

**Klondyke Tailings
Water Quality Assurance Revolving Fund (WQARF) Site
Community Advisory Board (CAB) Meeting**

FINAL MINUTES

Thursday, April 3, 2008
Graham County General Service Building Main Level
921 W. Thatcher Blvd.
Safford, Arizona

OU# 08-139

CAB Members present: Mark Haberstich (Co-chair), Noralea Gale, Lauralea Bott, Mark Herrington, John Luepke, and Cathy Gorman

CAB Members absent: Michael Bryce, Bill Griffin, and Lynn Skinner (Co-chair).

ADEQ Staff in attendance: Scott Goodwin (Project Manager), and Felicia Calderon (Community Involvement Coordinator)

Members of the public present: Jay and Ginny Schnell, Don Lackner, Larry Thrasher, Steven D. Puzas, John A. Stoddard, and Lee Hurston

The meeting began at 4:10 p.m.

1. Call to Order/Introductions

Ms. Calderon opened the meeting. Introductions were made of the Community Advisory Board (CAB) members, ADEQ staff, and members of the public.

2. Acceptance and/or Changes to September 27, 2007 Meeting Minutes

Ms. Gale made a motion to accept the minutes as written. It was seconded by Mr. Haberstich. The minutes were approved unanimously by the board.

3. Discussion of Current Status and Activities at Klondyke Tailings - Scott Goodwin

Mr. Goodwin initiated his presentation to the CAB with a discussion on current and future activities for Klondyke Tailings.

See presentation below

A. Soil Sampling Update

Mr. Goodwin reviewed with the CAB soil sampling updates.

See presentation below

Mr. Goodwin commented that based upon information from the Schnell's there apparently is a small amount of tailings on the Schnell property from the Dog Water Mine.

B. Early Response Action (ERA) & Selection of Gabion Mattress for Erosion Protection

Mr. Goodwin next discussed the Early Response Action (ERA) plans and selection of Gabion Mattress for erosion protection.

See presentation below

Mr. Haberstich requested specification on what exactly was being removed from the lower tailings pile and where it was being relocated. In response, Mr. Goodwin presented to Mr. Haberstich a map of the portion of the lower tailings pile being moved to the upper tailings pile.

Mr. Haberstich inquired how thick the Gabions would be. Mr. Goodwin replied approximately 12 inches.

C. Update on Construction of Erosion Protection, Upper Tailings Pile

Mr. Goodwin lastly presented to the CAB an update on current construction of erosion protection on the upper tailings pile.

See presentation below

Mrs. Schnell inquired about clean up activities on properties adjacent to the site. In response Mr. Goodwin stated that clearing of brush may be done on surrounding properties in order to move contaminated soils to consolidate with the upper tailings pile.

Mr. Stoddard commented that he was pleased that construction on the tailings had finally been initiated and inquired of future plans for the site. Mr. Goodwin replied that a Declaration of Environmental Use Restriction (DEUR) will be placed on the tailings piles so the piles cannot be disturbed by future development of the property.

Discussion ensued with Mr. Goodwin, Mr. Lackner, and Ms. Gorman regarding Aravaipa Creek and the problematic issues of controlling its flooding.

Mr. Lackner inquired where the riprap, a loose assemblage of broken stones or other material used to armor shorelines and streambeds against water erosion, was expected from. In response Mr. Goodwin replied that it was coming from a location in Safford.

Mr. Goodwin advised the CAB that the deadline for construction on the upper tailings pile is scheduled for June 30th of this fiscal year.

Mr. Goodwin also informed the CAB that ongoing monitoring and maintenance of the groundwater monitoring wells and tailings piles would be required.

4. Distribution of Finalized Community Involvement Plan (CIP) - Felicia Calderon

Ms. Calderon distributed copies of the CIP to CAB members. Ms. Calderon discussed with the CAB the purpose of the CIP. In addition, the CAB was advised that copies of the CIP were located at the repositories.

5. Call to the Public

Mr. Thrasher inquired about the University of Arizona's research on lead isotopes in the area. Mr. Goodwin replied that he was aware of their studies but did not see any relevance towards remediation of the tailings as ADEQ was trying to address both the Klondyke tailings and the Grand Reef Mine.

6. Future Meeting and Agenda Discussion

The next CAB meeting was scheduled for Thursday, September 25, 2008 at 4 p.m. at the Klondyke Schoolhouse in Klondyke. Proposed agenda items for the next meeting included co-chair voting, update of construction on lower tailings, status of the Environmental Protection Agency (EPA) investigation of Grand Reef Mine, and budget status for FY 2009.

7. Adjournment

Mr. Haberstich adjourned the meeting at 5:20 p.m.

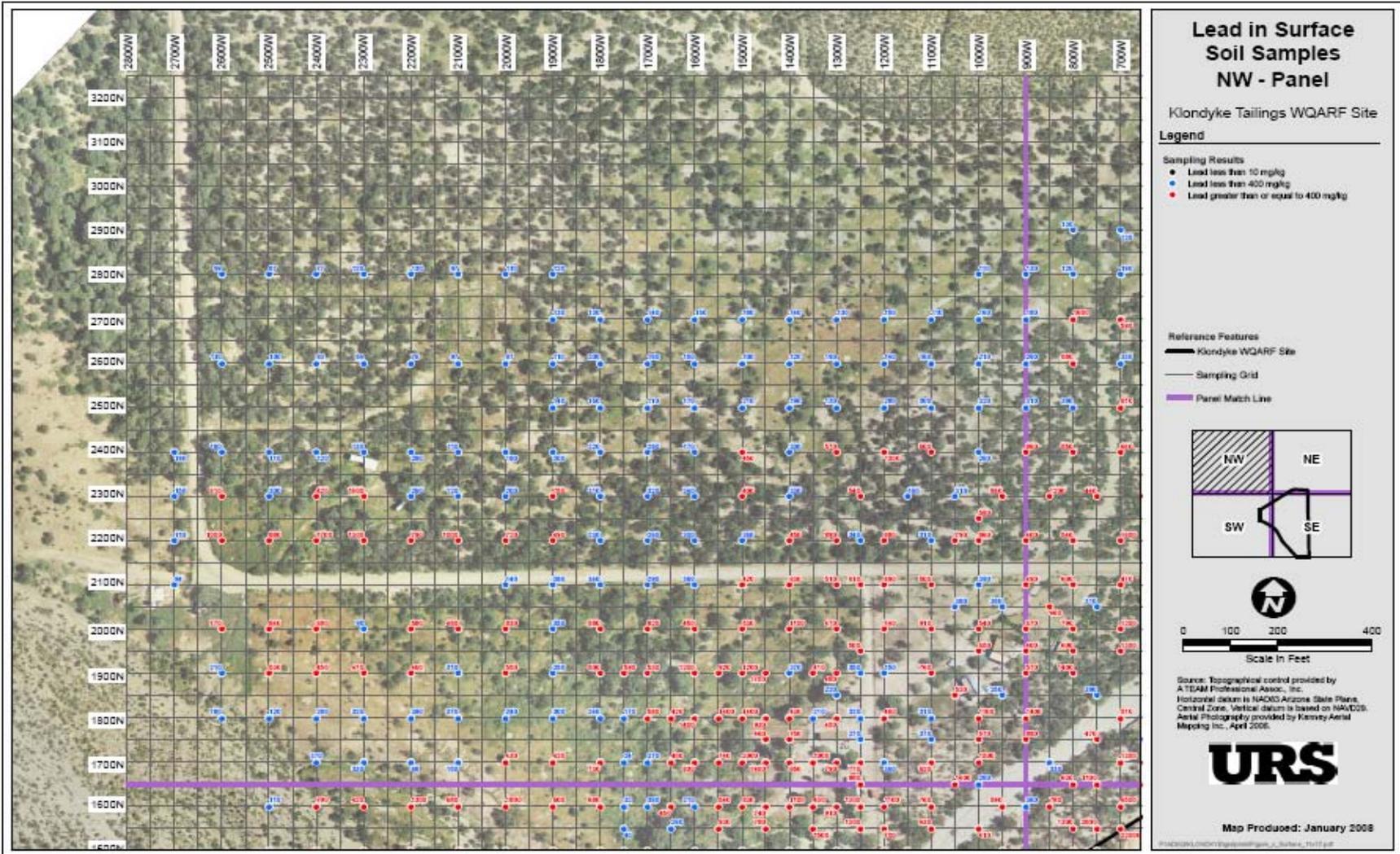


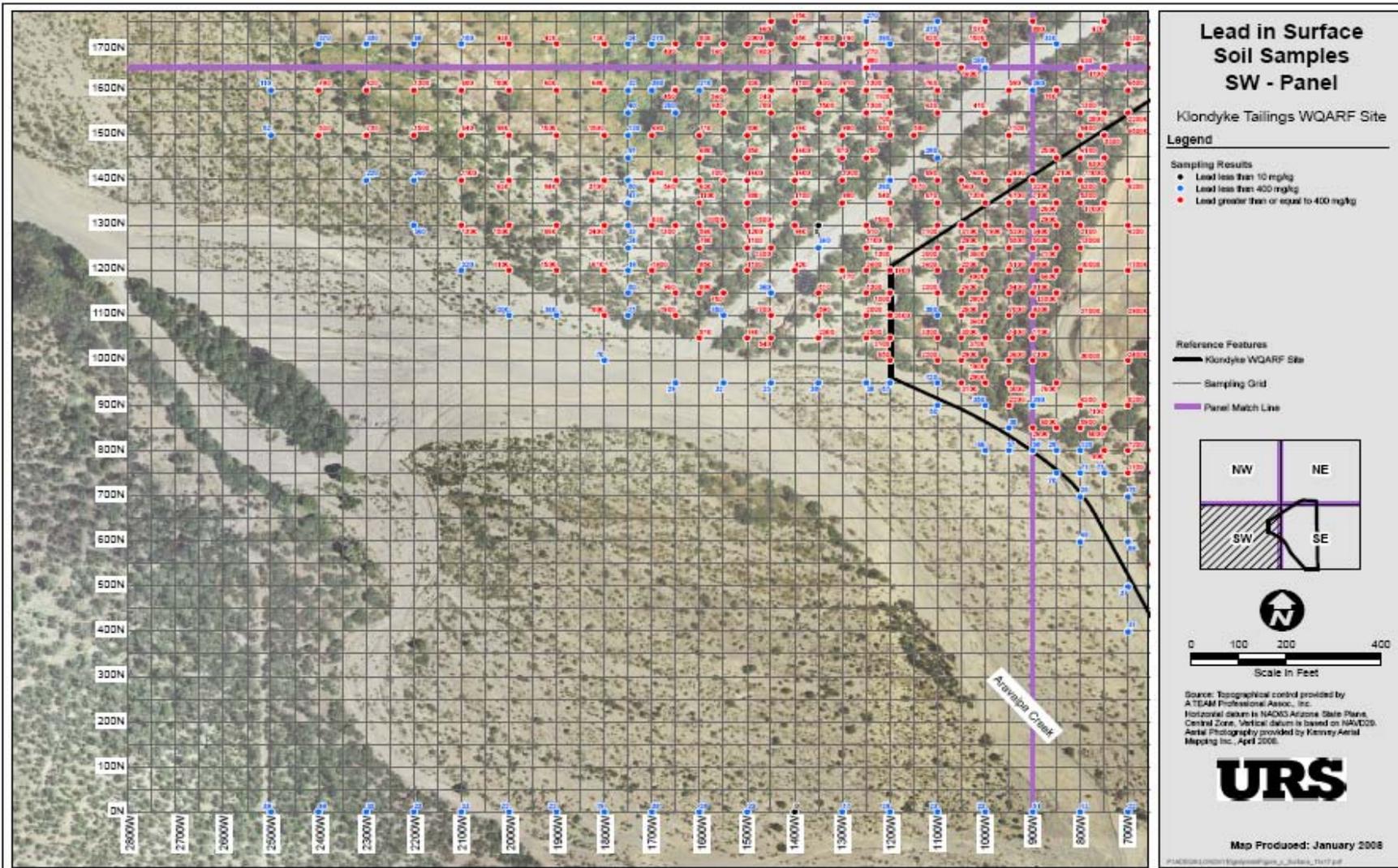
Klondyke Tailings Water Quality Assurance Revolving Fund (WQARF) Site

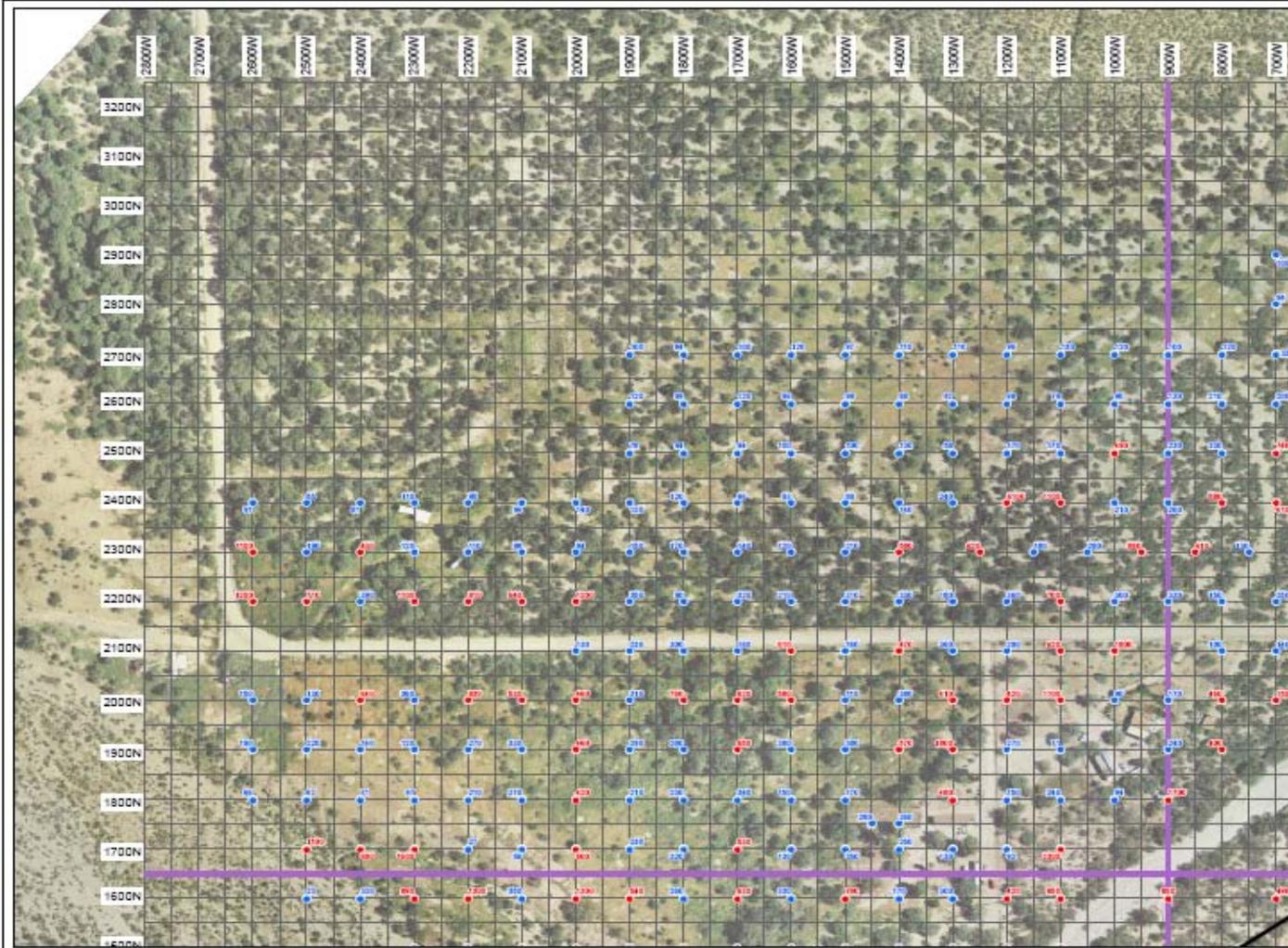
April 3, 2008

REMEDIAL INVESTIGATION UPDATE ON SOIL SAMPLING RESULTS

- During November 2007, URS collected an additional 160 soil samples from properties adjacent to the site.
- Results provided in January 2008 indicate that, with the exception of contributions from Laurel Creek, the extent of contamination above 400 mg/kg has been defined on properties that allowed ADEQ access to collect samples.
- ADEQ has not been allowed access to one property located east of the site.







Lead in Subsurface Soil Samples at a 6-inch Depth

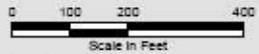
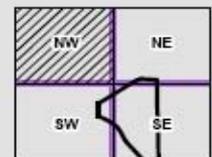
NW - Panel

Klondyke Tailings WQARF Site

Legend

- Sampling Results**
- Lead less than 10 mg/kg
 - Lead less than 400 mg/kg
 - Lead greater than or equal to 400 mg/kg

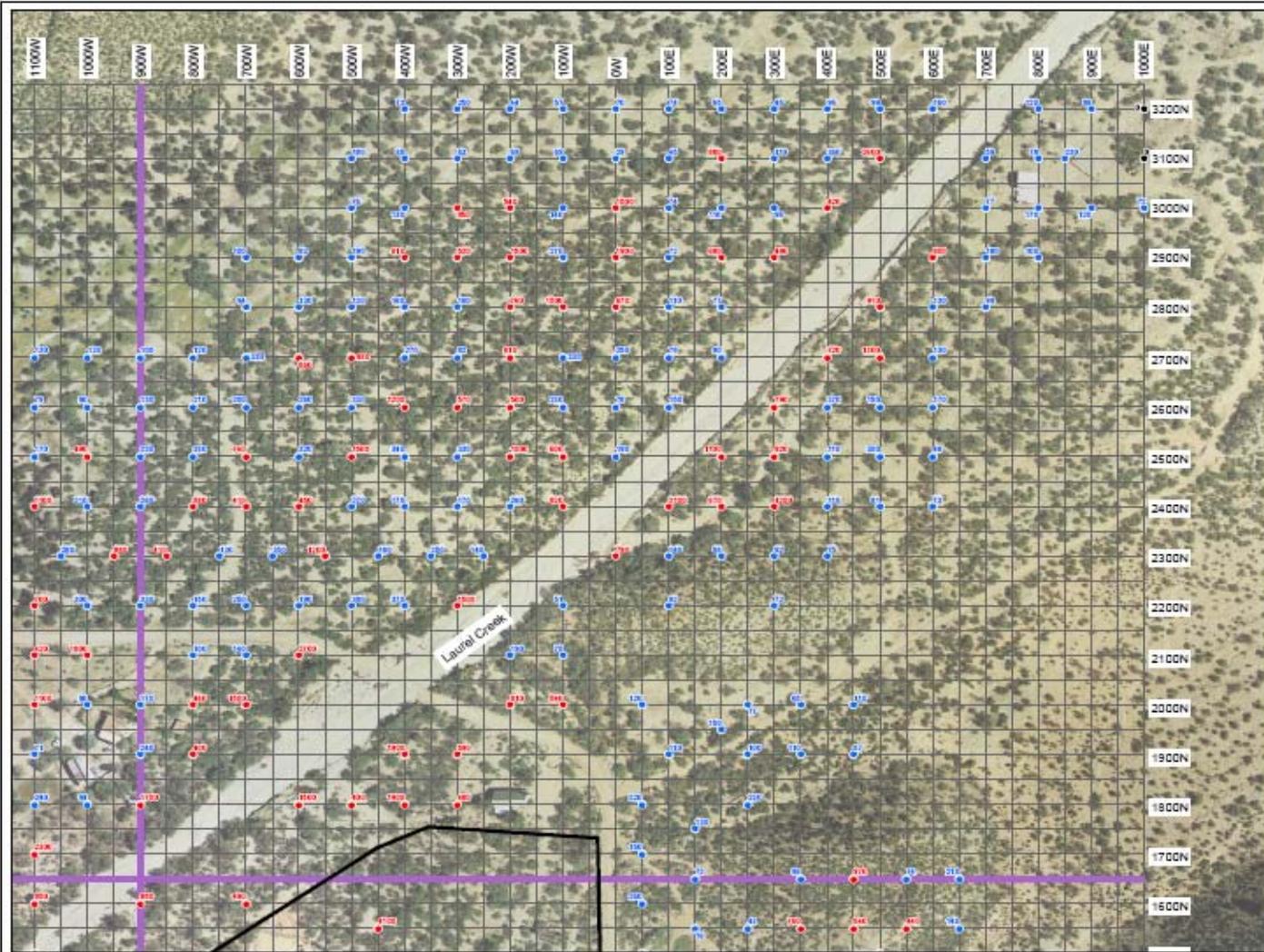
- Reference Features**
- Klondyke WQARF Site
 - Sampling Grid
 - Panel Match Line



Source: Topographical control provided by ATEAM Professional Assoc., Inc.
 Horizontal datum is NAD83 Arizona State Plane, Central Zone; Vertical datum is based on NAVD83.
 Aerial Photography provided by Kenney Aerial Mapping Inc., April 2006.



Map Produced: January 2008



Lead in Subsurface Soil Samples at a 6-inch Depth

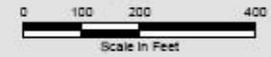
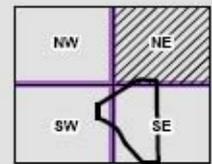
NE - Panel

Klondyke Tailings WQARF Site

Legend

- Sampling Results**
- Lead less than 10 mg/kg
 - Lead less than 400 mg/kg
 - Lead greater than or equal to 400 mg/kg

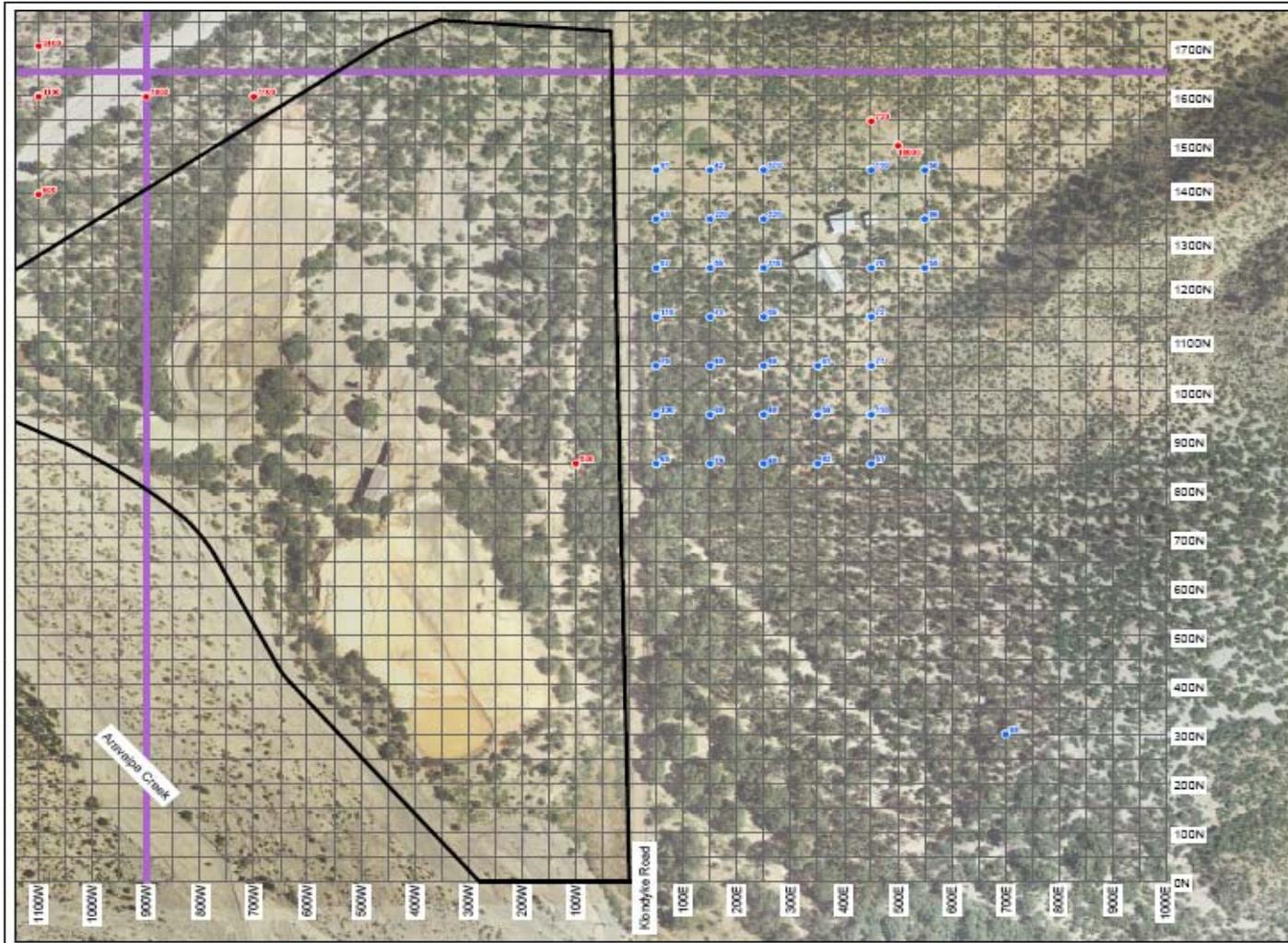
- Reference Features**
- Klondyke WQARF Site
 - Sampling Grid
 - Panel Match Line



Source: Topographical control provided by A TEAM Professional Assoc., Inc.
 Horizontal datum is NAD83 Arizona State Plane, Central Zone. Vertical datum is based on NAVD83.
 Aerial Photography provided by Kenney Aerial Mapping Inc., April 2006.



Map Produced: January 2008



Lead in Subsurface Soil Samples at a 12-inch Depth SE - Panel

Klondyke Tailings WQARF Site

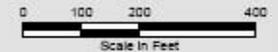
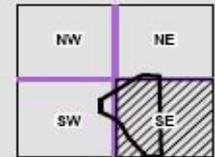
Legend

Sampling Results

- Lead less than 10 mg/kg
- Lead less than 400 mg/kg
- Lead greater than or equal to 400 mg/kg

Reference Features

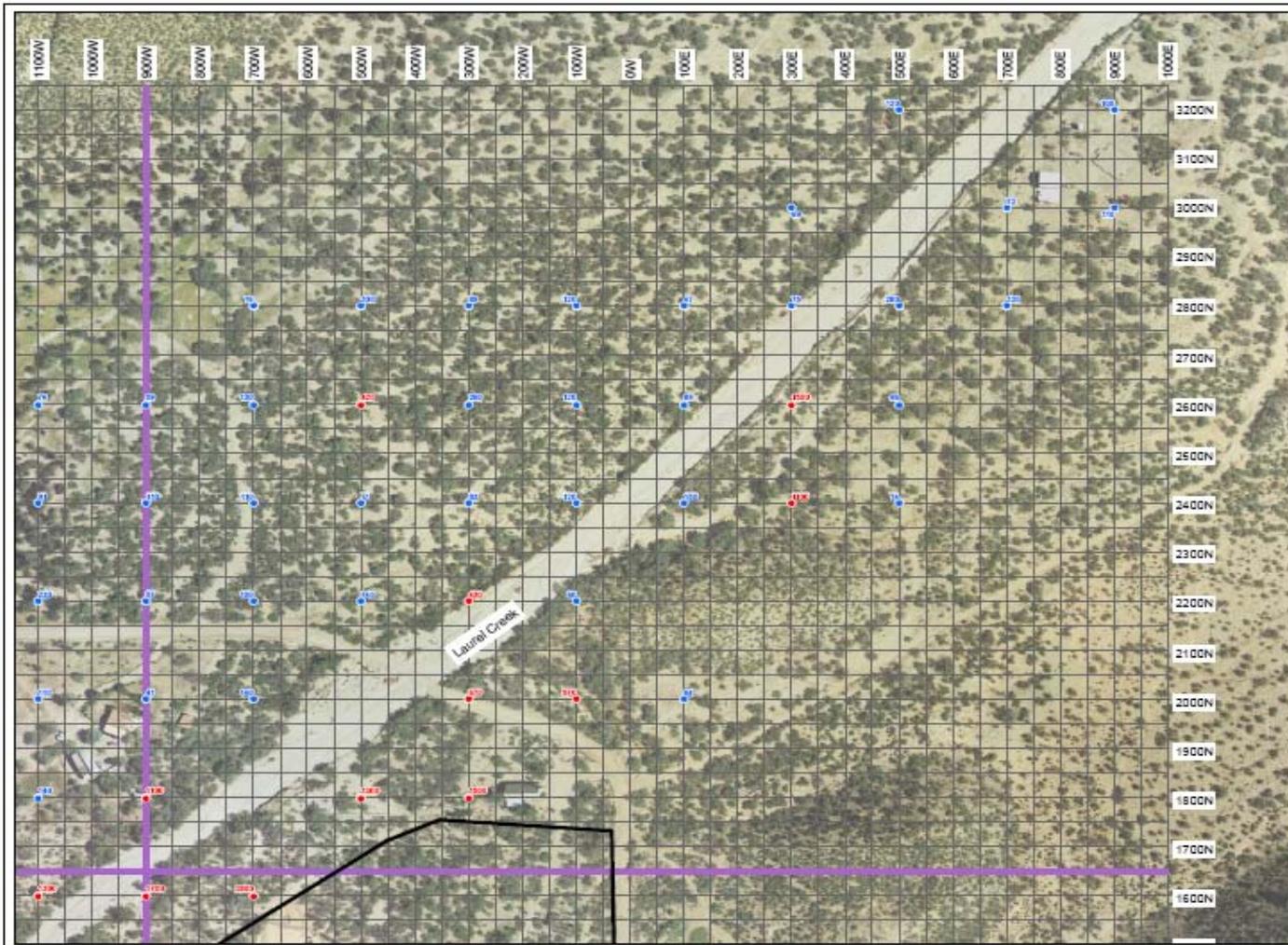
- Klondyke WQARF Site
- Sampling Grid
- Panel Match Line



Source: Topographical control provided by ATEAM Professional Assoc., Inc.
 Horizontal datum is NAD83 Arizona State Plane, Central Zone. Vertical datum is based on NAVD83.
 Aerial Photography provided by Kervey-Aerial Mapping Inc., April 2006.

URS

Map Produced: January 2008



Lead in Subsurface Soil Samples at a 24-inch Depth NE - Panel

Klondyke Tailings WQARF Site

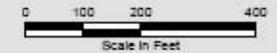
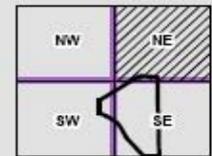
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Sampling Results

- Lead less than 10 mg/kg
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- Lead greater than or equal to 400 mg/kg

Reference Features

- Klondyke WQARF Site
- Sampling Grid
- Panel Match Line



Source: Topographical control provided by A TEAM Professional Assoc., Inc.
Horizontal datum is NAD83 Arizona State Plane, Central Zone. Vertical datum is based on NAVD83.
Aerial Photography provided by Kinsey Aerial Mapping Inc., April 2006.



Map Produced: January 2008

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EARLY RESPONSE ACTION-REVIEW

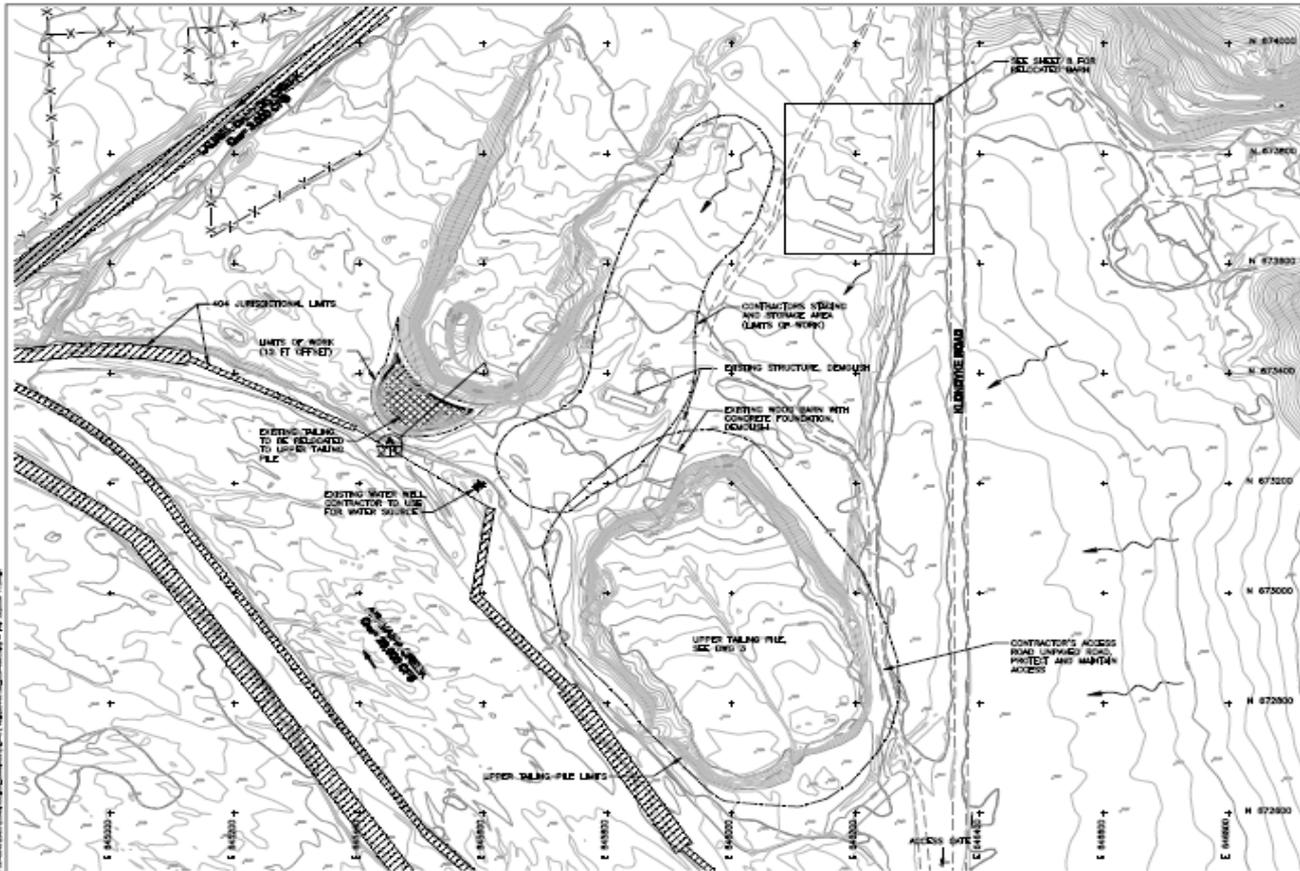
- URS provided ADEQ with an Erosion Protection Alternatives Analysis in August 2007.
 - Erosion Protection Alternatives Analysis evaluated estimated construction cost and operation and maintenance cost for several methods of erosion protection of the upper pile.



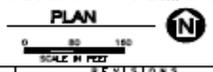
EROSION PROTECTION ALTERNATIVE	ESTIMATED CONSTRUCTION COSTS (Millions of Dollars)	
	50 - year	100 - year
Riprap	2.4	3.5
Gabion Mattress	2.3	2.3
Soil Cement	2.5	2.5
Concrete articulating mat	3.1	3.1

EARLY RESPONSE ACTION-REVIEW

- ADEQ plans to relocate a portion of the lower tailings pile, subject to 100-year flood on Aravaipa Creek, to the upper tailings pile.
- Erosion protection against 100-year flood event on Aravaipa Creek will be installed on upper tailings pile.



- GENERAL NOTES**
1. THE CONTRACTOR SHALL CALL BLUE STAKE TO VERIFY THE LOCATION OF UNDERGROUND UTILITIES AT LEAST TWO DAYS PRIOR TO BEGINNING CONSTRUCTION.
 2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.
 3. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PREVENT DESTROYING BOUNDARY CORNERS, SECTION CORNERS, AND EXISTING CONTROL POINTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF DAMAGED OR DESTROYED BOUNDARY CORNERS, SECTION CORNERS, AND CONTROL POINTS. REPLACEMENT WORK SHALL BE SUPERVISED BY A LAND SURVEYOR CURRENTLY LICENSED IN THE STATE OF ARIZONA.
 4. ALL VEGETATION WITHIN THE LIMITS OF WORK SHALL BE REMOVED. OUTSIDE THE LIMITS OF WORK UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL EXISTING TREES BELONGING, BUT NOT LIMITED TO TREES, OTHER LANDSCAPING, BENCH, FENCES, ETC. SHALL BE PROTECTED BY THE CONTRACTOR.
 5. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT IMPROVEMENTS FROM DAMAGE THAT ARE NOT CALLED OUT FOR REMOVAL. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR SHALL BE RESTORED OR REPLACED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
 6. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR WORKING CONDITIONS ON THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THE REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AS SPECIFIED BY THE TOW AND CONDITIONS.
 7. CONTRACTOR SHALL NOT WOODY EXISTING ROADS WITHOUT APPROVAL BY THE OWNER.
 8. THE CONTRACTOR SHALL HANDLE AND STORE FUELS AND OTHER FLAMMABLE MATERIALS IN ACCORDANCE WITH OSHA STANDARDS FOR FIRE PROTECTION AND PREVENTION. THESE INCLUDES INCLUDING APPROPRIATE STORAGE OF FLAMMABLE LIQUIDS, AND PREVENTION OF OPEN FLAMES WITHIN 30 FEET OF FLAMMABLE STORAGE AREAS.
 9. WHEN SLOPES AND ELEVATIONS ARE PROVIDED AND CONFLICT WITH EACH OTHER, THE PROPOSED ELEVATIONS SHALL GOVERN. THE CONTRACTOR SHALL MAINTAIN A STRAIGHT GRADE BETWEEN TWO PROPOSED ELEVATIONS UNLESS OTHERWISE NOTED.
 10. UPON COMPLETION OF WORK, CONTRACTOR SHALL RESTORE STAGING AREA TO ORIGINAL GRADE.



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PROJECT NO.		DATE	
PROJECT NAME			
PROJECT LOCATION			
PROJECT OWNER			
PROJECT ENGINEER			
PROJECT SURVEYOR			
PROJECT DRAFTER			
PROJECT CHECKER			
PROJECT APPROVER			

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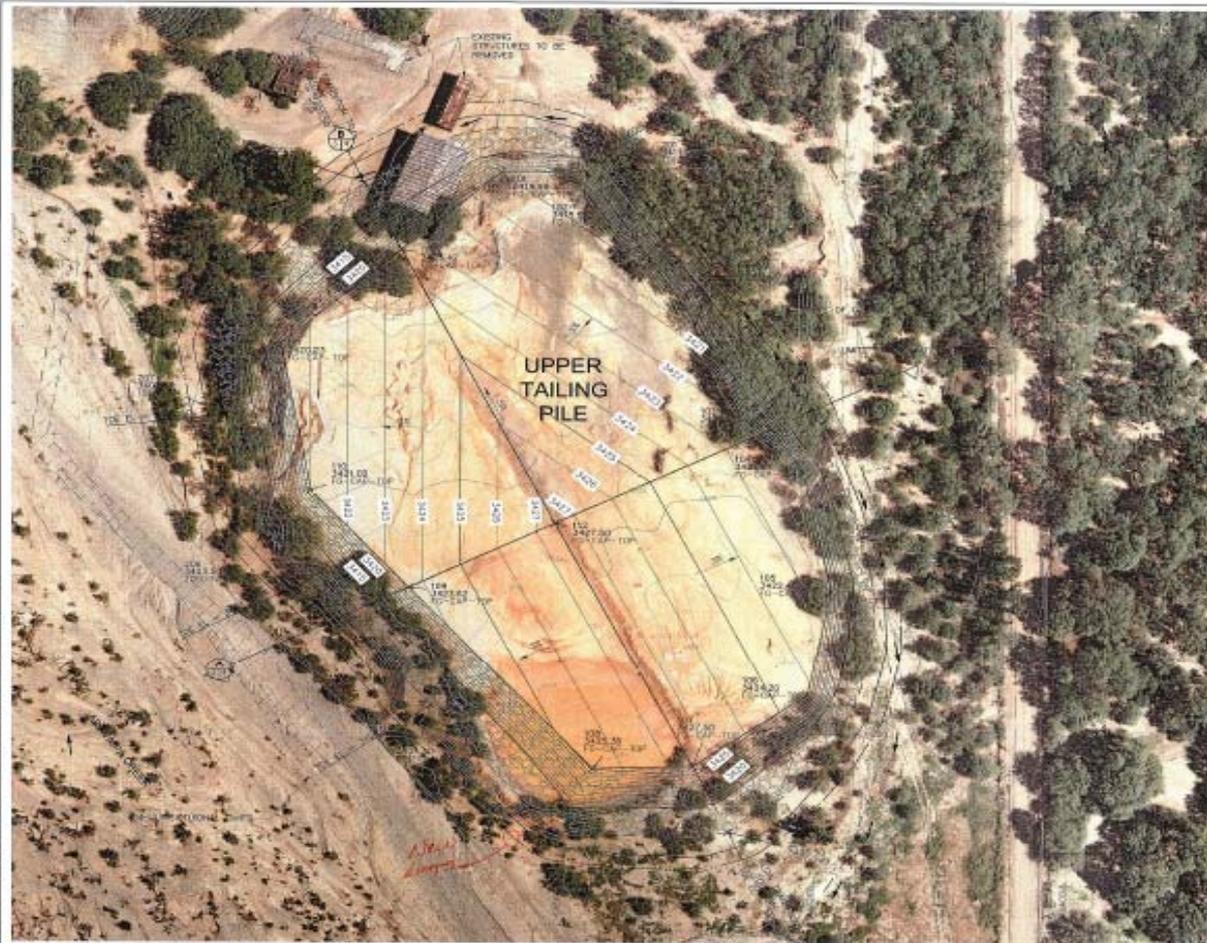
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EARLY RESPONSE ACTION UPDATE

- The gabion mattress alternative was recommended by URS in September 2007. URS recommended the gabion mattress based on cost, availability of contractors qualified to install the mattresses, ease of construction and long term reliability. ADEQ agreed with the recommendation in October 2007.
- ADEQ and URS meet with the U.S. Corps of Engineers in December 2007. The Corps indicated that as long as construction activities remained outside the normal high water mark of Aravaipa Creek, no Clean Water Act Section 404 permits would be required.






 UPPER TAILING PILE
 GRADING PLAN
 PLAN

 SCALE: 1" = 40'

REFERENCES		REFERENCES		REVISIONS		REVISIONS	
NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DATE	BY	DESCRIPTION
1	AS NOTED						
2							
3							
4							
5							

DATE	AS NOTED	D
BY		
CHECKED		
APPROVED		



URS
1725 N. 19th Street
Phoenix, Arizona 85016

PRELIMINARY
NOT FOR
CONSTRUCTION

KLONDYKE

**UPPER TAILING PILE
GRADING PLAN**

FIGURE

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EARLY RESPONSE ACTION UPDATE

- During the week of March 24, 2008 URS and their subcontractor, Environmental Response Inc. (ERI), began clearing and grubbing activities at the site in preparation for construction of the erosion protection on the upper tailings piles.
- During the next few weeks, ERI will begin hauling in rip-rap, to be used in the construction of the gabion mattresses, and clean fill material from a borrow pit near Highway 70 for capping the tailings.

EARLY RESPONSE ACTION UPDATE

- During this hauling period, the Klondyke road will be used heavily at periods and may experience congestion from dump trucks and dust control water trucks.
- During the week of March 24, 2008, residents in the area were notified of these activities.

Questions?

Contact Information

Scott Goodwin, Project Manager
Remedial Projects Section

sdg@azdeq.gov

(602) 771-4452, 1800-234-5677 ext 771-
4452