste Disposal
 Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site, Hayden, Arizona

Letter	Name
A	Lime Plant
B	Filter Plant
C	Concentrate Stockpile
D	Concentrate Rail Car Loading
E	Former Kennecott Smelter Building
F	Former Kennecott Stack



- Other RI Area Boundaries
- Area #4, Lime and Filter Plants
- Features
- Process Water Discharge
- Railroads

- Drainage Underpass (Unknown)
- Drainage Underpass

Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).

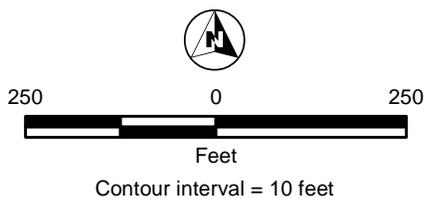
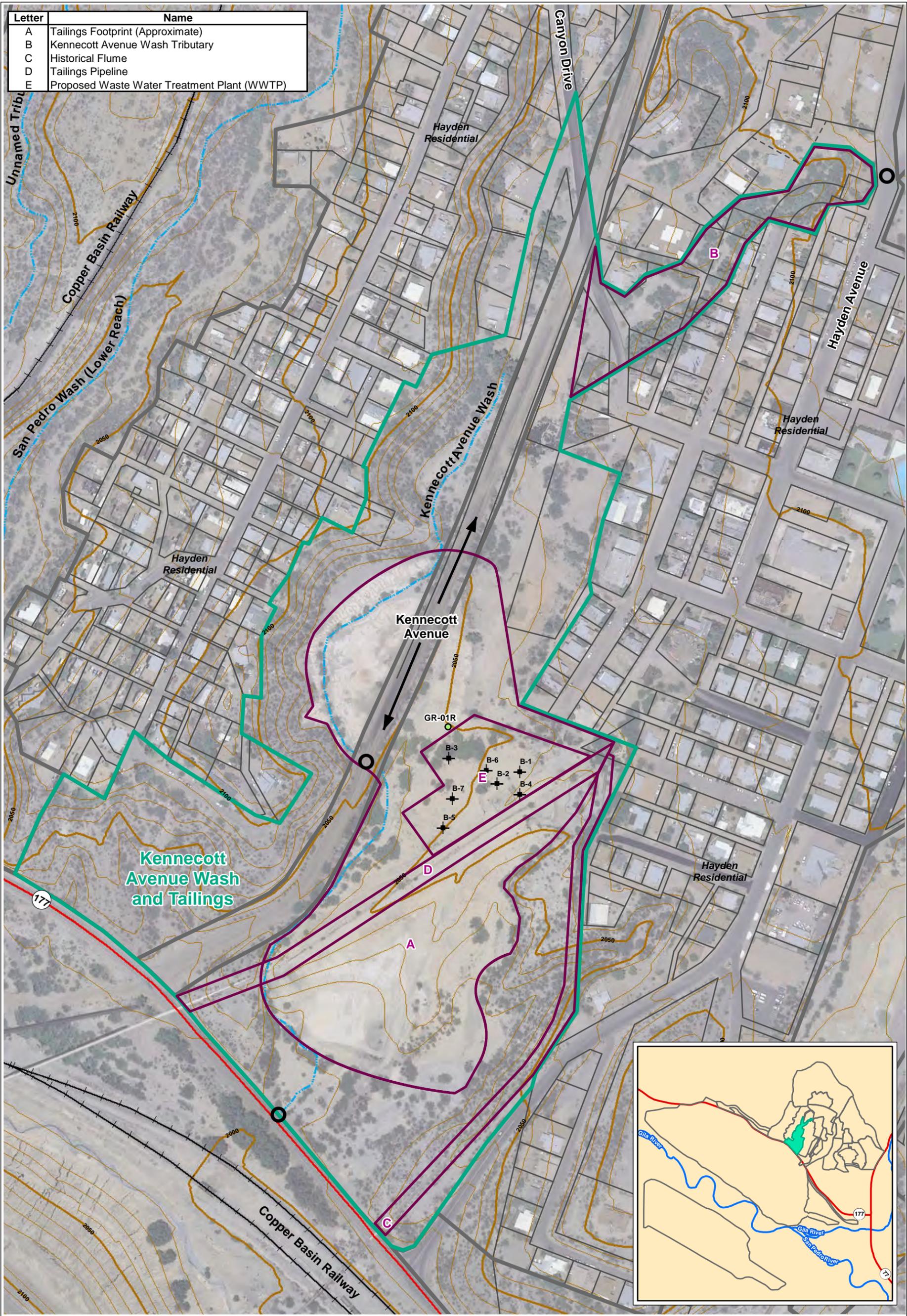


Figure 4-5
Features of Area #4,
Lime and Filter Plants
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona



Letter	Name
A	Tailings Footprint (Approximate)
B	Kennecott Avenue Wash Tributary
C	Historical Flume
D	Tailings Pipeline
E	Proposed Waste Water Treatment Plant (WWTP)

- Other RI Area Boundaries
- Area #5, Kennecott Avenue Wash and Tailings
- Features
- Thalweg (Approximate)
- Railroads
- Drainage Underpass (Unknown)
- Drainage Underpass
- WWTP Borings and Surface Samples
- Existing Well

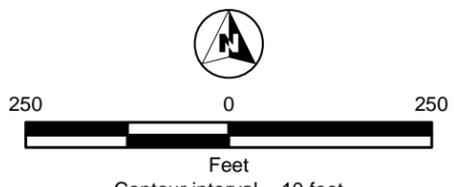
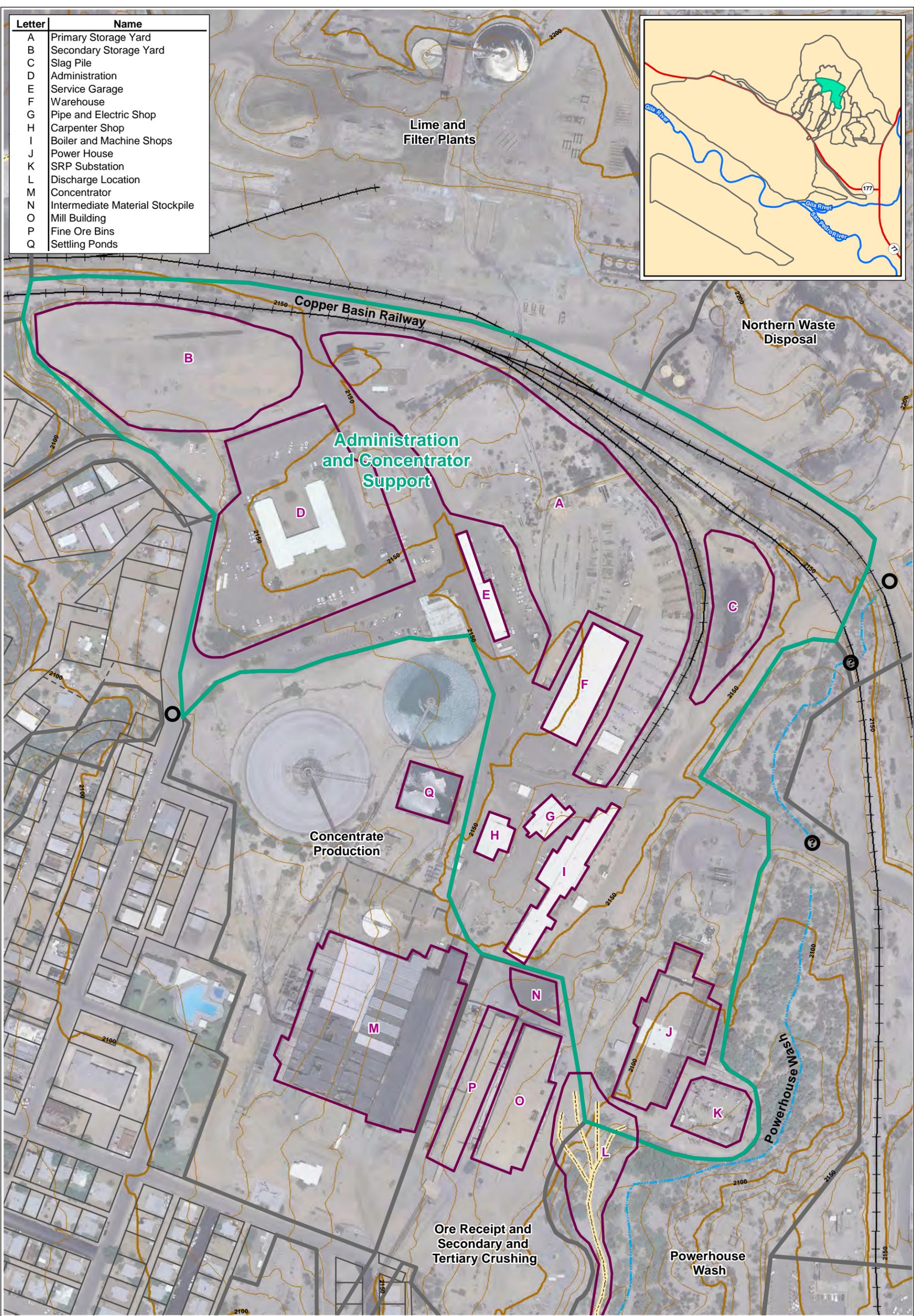
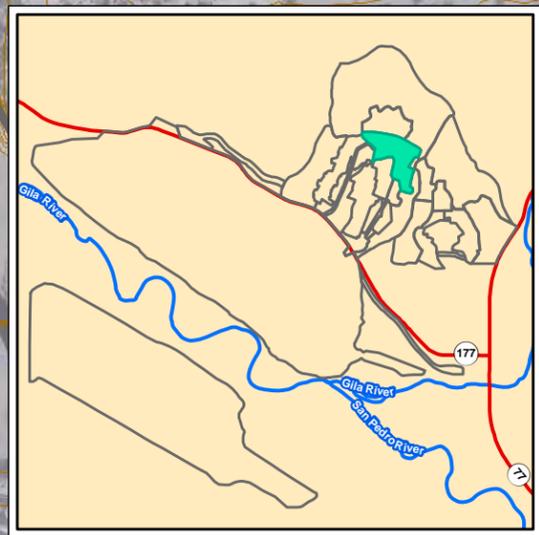


Figure 4-6
Features of Area #5,
Kennecott Avenue Wash and Tailings
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona



Aerial photography courtesy of ESRI®, dated May 1, 2009. Topography from CH2M Hill (2008).

Letter	Name
A	Primary Storage Yard
B	Secondary Storage Yard
C	Slag Pile
D	Administration
E	Service Garage
F	Warehouse
G	Pipe and Electric Shop
H	Carpenter Shop
I	Boiler and Machine Shops
J	Power House
K	SRP Substation
L	Discharge Location
M	Concentrator
N	Intermediate Material Stockpile
O	Mill Building
P	Fine Ore Bins
Q	Settling Ponds



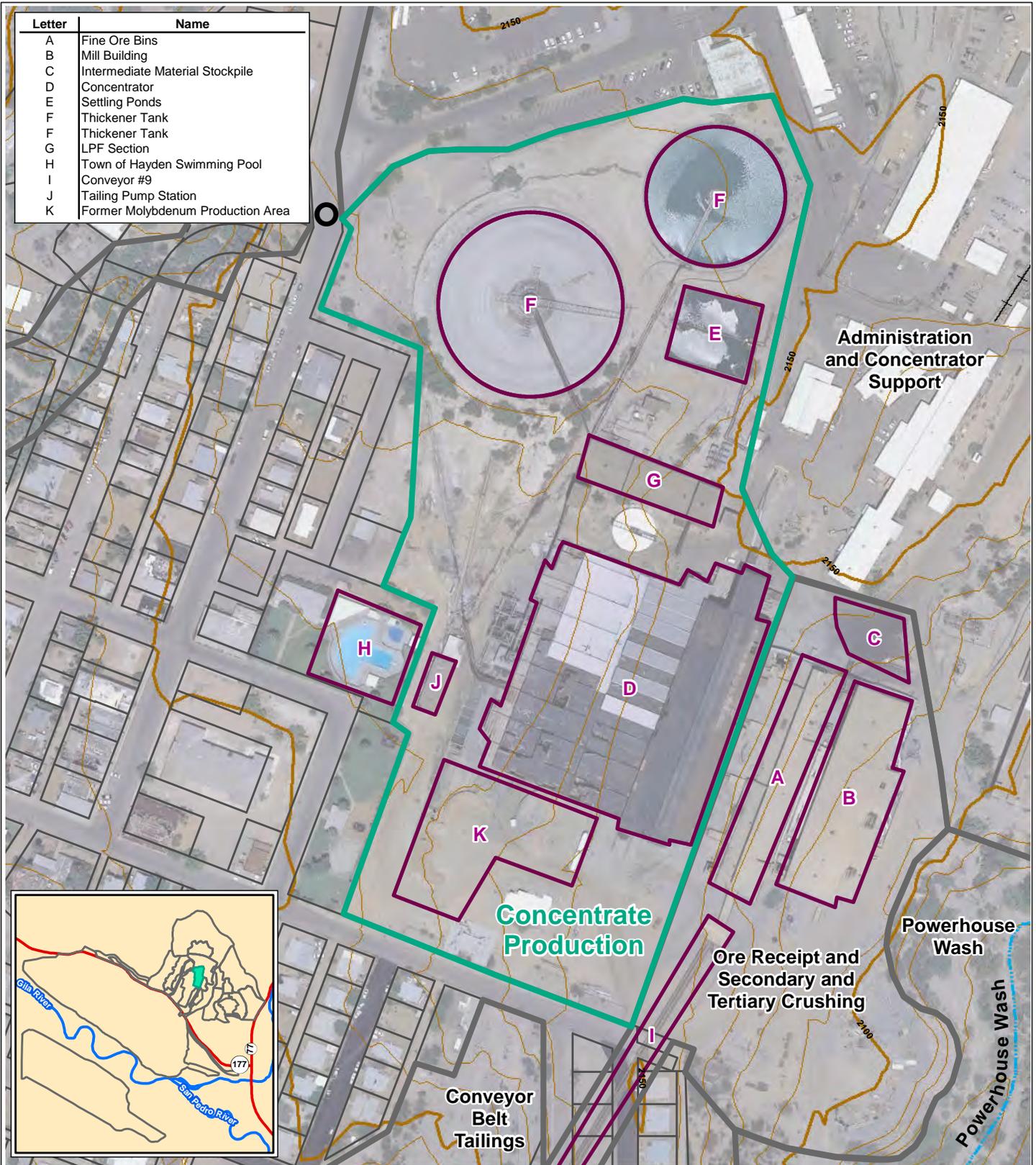
- Other RI Area Boundaries
- Area #6, Administration and Concentrator Support
- Features
- Drainage Underpass (Unknown)
- Drainage Underpass

- Discharge
- Thalweg (Approximate)
- Railroads

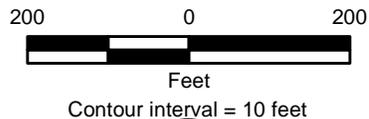
250 0 250
Feet
Contour interval = 10 feet

Figure 4-7
Features of Area #6, Administration and Concentrator Support
 ASARCO Hayden Plant Site
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 Hayden, Arizona

Letter	Name
A	Fine Ore Bins
B	Mill Building
C	Intermediate Material Stockpile
D	Concentrator
E	Settling Ponds
F	Thickener Tank
F	Thickener Tank
G	LPF Section
H	Town of Hayden Swimming Pool
I	Conveyor #9
J	Tailing Pump Station
K	Former Molybdenum Production Area



- Other RI Area Boundaries
- Area #7, Concentrate Production
- Features
- Drainage Underpass (Unknown)
- Drainage Underpass
- Thalweg (Approximate)

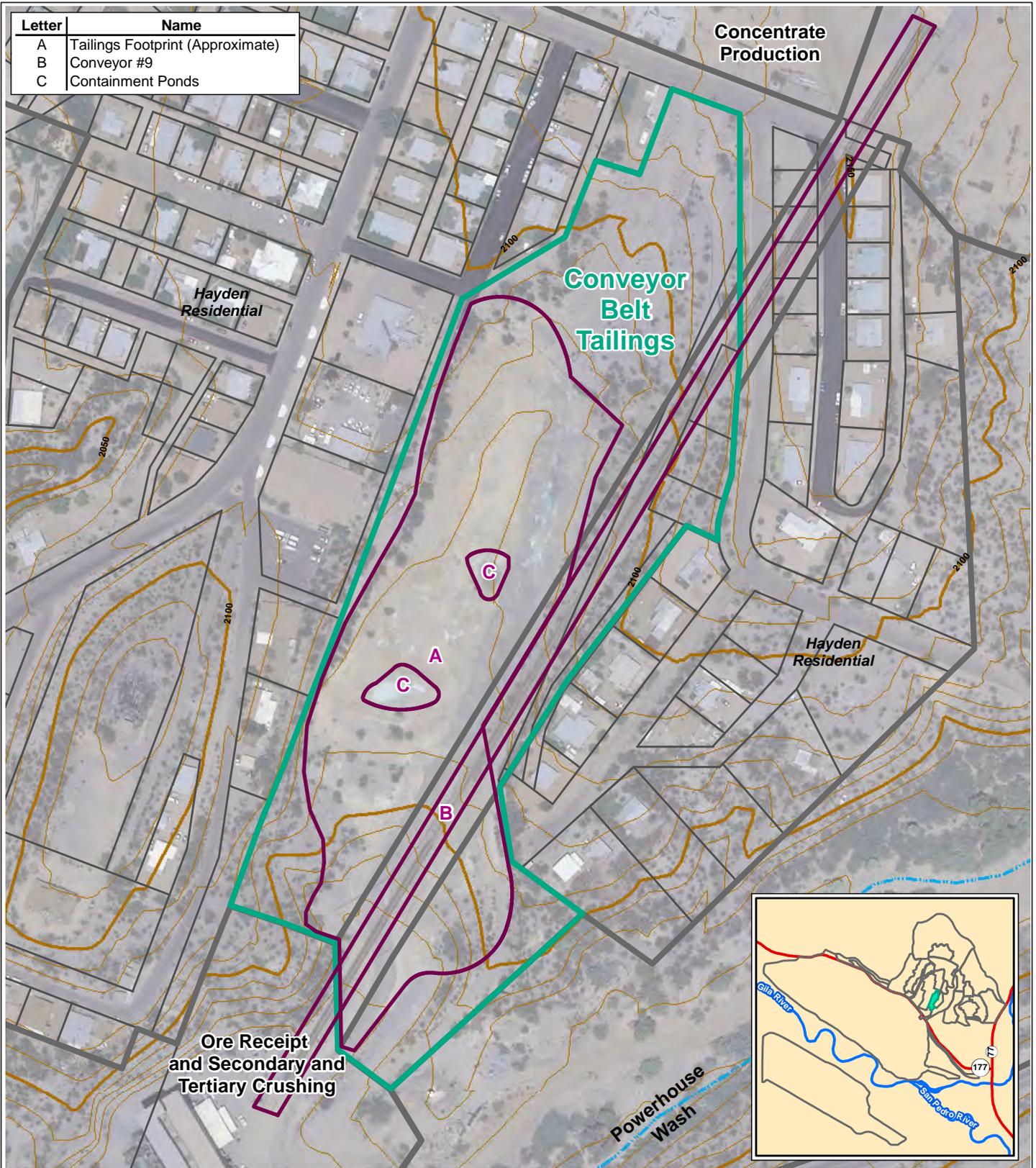


Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).

Figure 4-8
Features of Area #7,
Concentrate Production
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona



Letter	Name
A	Tailings Footprint (Approximate)
B	Conveyor #9
C	Containment Ponds



- Other RI Area Boundaries
- Area #8, Conveyor Belt Tailings
- Features
- Thalweg (Approximate)

Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).

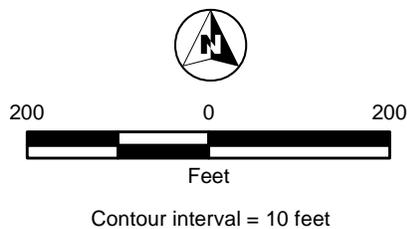
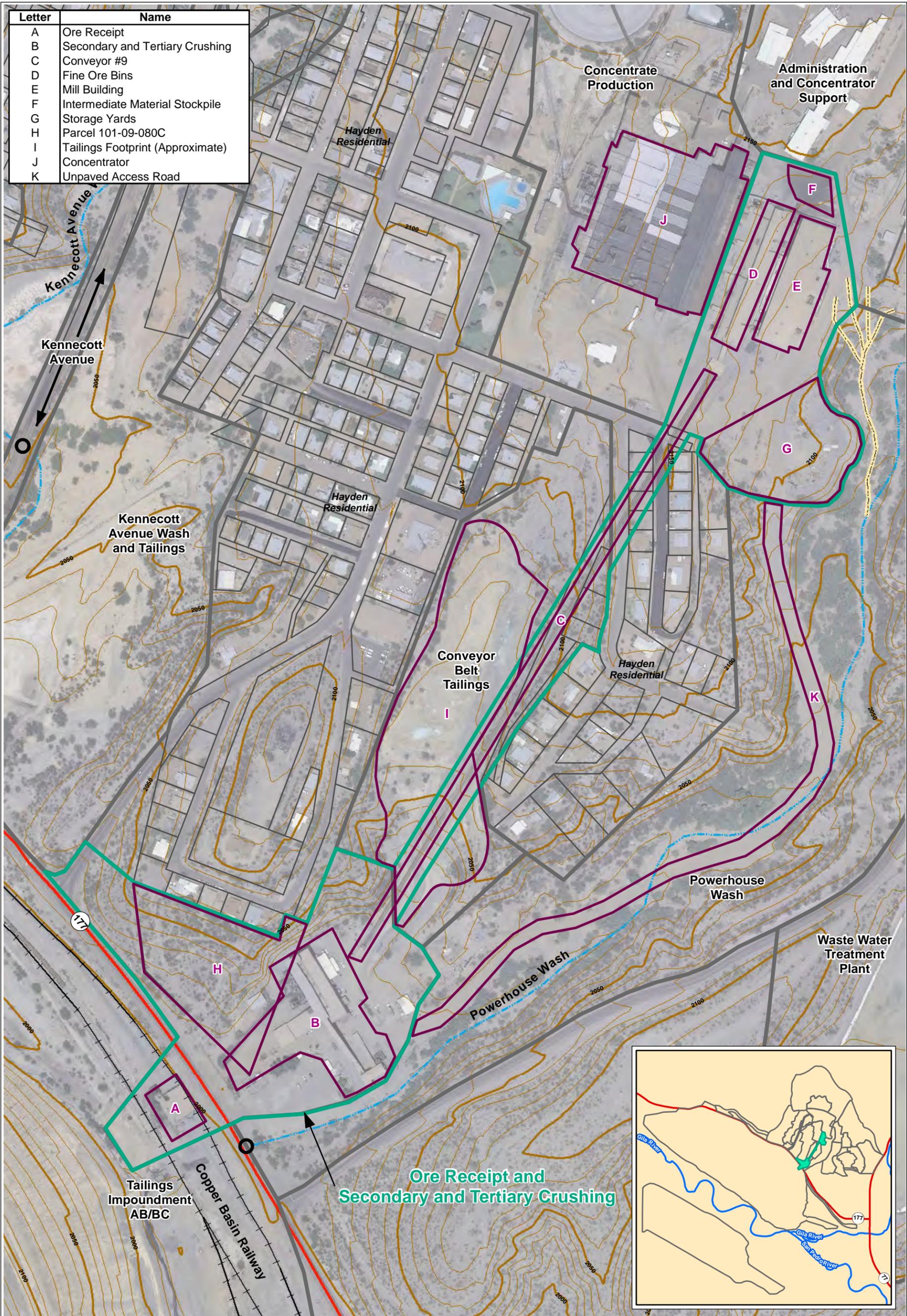


Figure 4-9
Features of Area #8,
Conveyor Belt Tailings
 Final Phase II RI/FS Work Plan
 (Part 1 or 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona





Letter	Name
A	Ore Receipt
B	Secondary and Tertiary Crushing
C	Conveyor #9
D	Fine Ore Bins
E	Mill Building
F	Intermediate Material Stockpile
G	Storage Yards
H	Parcel 101-09-080C
I	Tailings Footprint (Approximate)
J	Concentrator
K	Unpaved Access Road

Other RI Area Boundaries	Thalweg (Approximate)
Area #9, Ore Receipt and Secondary and Tertiary Crushing	Railroads
Features	Road
Drainage Underpass (Unknown)	
Drainage Underpass	

250 0 250
 Feet
 Contour interval = 10 feet

Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).

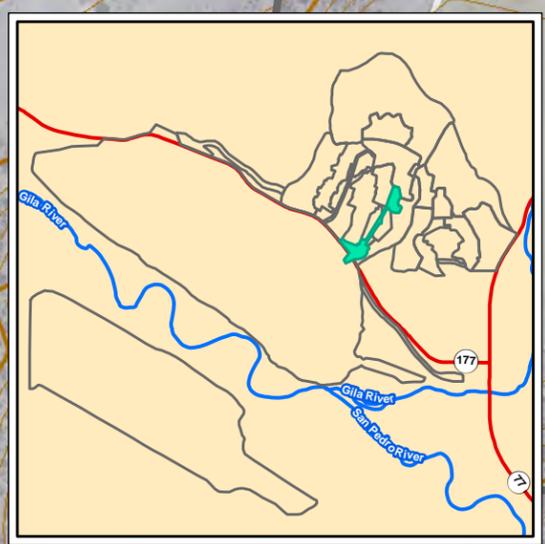


Figure 4-10
Features of Area #9, Ore Receipt and
Secondary and Tertiary Crushing
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona

Innovative Technical Solutions, Inc.
 A Gilbane Company

Letter	Name
A	Historical Tailings (Approximate)
B	Discharge Location
C	Secondary and Tertiary Crushing
D	Fine Ore Bins
E	Mill Building
F	Intermediate Material Stockpile
G	Concentrator
H	Power House
I	SRP Substation
J	Unpaved Access Road
K	Storage Yards

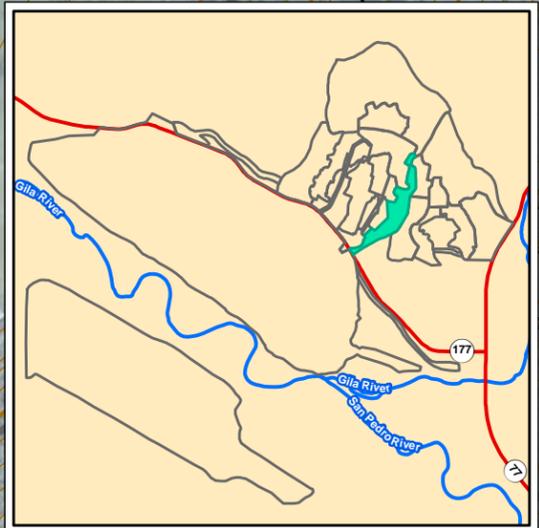
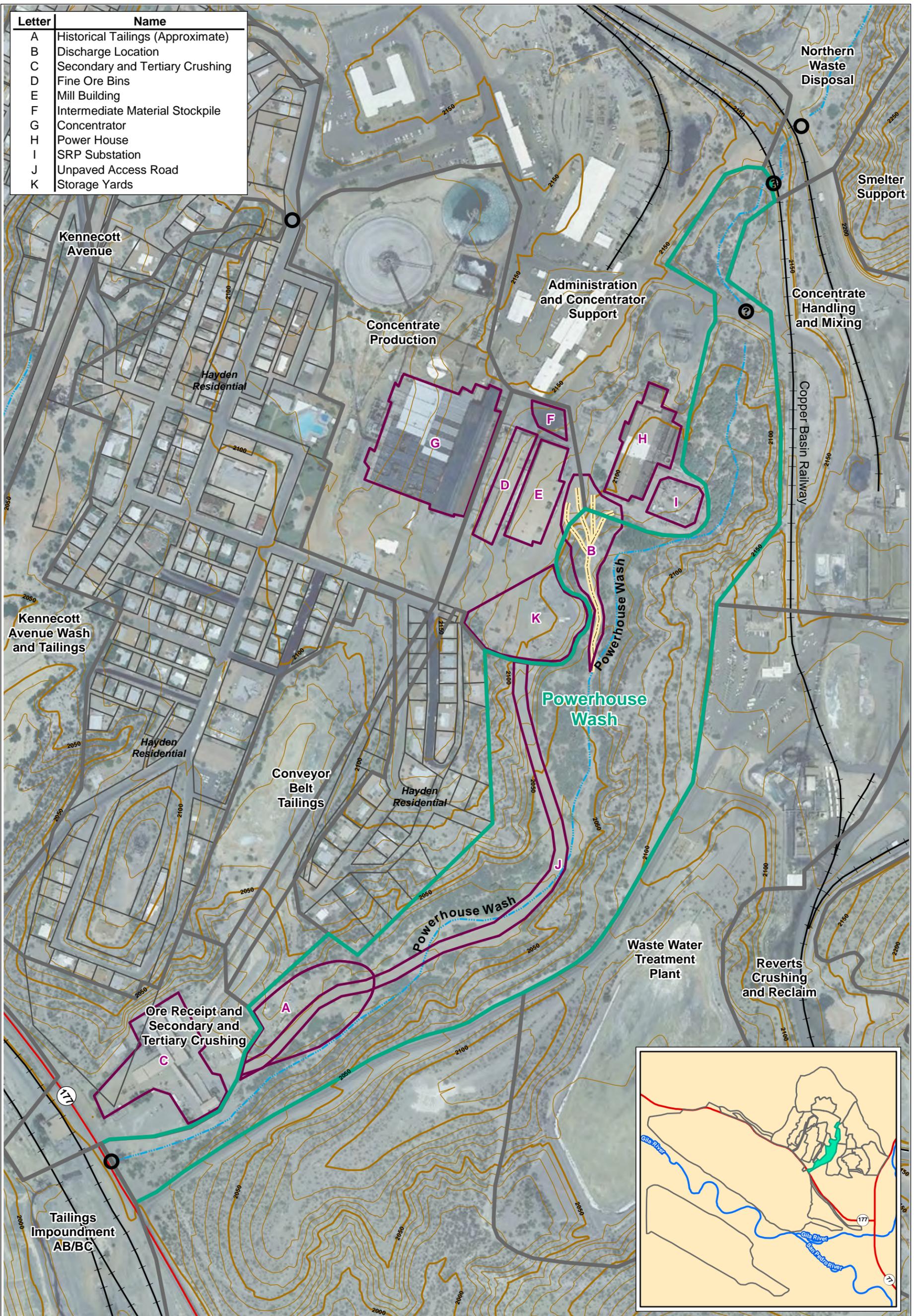


Figure 4-11
Features of Area #10, Powerhouse Wash
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona

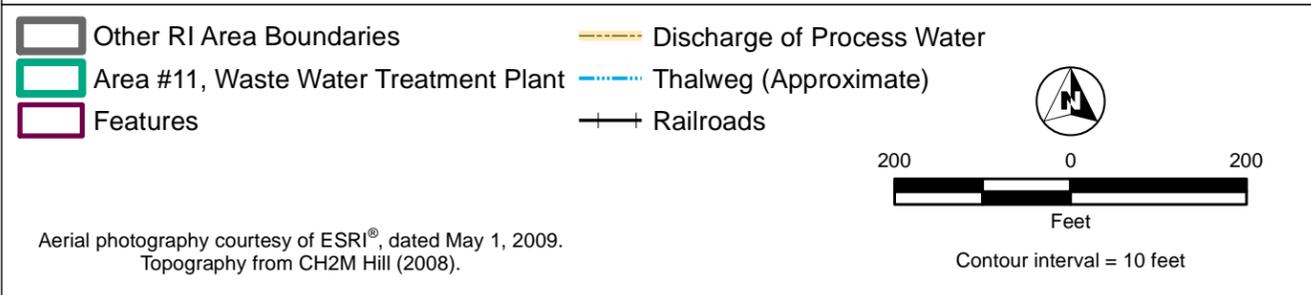
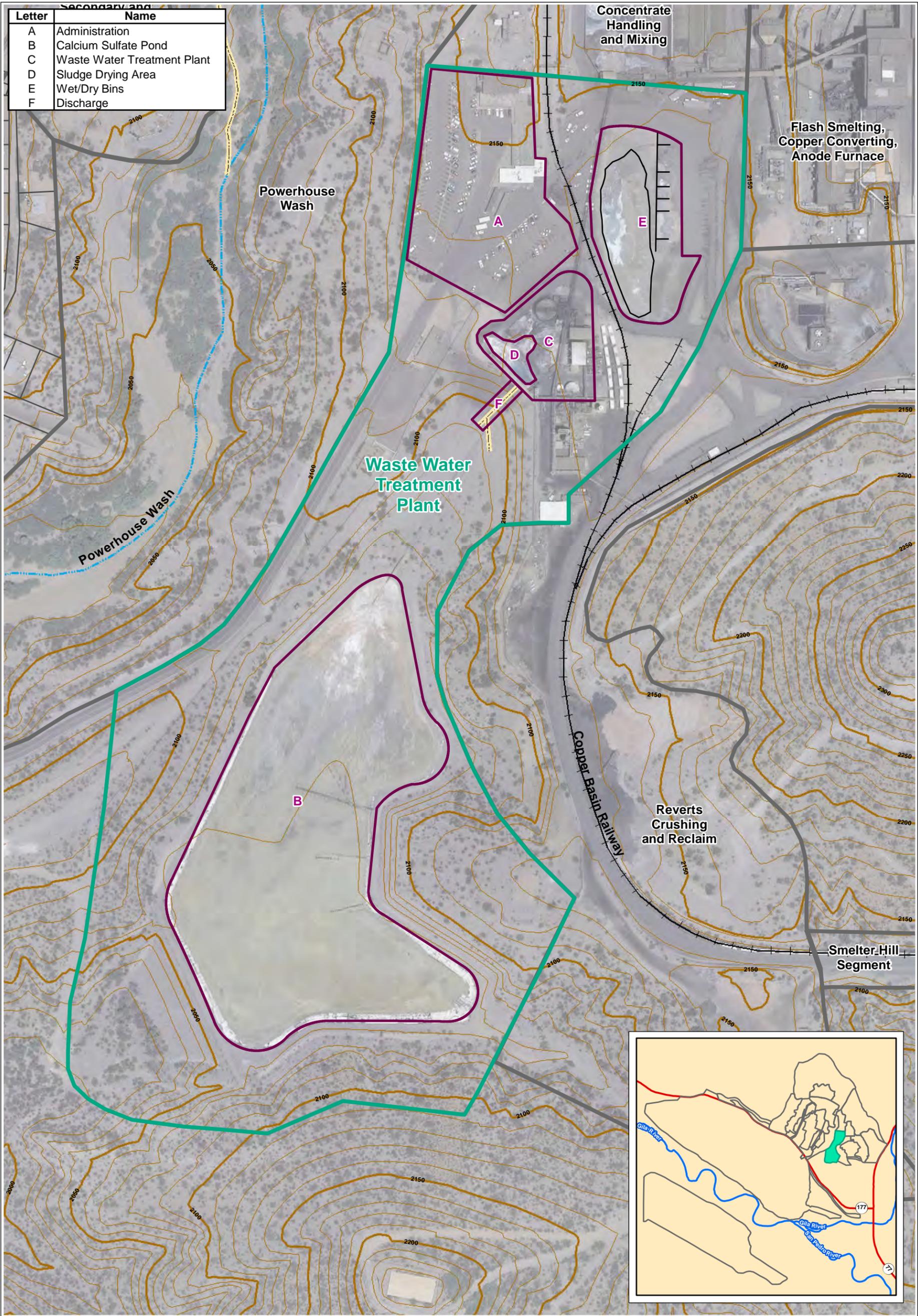
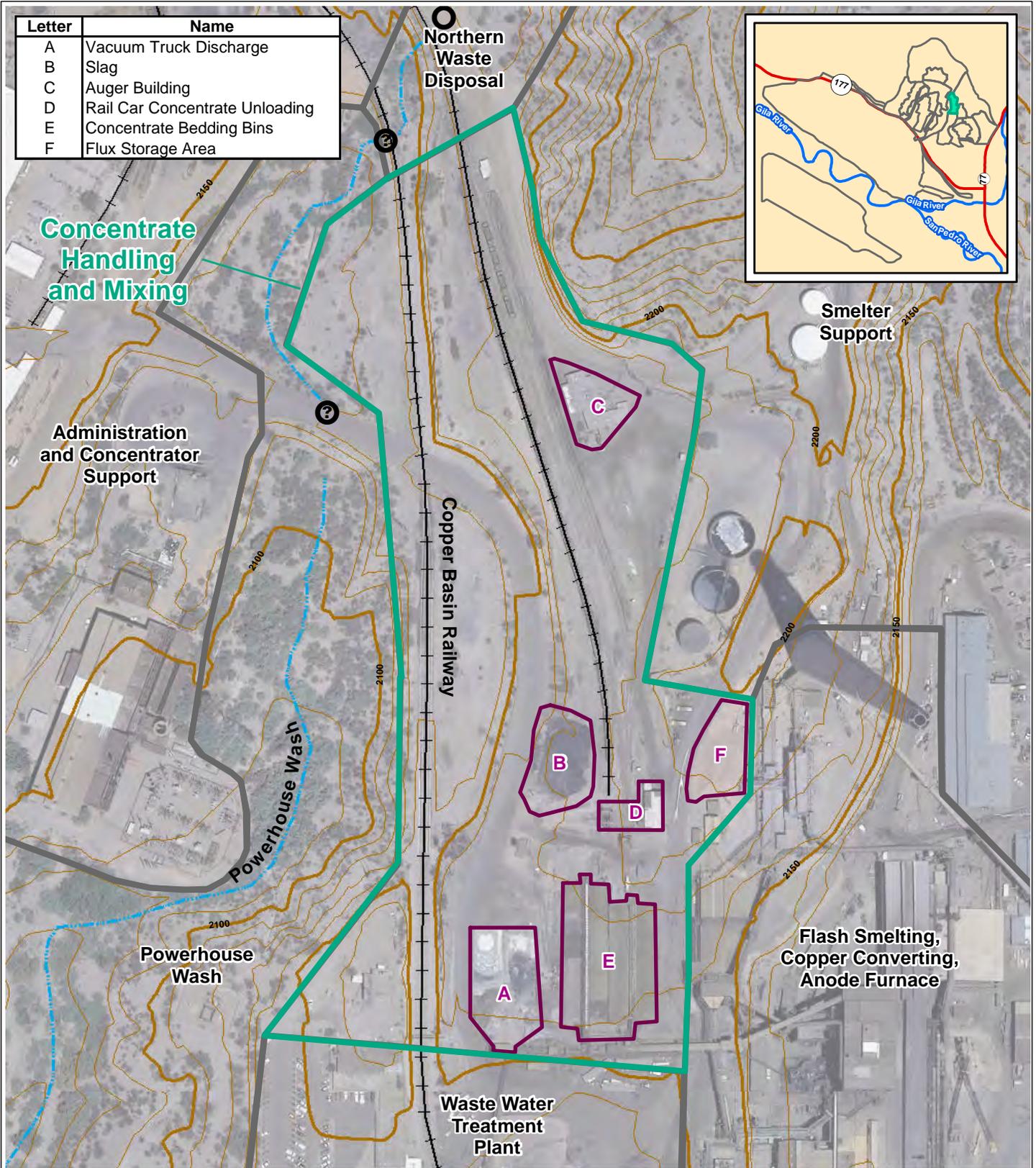
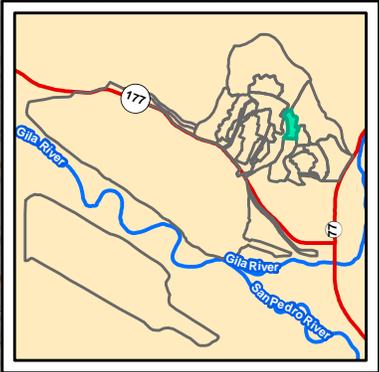


Figure 4-12
Features of Area #11, Waste Water Treatment Plant
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona
 Innovative Technical Solutions, Inc.
 A Gilbane Company

Letter	Name
A	Vacuum Truck Discharge
B	Slag
C	Auger Building
D	Rail Car Concentrate Unloading
E	Concentrate Bedding Bins
F	Flux Storage Area



Other RI Area Boundaries	Thalweg (Approximate)
Area #12, Concentrate Handling and Mixing	Railroads
Features	
Drainage Underpass (Unknown)	
Drainage Underpass	

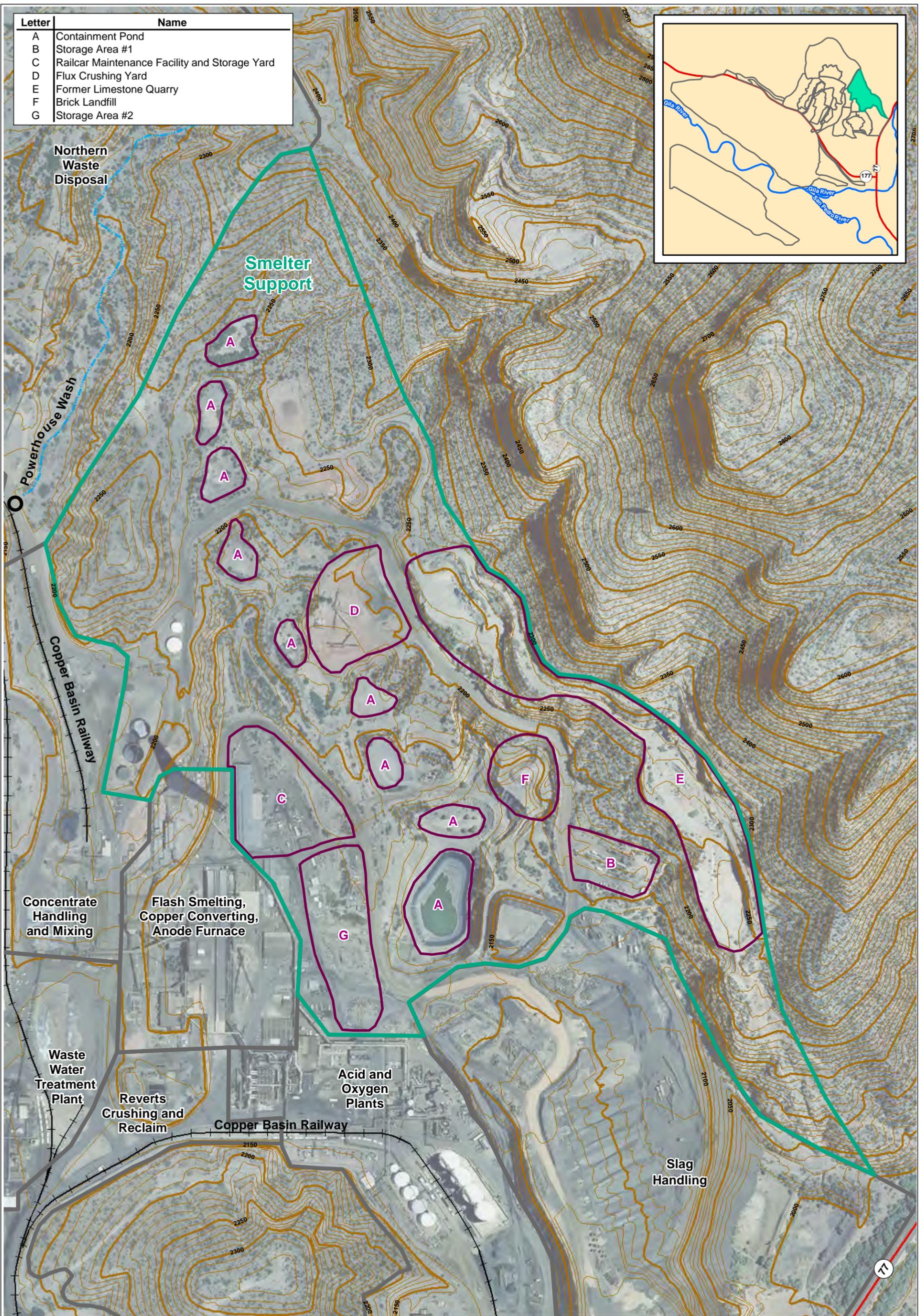
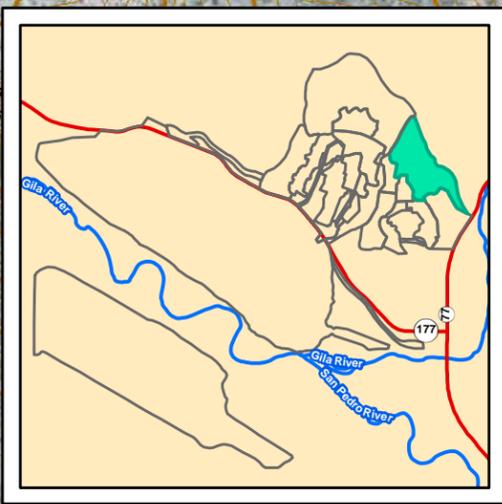
Contour interval = 10 feet

Figure 4-13
Features of Area #12,
Concentrate Handling and Mixing
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona

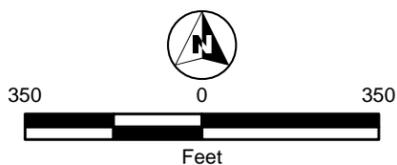


Aerial photography courtesy of ESRI®, dated May 1, 2009. Topography from CH2M Hill (2008).

Letter	Name
A	Containment Pond
B	Storage Area #1
C	Railcar Maintenance Facility and Storage Yard
D	Flux Crushing Yard
E	Former Limestone Quarry
F	Brick Landfill
G	Storage Area #2



- Other RI Area Boundaries
- Area #13, Smelter Support
- Features
- Thalweg (Approximate)
- Railroads
- Drainage Underpass (Unknown)
- Drainage Underpass



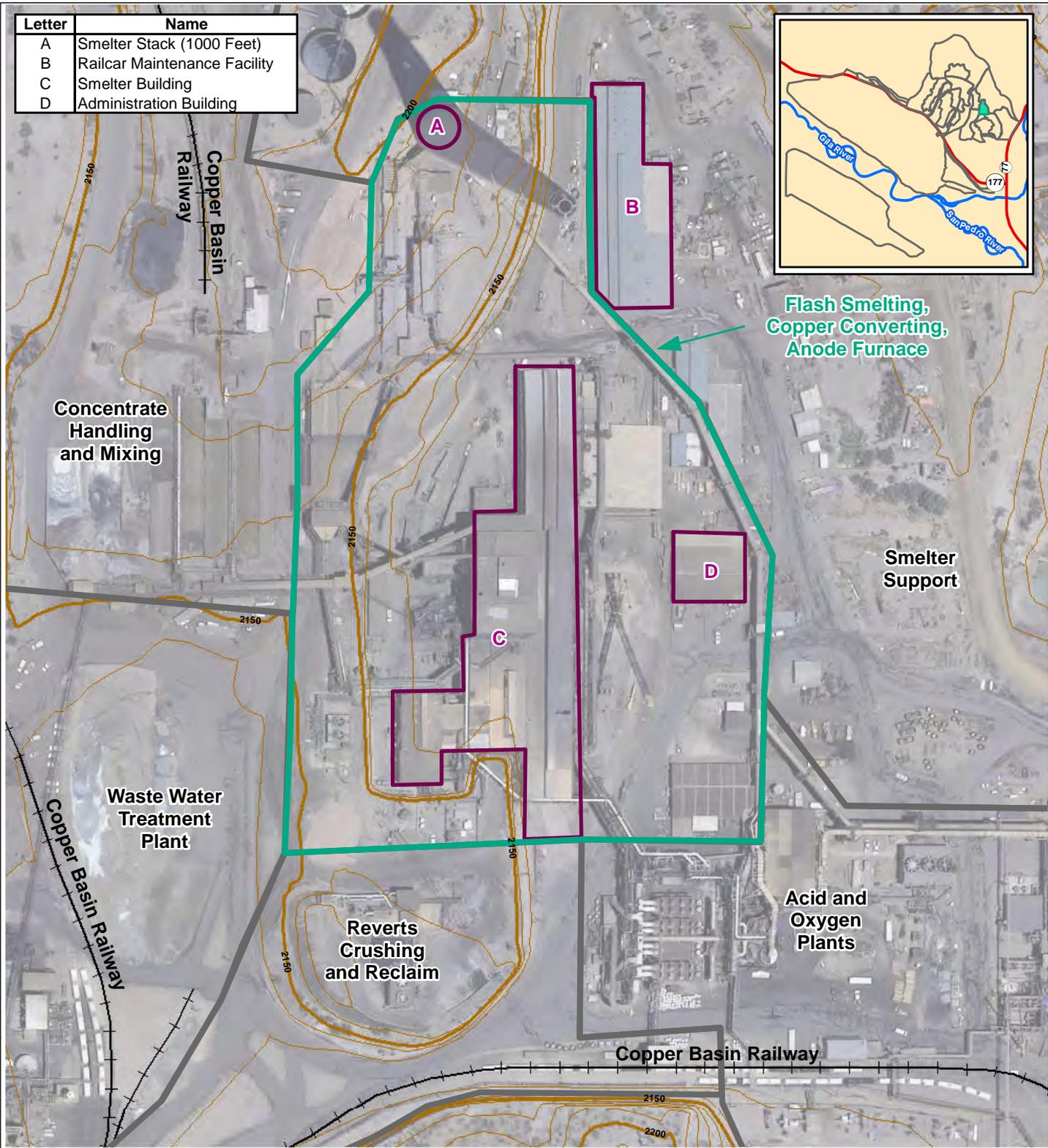
Aerial photography courtesy of ESRI®, dated May 1, 2009.
Topography from CH2M Hill (2008).

Contour interval = 10 feet

Figure 4-14
Features of Area #13,
Smelter Support
Final Phase II RI/FS Work Plan
(Part 1 of 2 - Air)
ASARCO Hayden Plant Site
Hayden, Arizona



Letter	Name
A	Smelter Stack (1000 Feet)
B	Railcar Maintenance Facility
C	Smelter Building
D	Administration Building



- Other RI Area Boundaries
- Area #14, Flash Smelting, Copper Converting, Anode Furnace
- Features
- Railroads



150 0 150



Feet

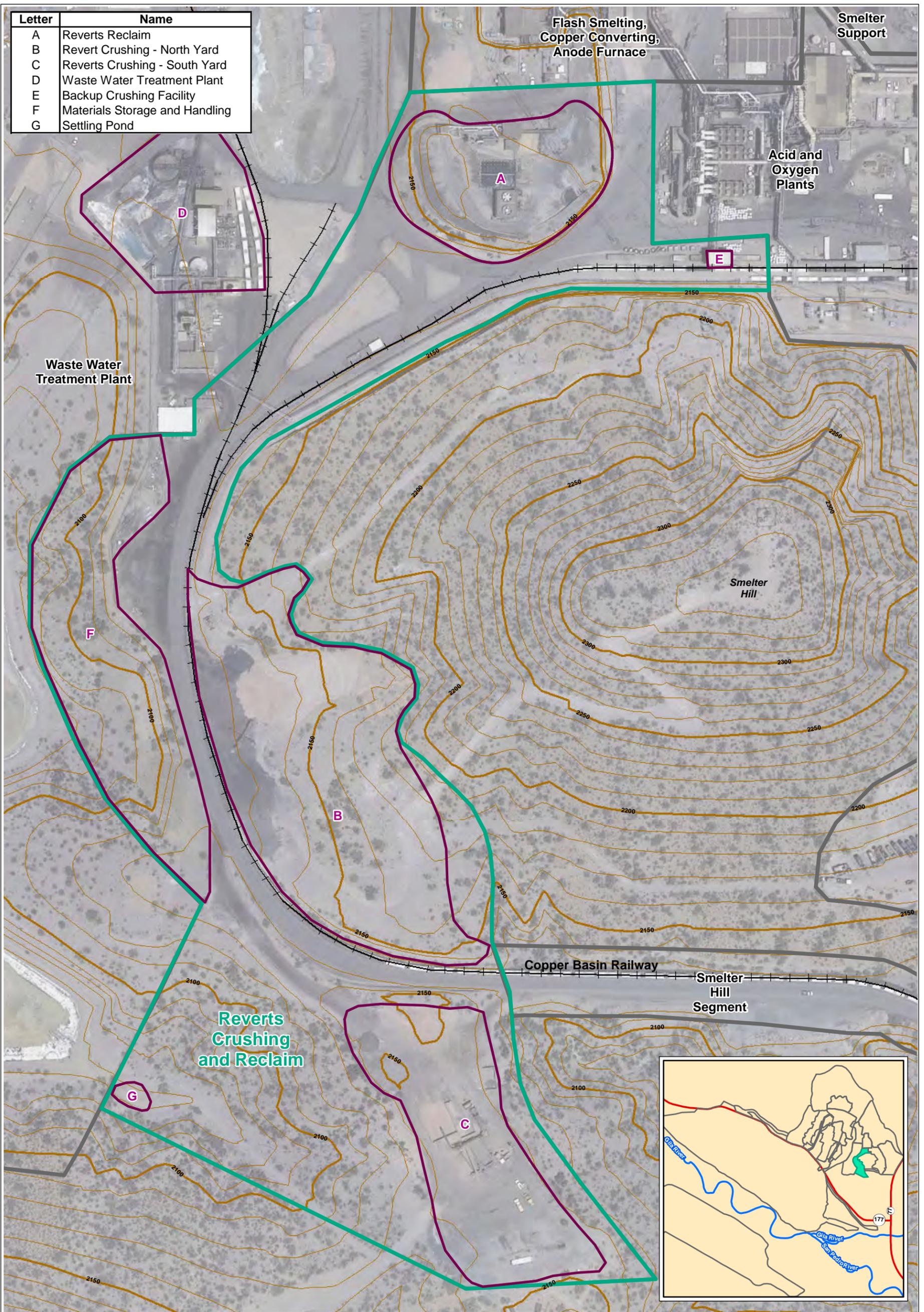
Contour interval = 10 feet

Aerial photography courtesy of ESRI®, dated May 1, 2009.
Topography from CH2M Hill (2008).

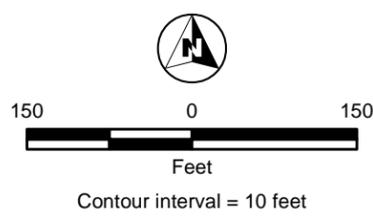
Figure 4-15
Features of Area #14,
Flash Smelting, Copper Converting,
Anode Furnace
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona



Letter	Name
A	Reverts Reclaim
B	Revert Crushing - North Yard
C	Reverts Crushing - South Yard
D	Waste Water Treatment Plant
E	Backup Crushing Facility
F	Materials Storage and Handling
G	Settling Pond



- Other RI Area Boundaries
- Area #15, Reverts Crushing and Reclaim
- Features
- Railroads



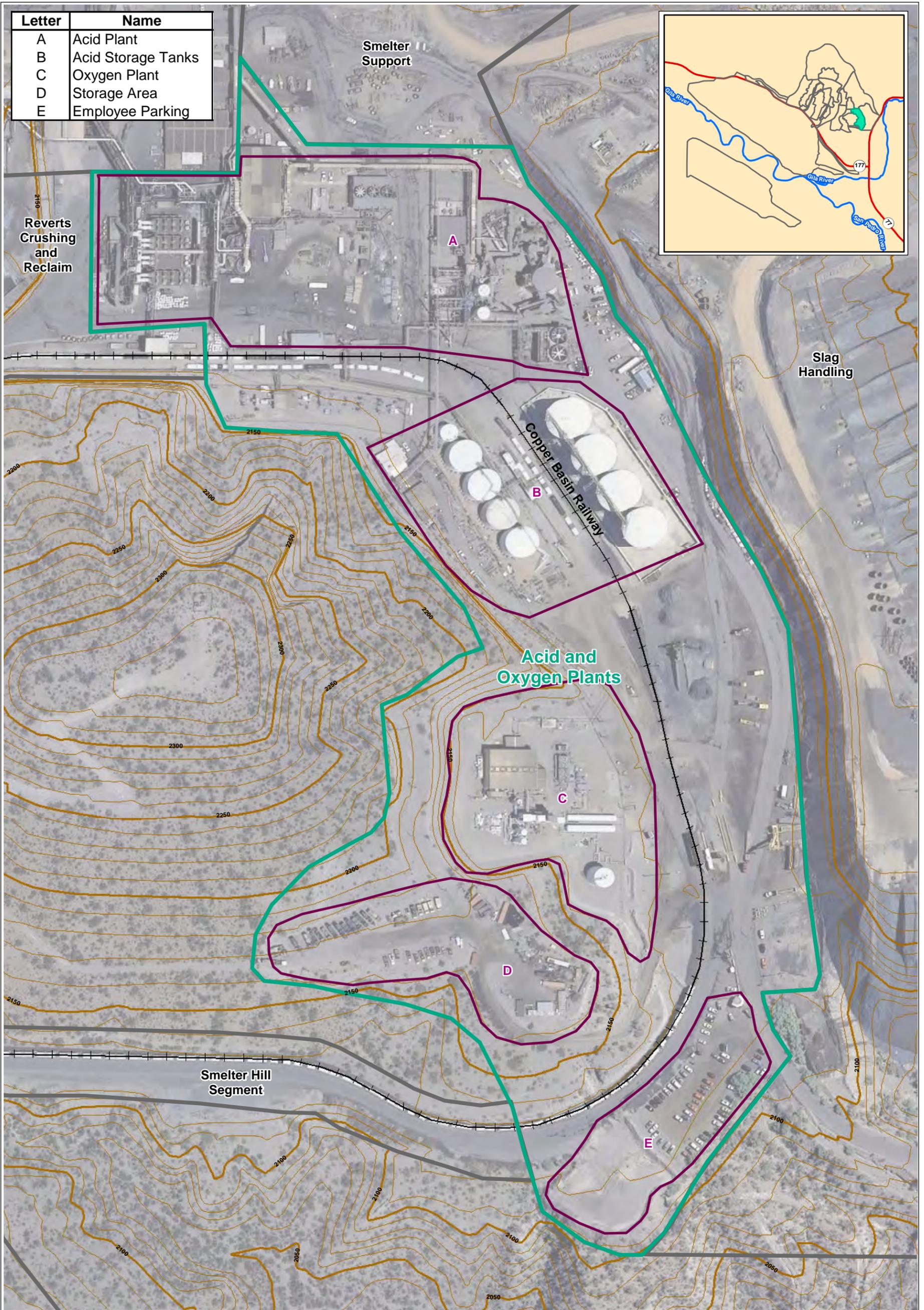
Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).



Figure 4-16
Features of Area #15,
Reverts Crushing and Reclaim
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona



Letter	Name
A	Acid Plant
B	Acid Storage Tanks
C	Oxygen Plant
D	Storage Area
E	Employee Parking



- Other RI Area Boundaries
- Area #16, Acid and Oxygen Plants
- Features
- Railroads

Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).

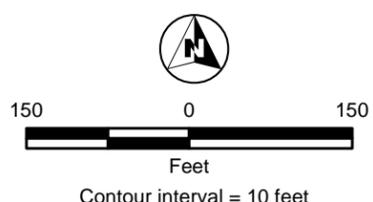
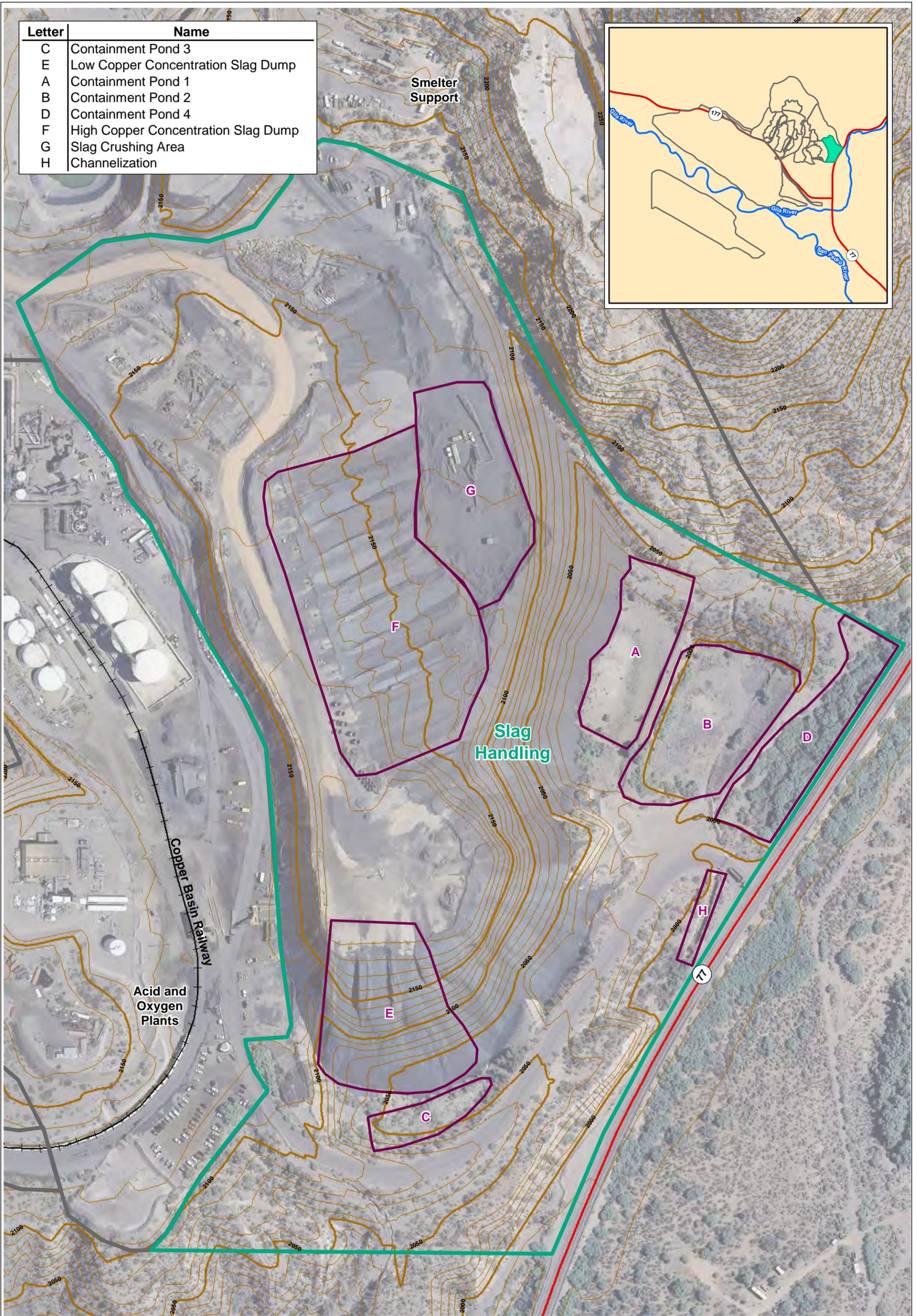


Figure 4-17
Features of Area #16,
Acid and Oxygen Plants
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona



Letter	Name
C	Containment Pond 3
E	Low Copper Concentration Slag Dump
A	Containment Pond 1
B	Containment Pond 2
D	Containment Pond 4
F	High Copper Concentration Slag Dump
G	Slag Crushing Area
H	Channelization



- Other RI Area Boundaries
- Area #17, Slag Handling
- Features
- Railroad
- Road

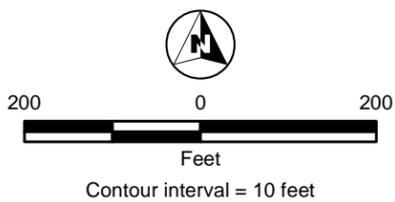
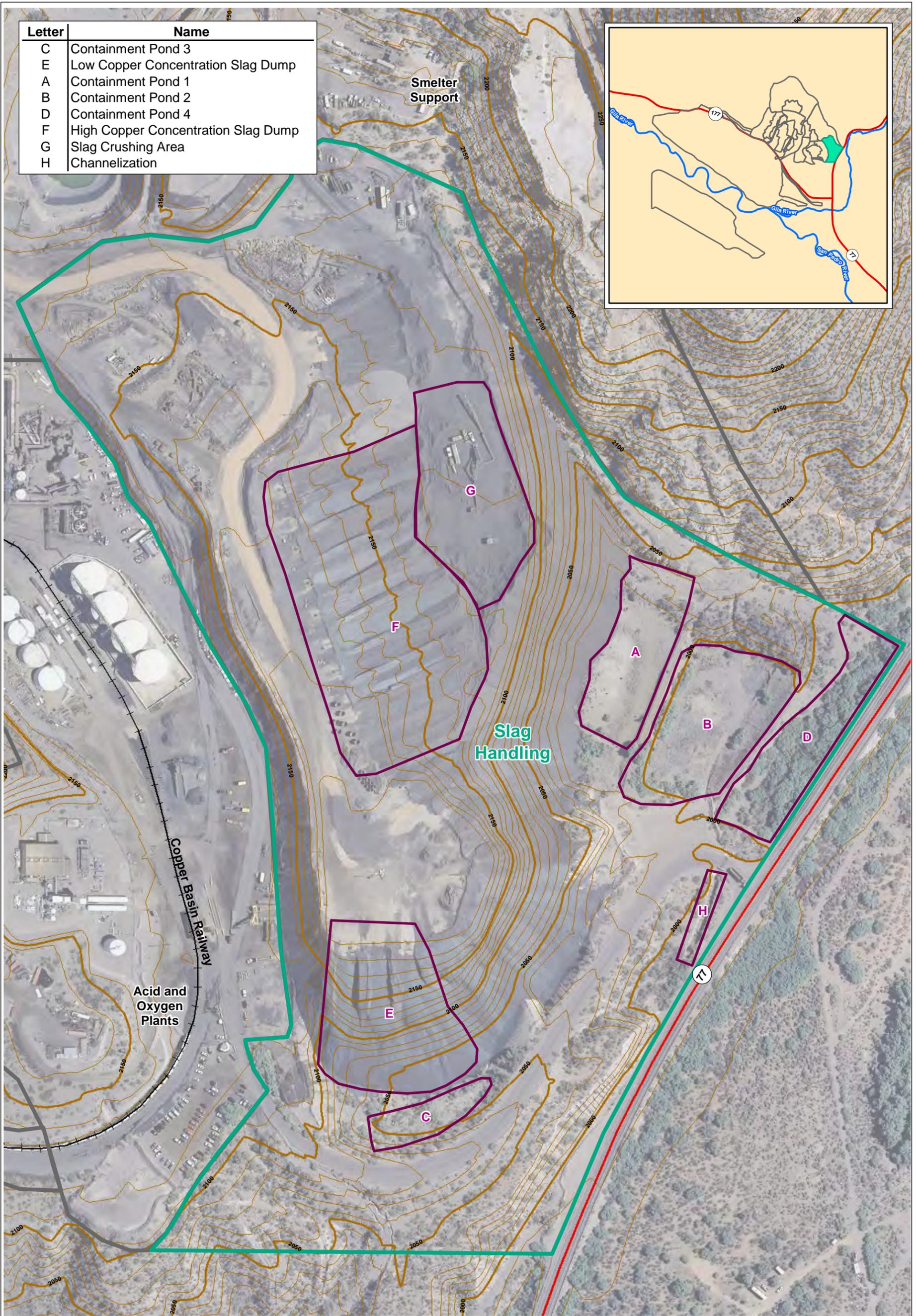


Figure 4-18
Features of Area #17, Slag Handling
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona



Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).

Letter	Name
C	Containment Pond 3
E	Low Copper Concentration Slag Dump
A	Containment Pond 1
B	Containment Pond 2
D	Containment Pond 4
F	High Copper Concentration Slag Dump
G	Slag Crushing Area
H	Channelization



- Other RI Area Boundaries
- Area #17, Slag Handling
- Features
- Railroad
- Road

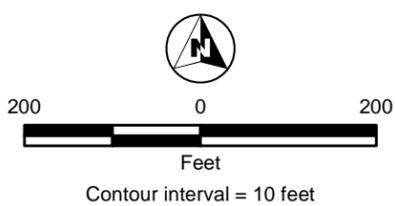


Figure 4-18
Features of Area #17, Slag Handling
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site
 Hayden, Arizona



Aerial photography courtesy of ESRI®, dated May 1, 2009.
 Topography from CH2M Hill (2008).

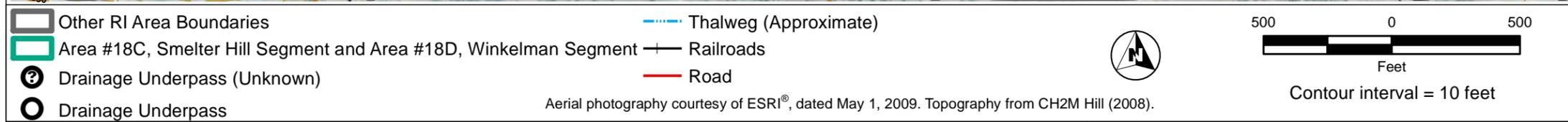
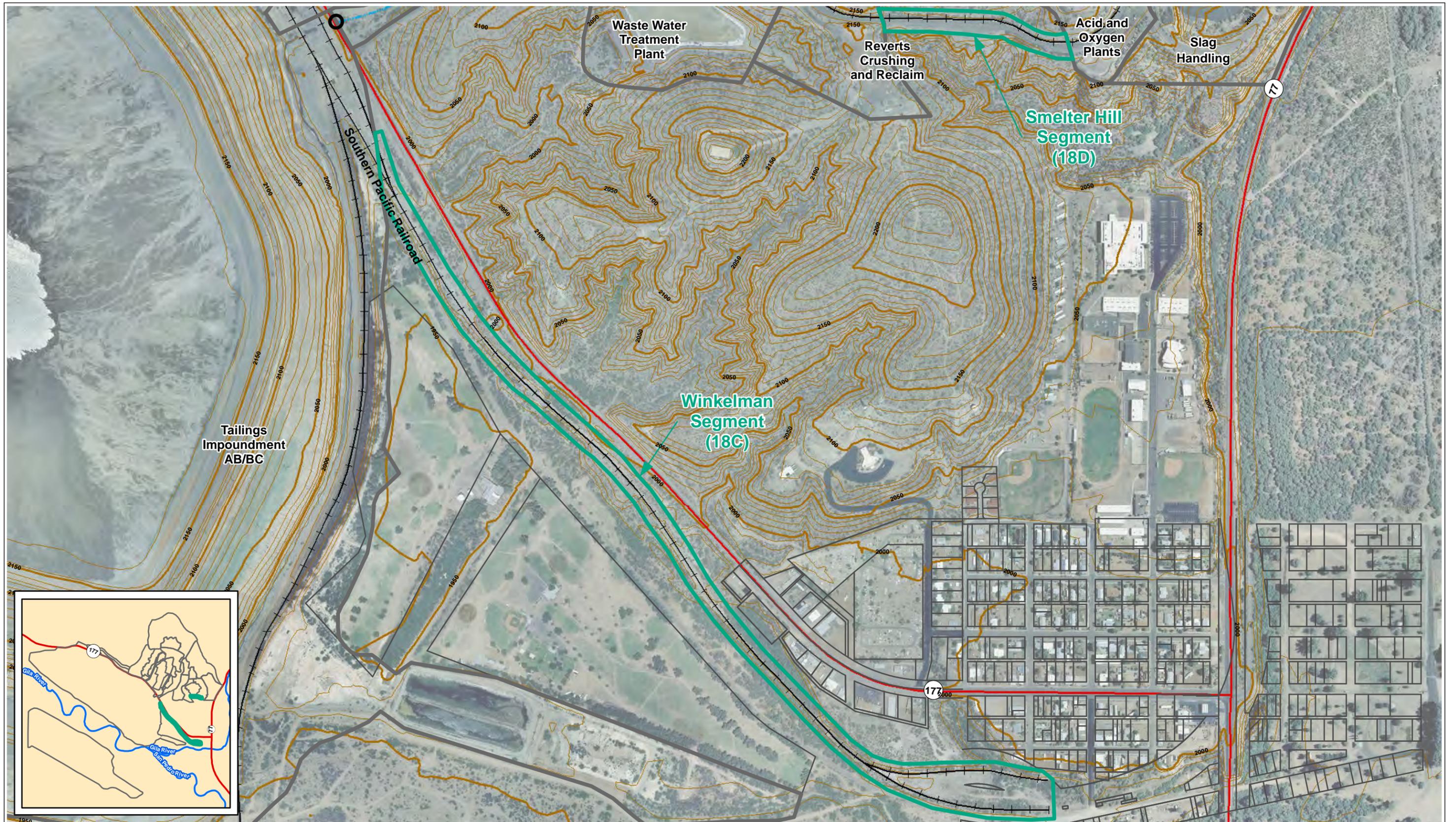
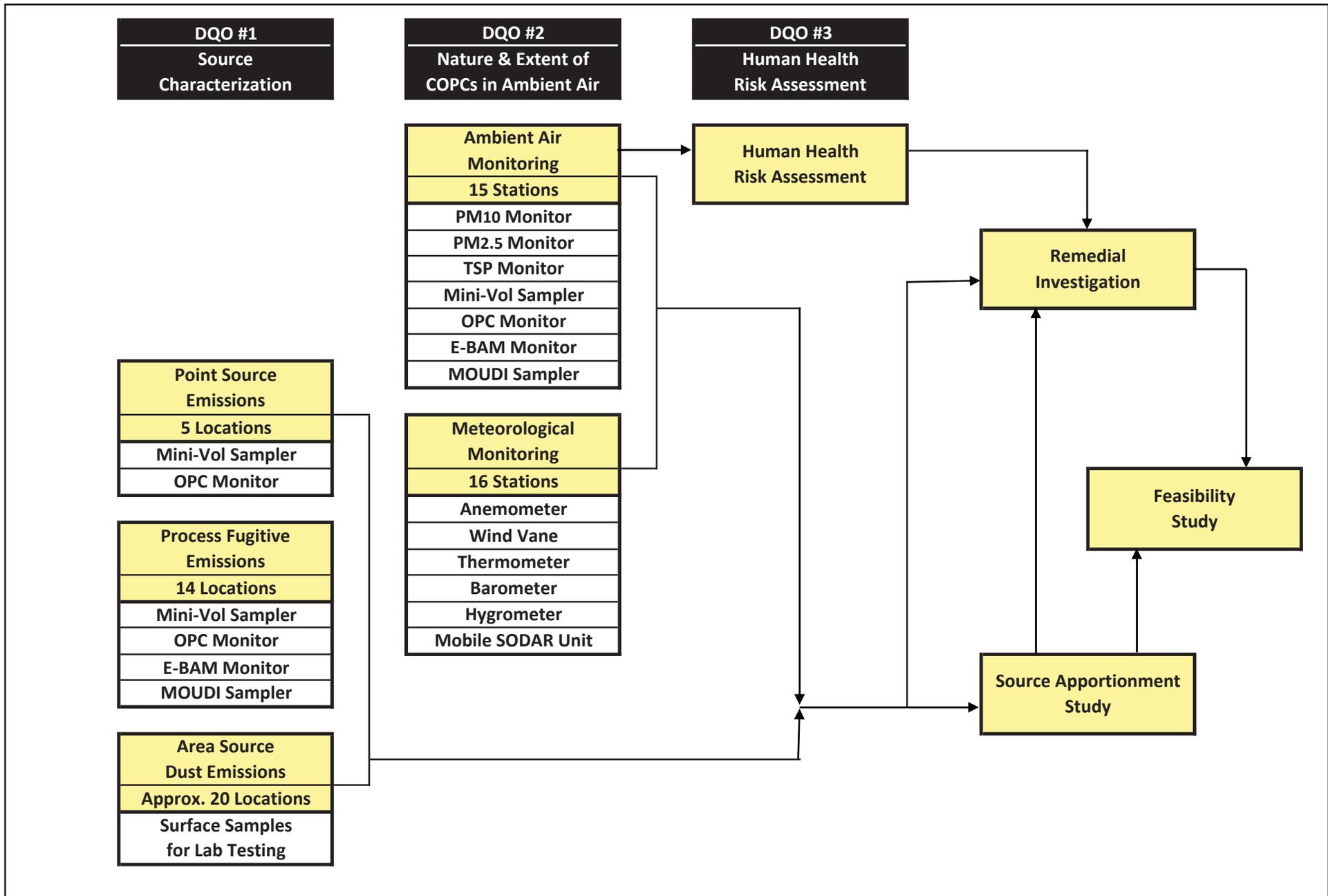
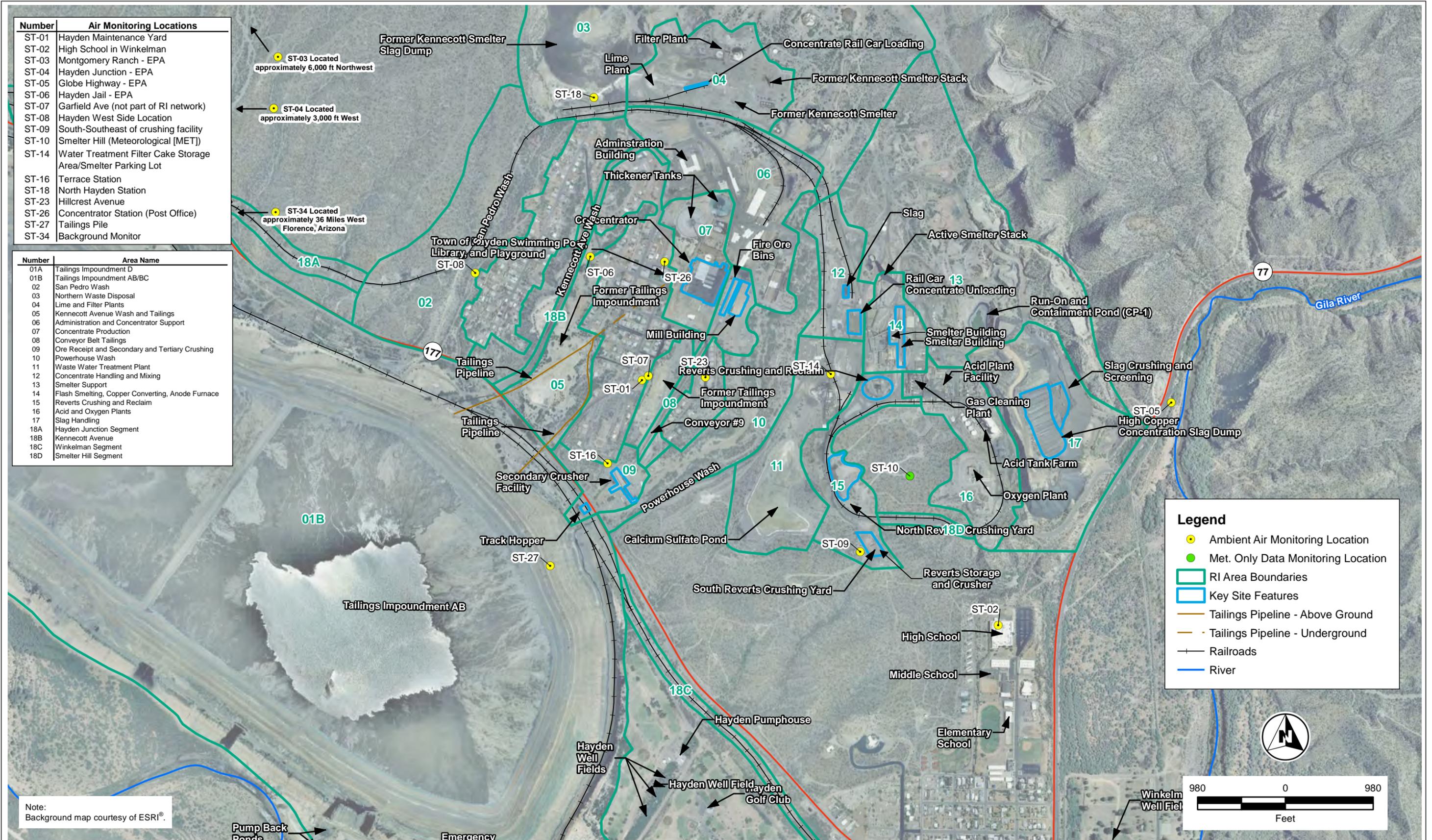


Figure 4-19CD
Features of Area #18C and Area #18D,
Smelter Hill and Winkelman Railroad Segments
 Final Phase II RI/FS Work Plan
 (Part 1 of 2 - Air)
 ASARCO Hayden Plant Site, Hayden, Arizona



Number	Air Monitoring Locations
ST-01	Hayden Maintenance Yard
ST-02	High School in Winkelman
ST-03	Montgomery Ranch - EPA
ST-04	Hayden Junction - EPA
ST-05	Globe Highway - EPA
ST-06	Hayden Jail - EPA
ST-07	Garfield Ave (not part of RI network)
ST-08	Hayden West Side Location
ST-09	South-Southeast of crushing facility
ST-10	Smelter Hill (Meteorological [MET])
ST-14	Water Treatment Filter Cake Storage Area/Smelter Parking Lot
ST-16	Terrace Station
ST-18	North Hayden Station
ST-23	Hillcrest Avenue
ST-26	Concentrator Station (Post Office)
ST-27	Tailings Pile
ST-34	Background Monitor

Number	Area Name
01A	Tailings Impoundment D
01B	Tailings Impoundment AB/BC
02	San Pedro Wash
03	Northern Waste Disposal
04	Lime and Filter Plants
05	Kennecott Avenue Wash and Tailings
06	Administration and Concentrator Support
07	Concentrate Production
08	Conveyor Belt Tailings
09	Ore Receipt and Secondary and Tertiary Crushing
10	Powerhouse Wash
11	Waste Water Treatment Plant
12	Concentrate Handling and Mixing
13	Smelter Support
14	Flash Smelting, Copper Converting, Anode Furnace
15	Reverts Crushing and Reclaim
16	Acid and Oxygen Plants
17	Slag Handling
18A	Hayden Junction Segment
18B	Kennecott Avenue
18C	Winkelman Segment
18D	Smelter Hill Segment



Note:
Background map courtesy of ESRI®.



ASARCO Hayden Plant Site
Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
Hayden, Arizona

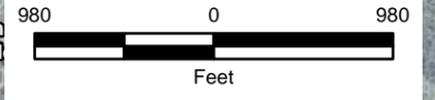
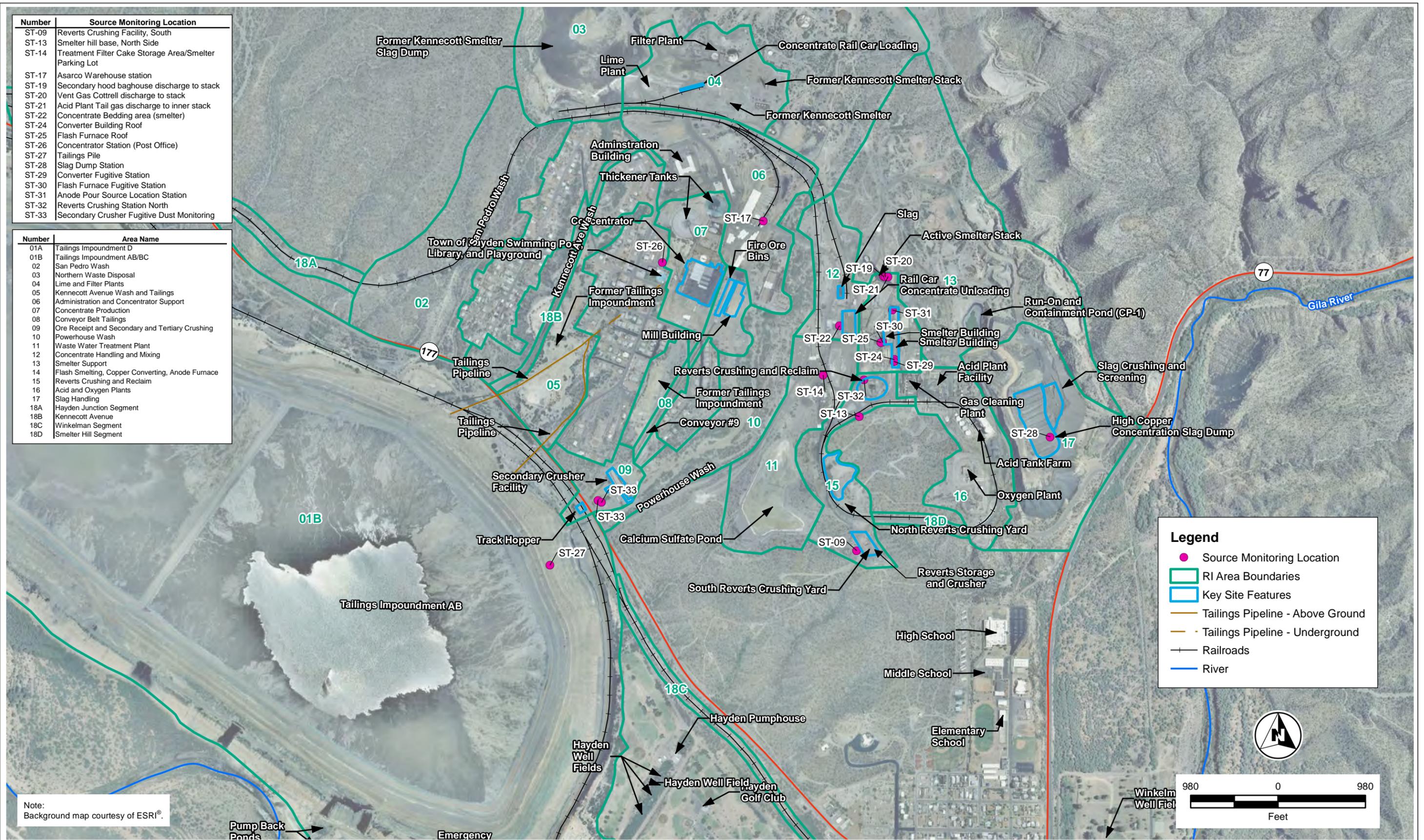


Figure 6-2
Ambient Air Monitoring Stations and
Key Features of Site Vicinity

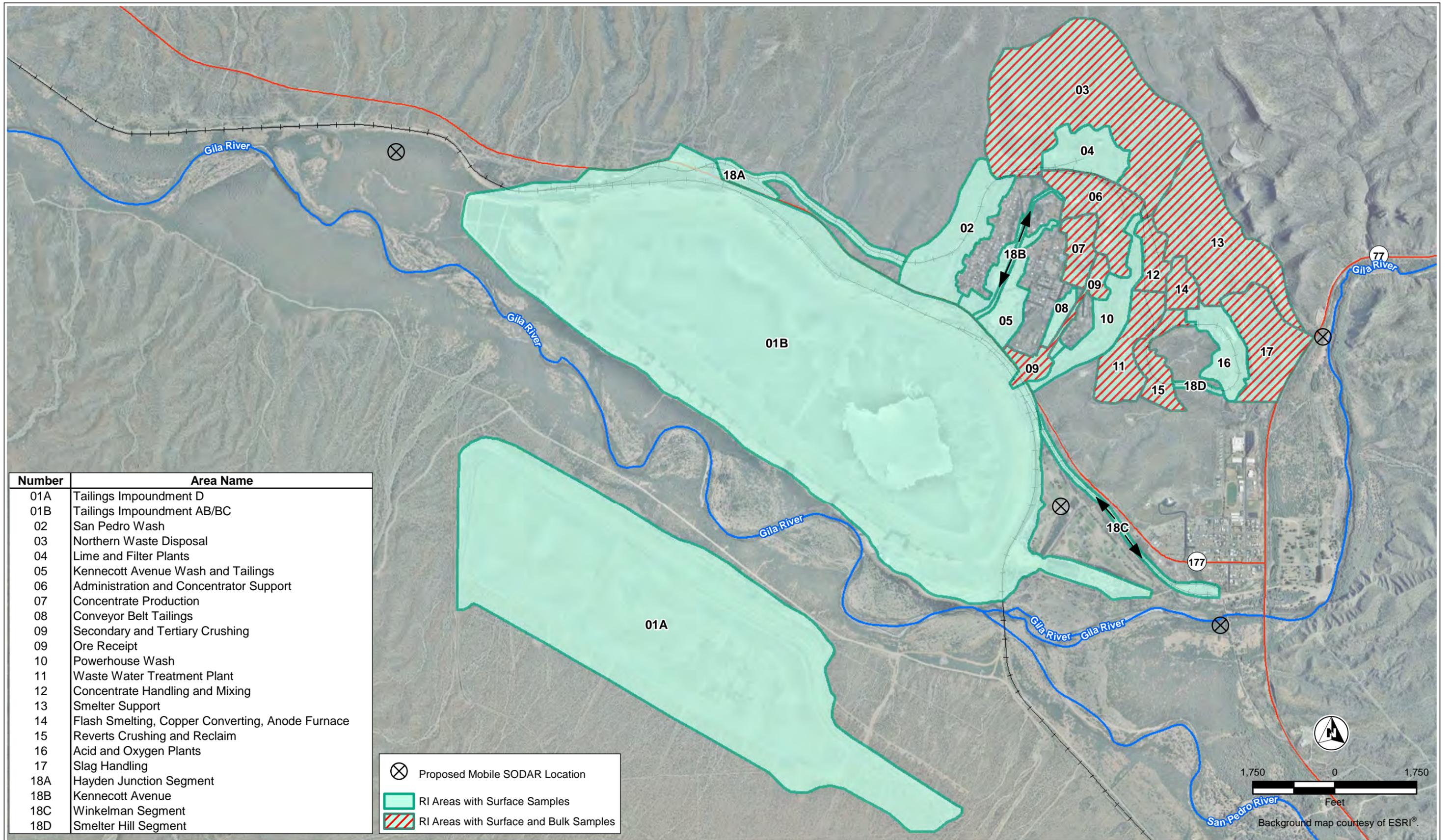
Number	Source Monitoring Location
ST-09	Reverts Crushing Facility, South
ST-13	Smelter hill base, North Side
ST-14	Treatment Filter Cake Storage Area/Smelter Parking Lot
ST-17	Asarco Warehouse station
ST-19	Secondary hood baghouse discharge to stack
ST-20	Vent Gas Cottrell discharge to stack
ST-21	Acid Plant Tail gas discharge to inner stack
ST-22	Concentrate Bedding area (smelter)
ST-24	Converter Building Roof
ST-25	Flash Furnace Roof
ST-26	Concentrator Station (Post Office)
ST-27	Tailings Pile
ST-28	Slag Dump Station
ST-29	Converter Fugitive Station
ST-30	Flash Furnace Fugitive Station
ST-31	Anode Pour Source Location Station
ST-32	Reverts Crushing Station North
ST-33	Secondary Crusher Fugitive Dust Monitoring

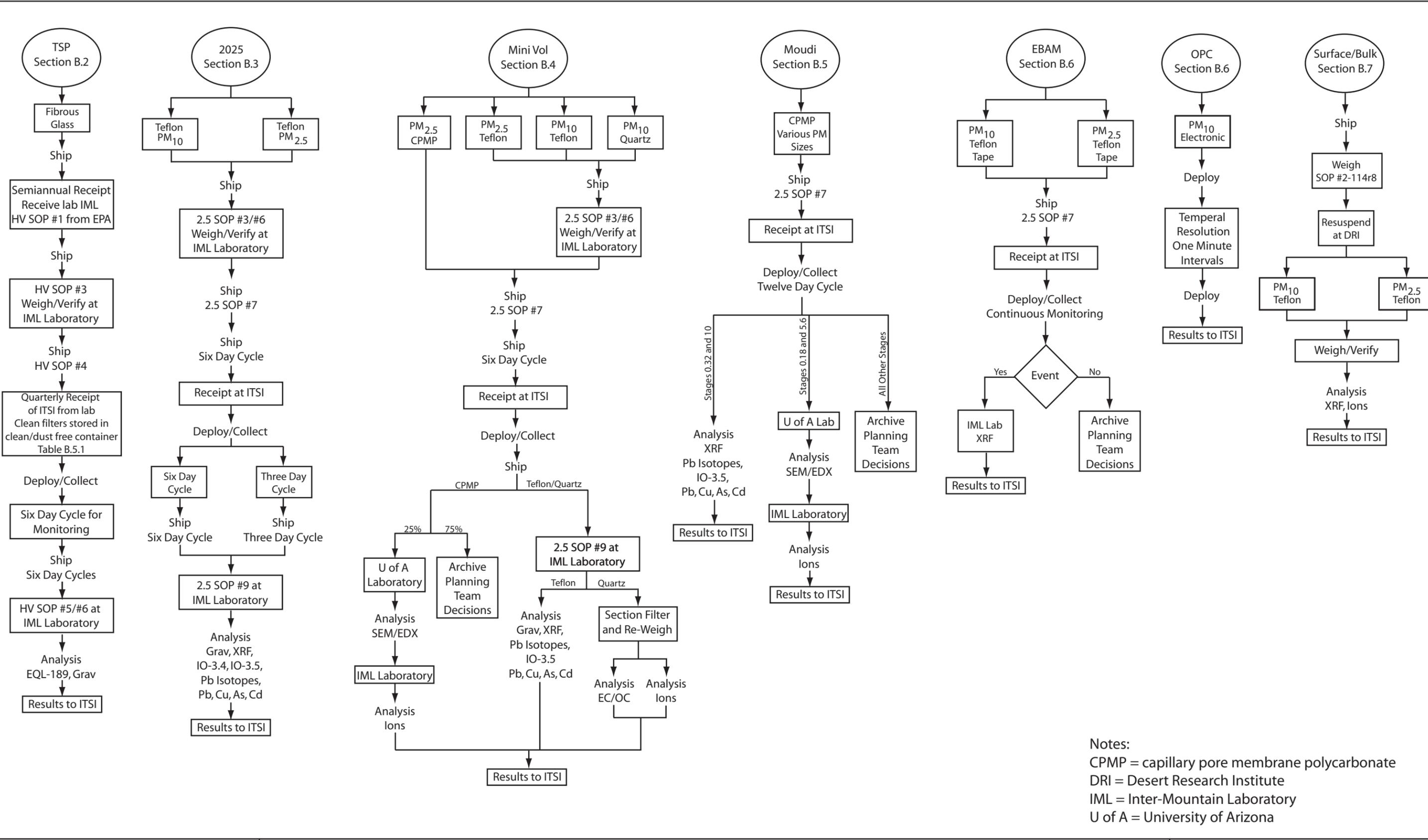
Number	Area Name
01A	Tailings Impoundment D
01B	Tailings Impoundment AB/BC
02	San Pedro Wash
03	Northern Waste Disposal
04	Lime and Filter Plants
05	Kennecott Avenue Wash and Tailings
06	Administration and Concentrator Support
07	Concentrate Production
08	Conveyor Belt Tailings
09	Ore Receipt and Secondary and Tertiary Crushing
10	Powerhouse Wash
11	Waste Water Treatment Plant
12	Concentrate Handling and Mixing
13	Smelter Support
14	Flash Smelting, Copper Converting, Anode Furnace
15	Reverts Crushing and Reclaim
16	Acid and Oxygen Plants
17	Slag Handling
18A	Hayden Junction Segment
18B	Kennecott Avenue
18C	Winkelman Segment
18D	Smelter Hill Segment



ASARCO Hayden Plant Site
Final Phase II RI/FS Work Plan (Part 1 of 2 - Air)
Hayden, Arizona

Figure 6-3
Source Sampling Locations and
Key Features of Site Vicinity

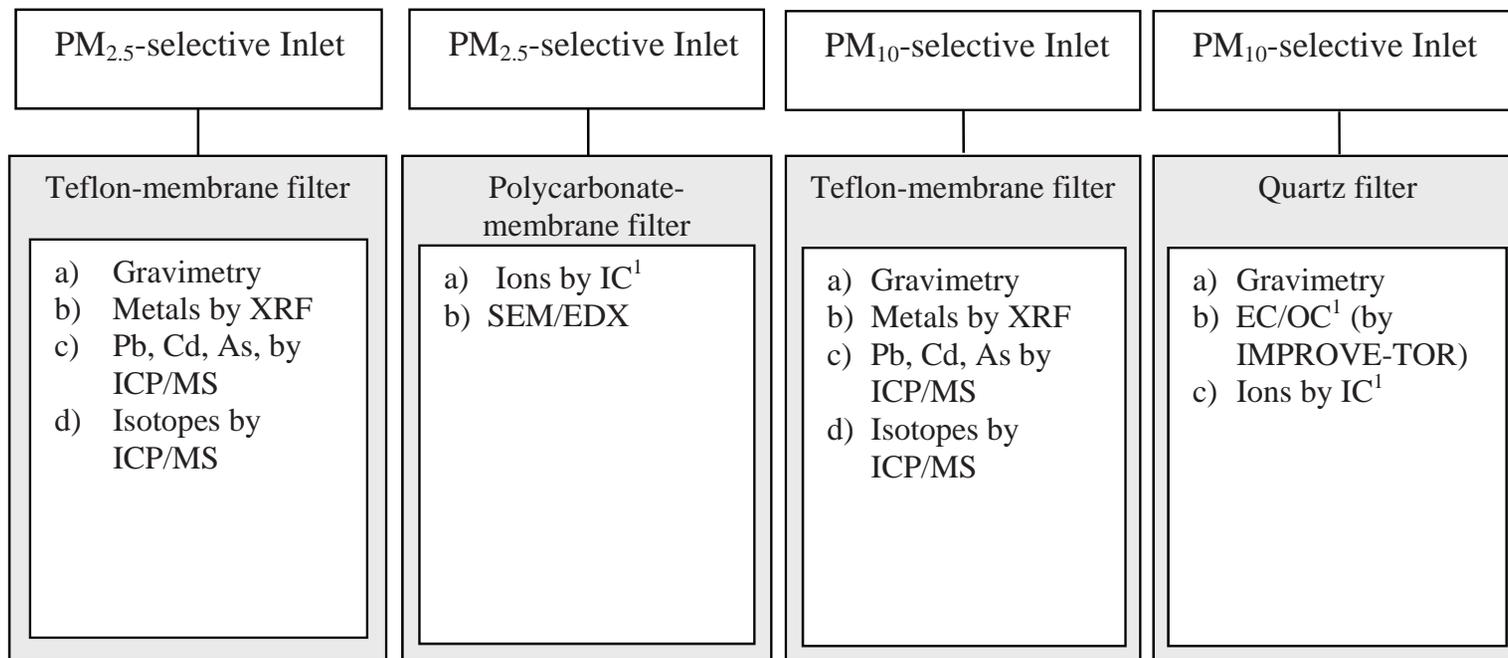




Notes:
 CPMP = capillary pore membrane polycarbonate
 DRI = Desert Research Institute
 IML = Inter-Mountain Laboratory
 U of A = University of Arizona



Figure 7-1
 Monitor and Filter Flowchart



1. Section of filter