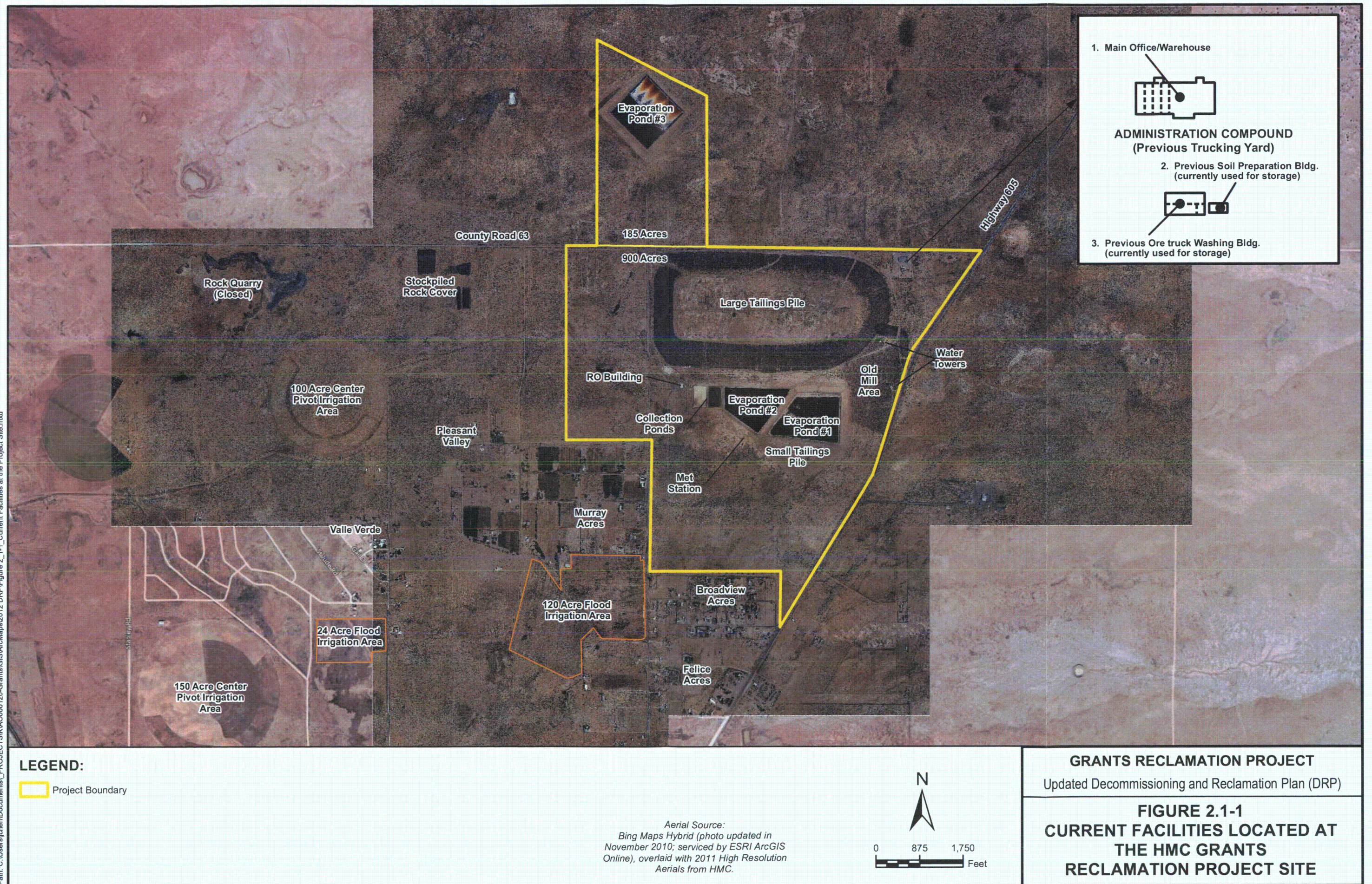




ARCADIS

Figures

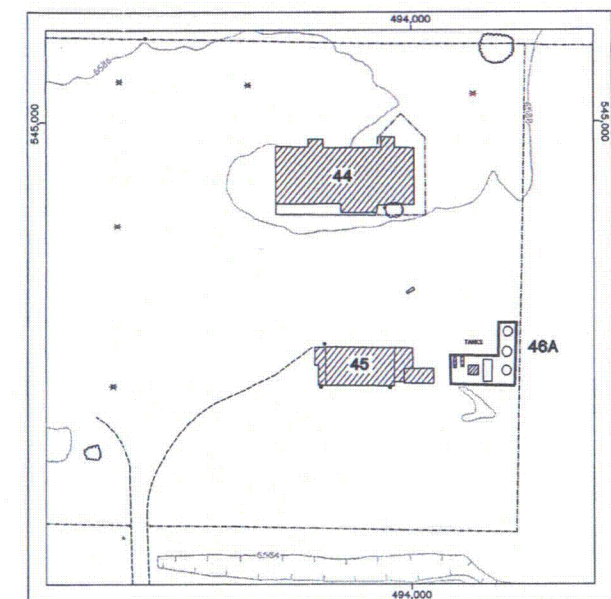






MILL FACILITIES

- ORE RECEIVING SECTION
 1. ORE RECEIVING SCALE (WM)
 2. ORE STORAGE PAD (C)
 - 2A. ORE STORAGE PAD (C)
- CRUSHING AND SAMPLING SECTION
 3. GRIZZLY (S)
 4. CRUSHER (SM)
 5. ROTARY DRYER (SM)
 - 5A. BELT TRANSFER BUILDING (SM)
 6. RECIPROCATING SAMPLERS (SM)
- FINE ORE STORAGE SECTION
 7. FINE ORE BINS (RC)
 - 7A. FINE ORE BIN (CS)
- GRINDING SECTION
 8. BALL MILLS (SM)
 - 8A. ROASTER (S)
 9. THICKENER TANKS (WS)
- URANIUM LEACHING SECTION
 10. PRESSURE LEACHING AUTOCLAVES (SM)
 - 10A. MIXING TANKS (SM)
 11. ATMOSPHERIC LEACHING PACHUCA TANKS
 12. FILTERS (SFM)
 - 12A. VACUUM PUMPS (SM)
 13. SOLUTION STORAGE TANK (WS)
 14. TAILINGS SLURRY PIPELINE (S)
 15. TAILINGS POND ION EXCHANGE (SM, CWS)
 - 15A. ION EXCHANGE PRECIPITATION UNIT (SM)
- PRECIPITATION SECTION
 16. PREGNANT SOLUTION TANK (CWS)
 17. PRECIPITATION TANKS (CS)
 18. PRECIPITATION TANKS (CS)
 19. PRECIPITATE THICKENER TANKS (S)
- VANADIUM REMOVAL SECTION
 20. ROASTING FURNACE (S)
- PACKING-STORAGE AND SHIPPING SECTION (SM)
 21. YELLOWCAKE DRYING FURNACE (S)
 22. YELLOWCAKE PACKAGING (SM)
 - 22A. YELLOWCAKE PACKAGING (SM)
 23. YELLOWCAKE DRUM STORAGE AND LOADOUT
- MISCELLANEOUS STRUCTURES
 24. ADMINISTRATIVE BUILDING (CB)
 25. GARAGE (PCW)
 26. SHOP (SM)
 27. WAREHOUSE (SM)
 - 27A. OIL STORAGE (SM)
 - 27B. MAIN WAREHOUSE (SM)
 28. LABORATORY (CB)
 29. SAMPLING PLANT (SM)
 30. ELECTRIC SHOP (PCW)
 31. INSTRUMENT SHOP (PCW)
 32. CARPENTER SHOP (WM)
 33. CHANGE HOUSE (CB)
 - 33A. GUARD SHACK (SM)
 34. POWER HOUSE (SM)
 35. ENVIRONMENTAL LAB. (PCW)
 36. COMPRESSOR HOUSE (SM)
 37. ELECTRICAL STORAGE (PCW)
 38. WATER TANK (S)
 - 38A. WATER TANK (S)
 39. TRAINING BUILDING (WM)
 40. STORAGE UNIT (SEE INDIVIDUAL UNITS ON PLAN)
 41. COOLING TOWER (CS)
 42. BOILERS (S)
 43. WELL
 44. TRUCK SHOP (SM)
 45. TRUCK STORAGE (SM)
 46. FUEL TANK (S)
 - 46A. FUEL TANKS (S)
 47. ELECTRIC VAULT (RC)



TRUCK SHOP AREA

LEGEND

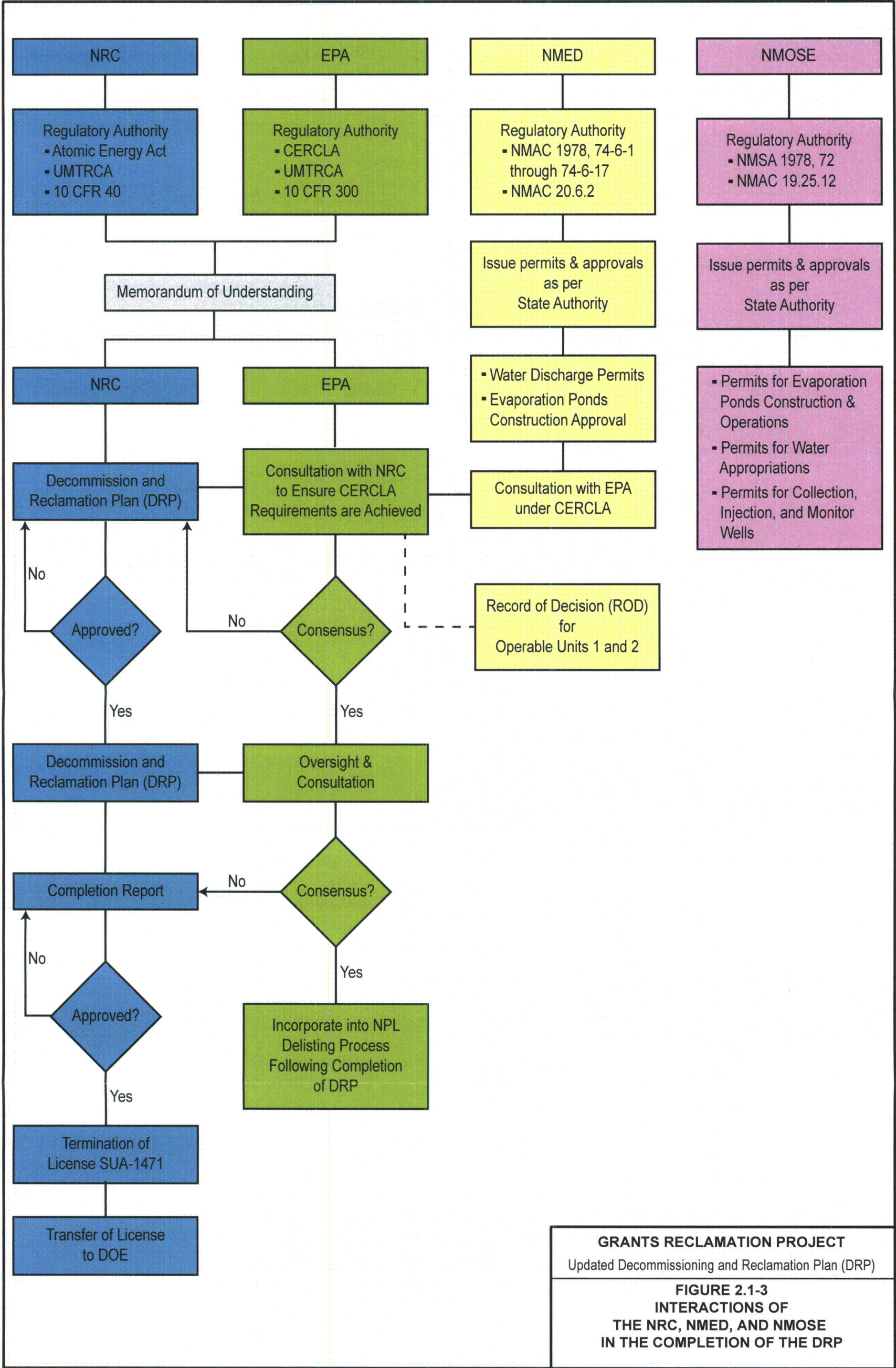
- STRUCTURES TO BE LEFT IN PLACE
- FENCE
- CLEAN AREA FOR PRE-RELEASE STORAGE OF SALVAGE
- (SM) STEEL FRAME, METAL SIDING/ROOF
- (WM) WOOD FRAME, METAL SIDING/ROOF
- (C) CONCRETE
- (RC) REINFORCED CONCRETE
- (CWS) CONCRETE PEDESTAL, WOOD BEAMS, STEEL TANK
- (WS) WOOD PILINGS AND BEAMS, STEEL TANK
- (CS) CONCRETE PEDESTAL, STEEL TANK
- (S) ALL STEEL
- (SFM) STEEL FRAME, FIBERGLASS AND METAL SIDING
- (PCW) PRE-CAST CONCRETE WALLS, WOOD FRAME ROOF
- (W) WOOD STRUCTURE
- (CB) CEMENT BLOCK WALLS, WOOD FRAME ROOF

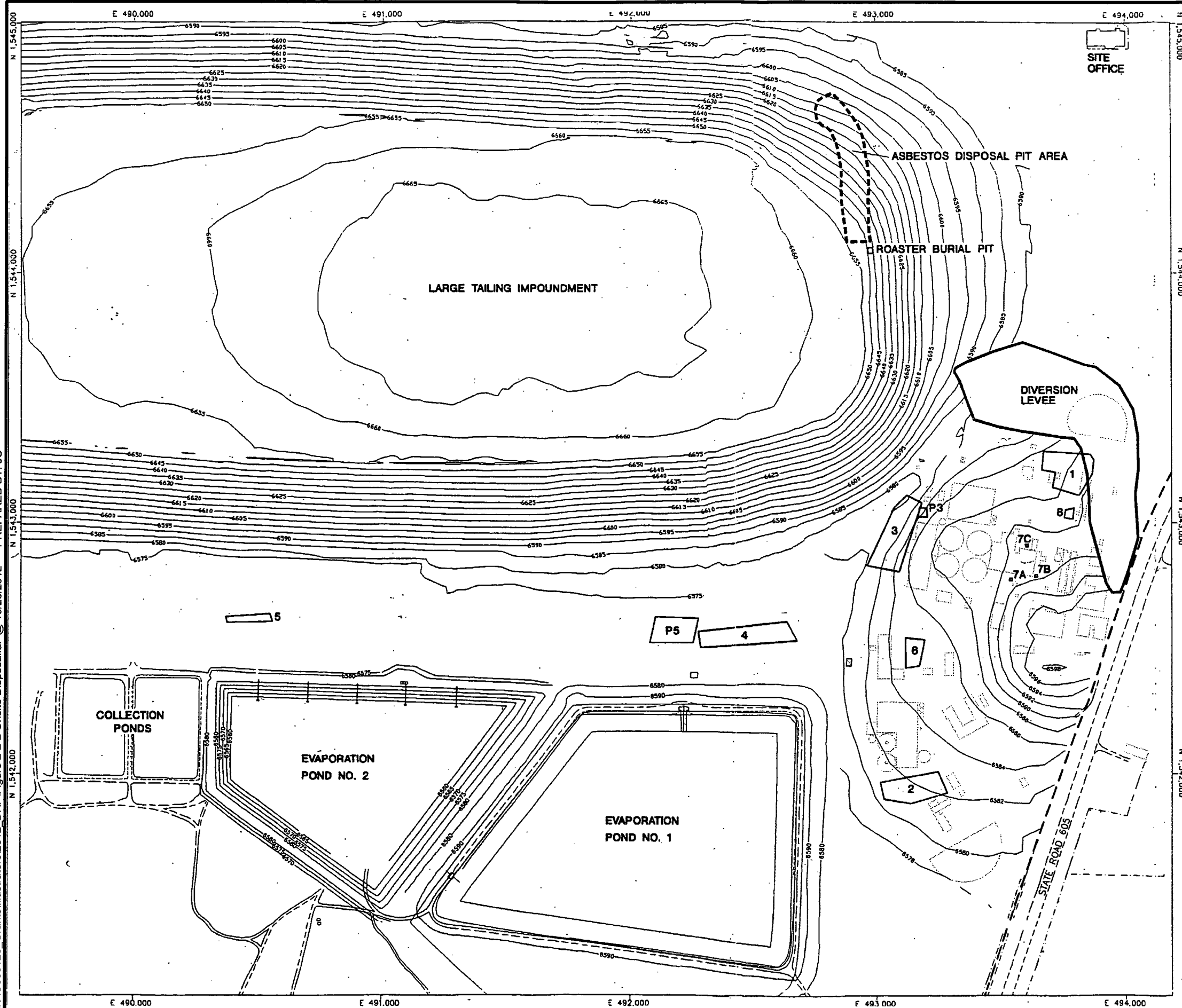
0 150 300
Feet

MILL AREA

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FIGURE 2.1-2
HMC MILL FACILITIES DURING
URANIUM PRODUCTION
OPERATIONS



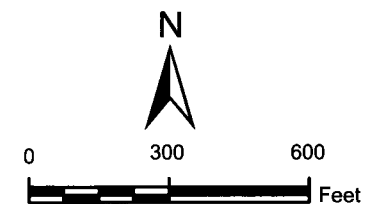


LEGEND

- 6590 — ELEVATION IN FEET ABOVE MSL
- - - - - BOUNDARY OF LICENSED AREA
- 8 □ DEBRIS DISPOSAL PIT

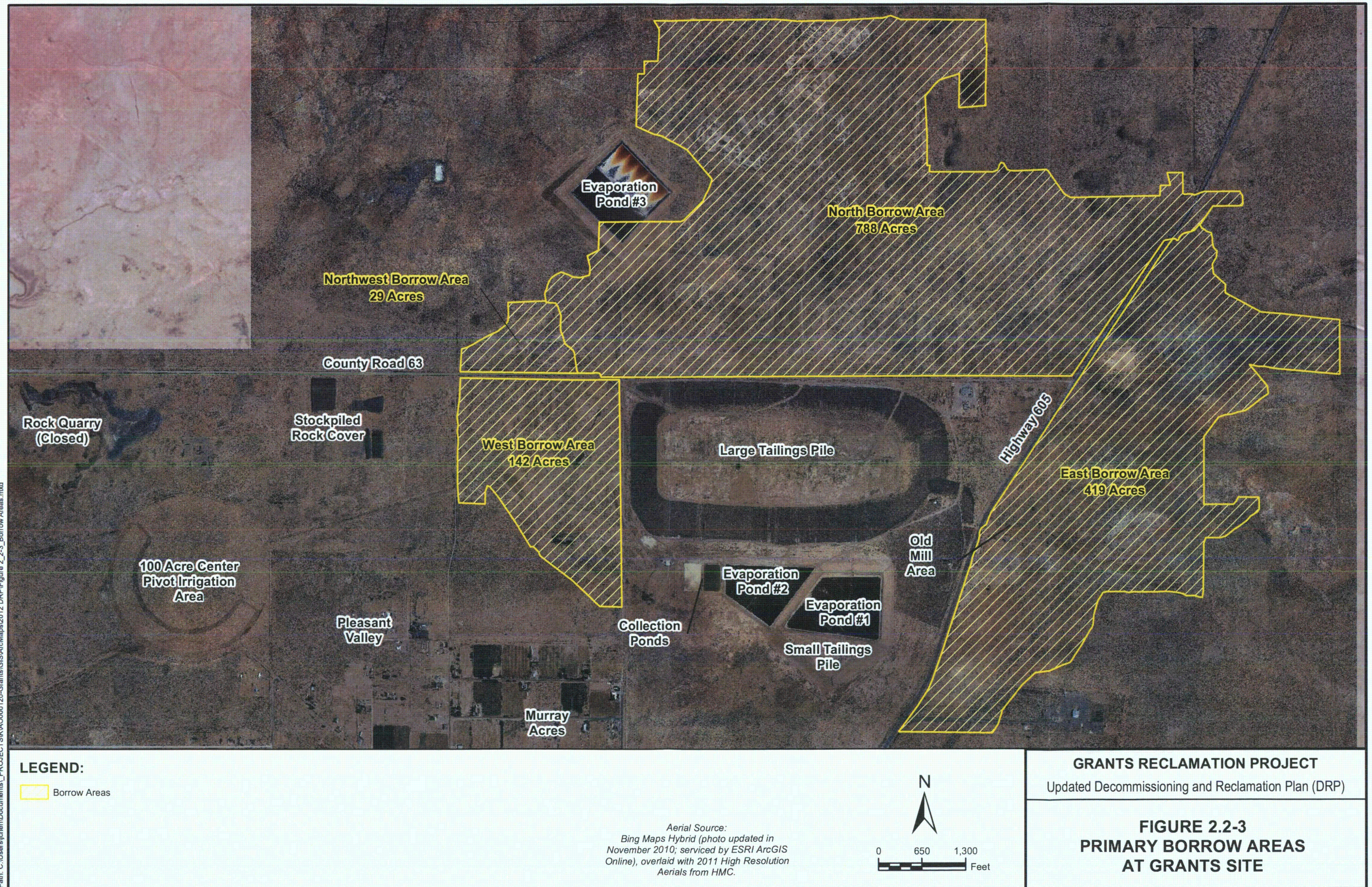
MILL AREA CONTOURS FROM LAND SURVEY OF 12/95

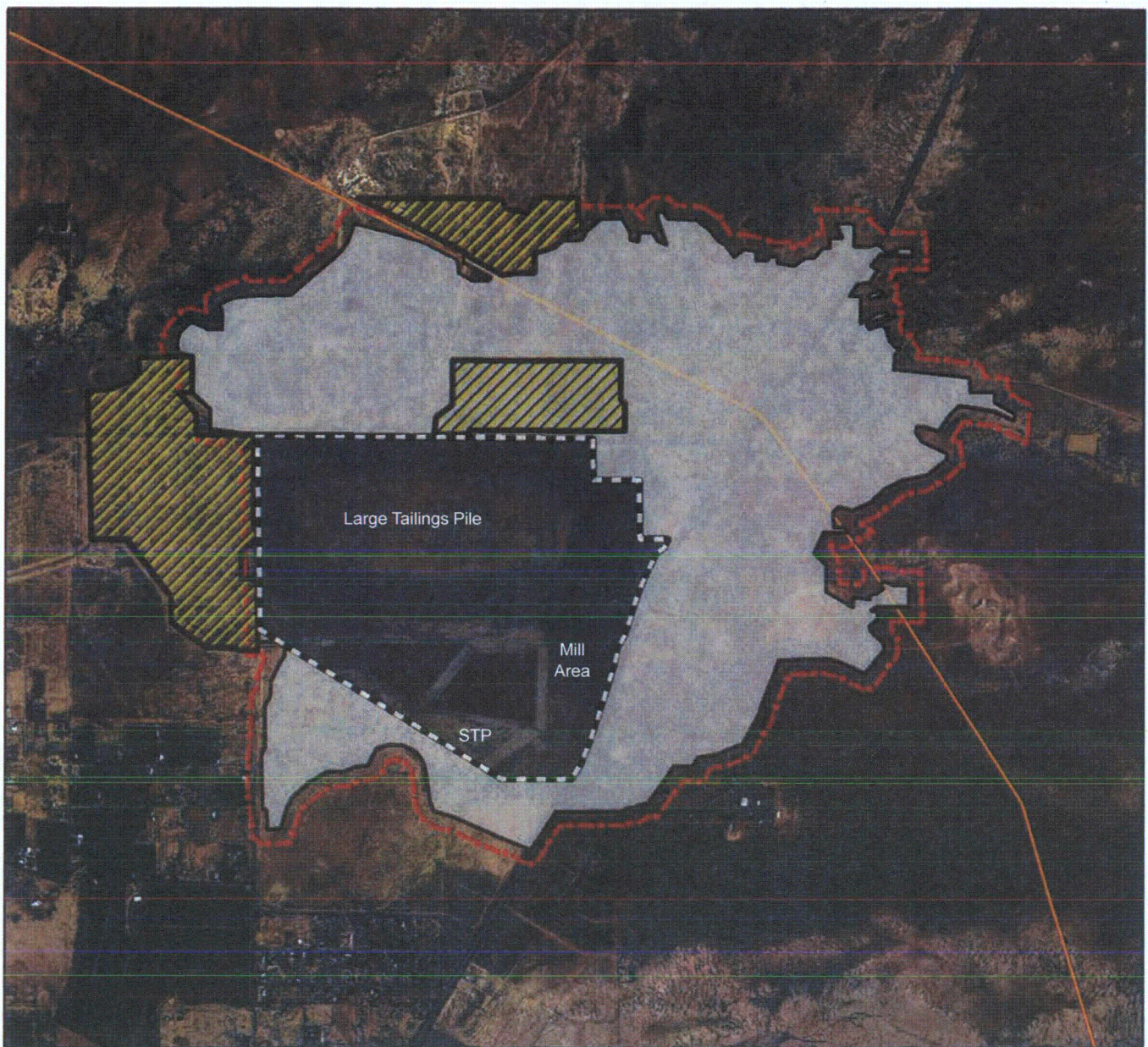
Source: HMC 1996



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FIGURE 2.2-2
HMC MILL DECOMMISSIONING
ONSITE DISPOSAL SITES





Soil Excavation and Cleanup Verification Zones

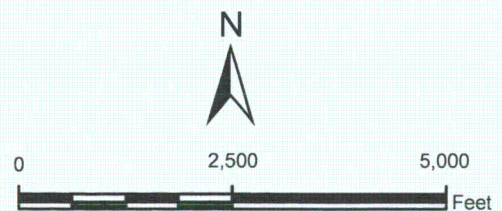
-  Inner Zone Area
-  Outer Zone Area
-  Borrow Area Activities
-  Scraped Area Boundary Offset
-  Transwestern Pipeline

STP = Small Tailings Pile

The Inner and Outer Zones Used for Soil Verification

Prepared by:
Anderson Engineering Co., Inc.
10/20/1995 FIG 3-2.DWG

Source: ERG 1995



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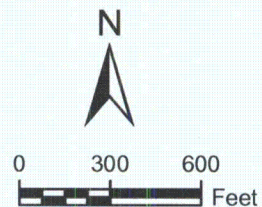
FIGURE 2.2-4
HMC PROJECT AREAS OF SOIL
EXCAVATION AND CLEANUP
VERIFICATION ZONES



LEGEND:

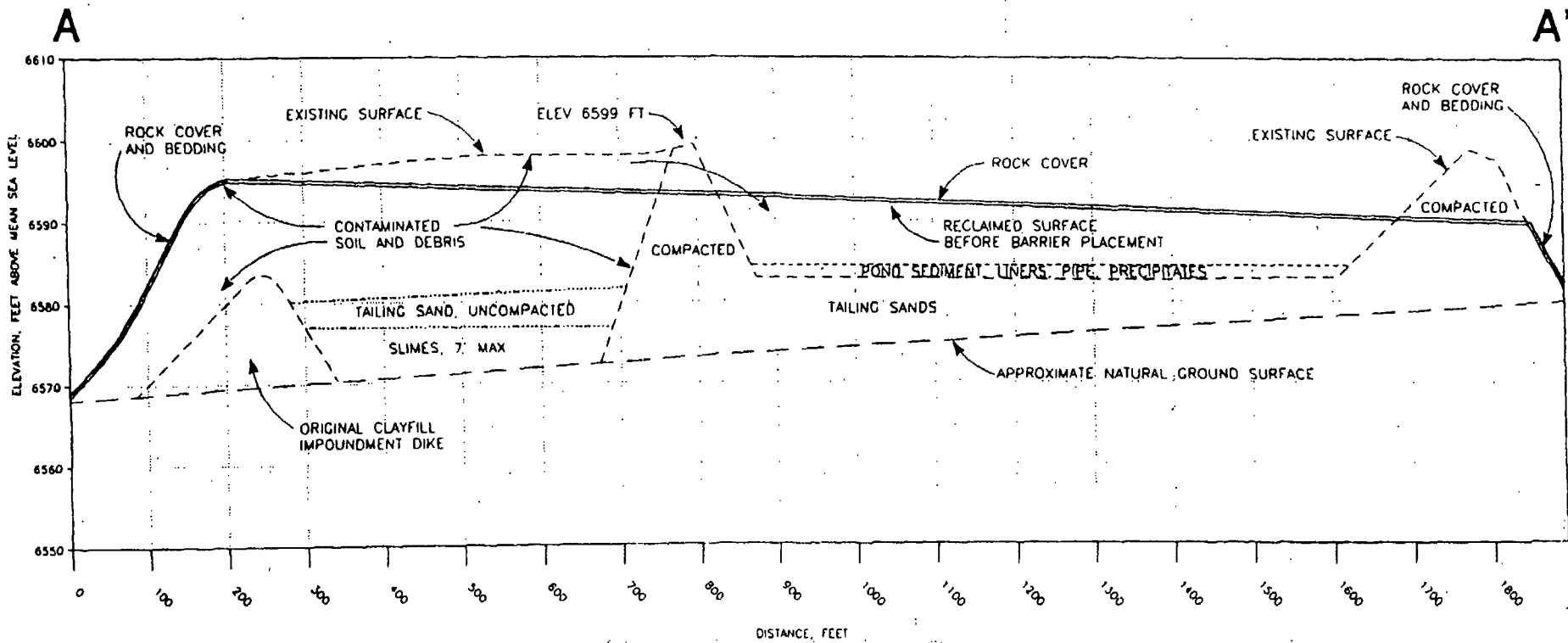
-  Small Tailings Pile
-  South Triangle Area

Aerial Source:
2011 High Resolution Aerials from HMC.



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FIGURE 2.2-5
PONDS SOUTH OF LARGE
TAILINGS PILE



10X VERTICAL EXAGGERATION

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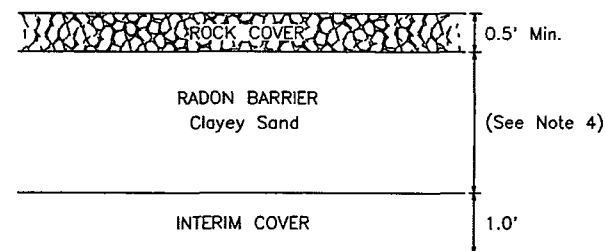
FIGURE 2.2-6
CROSS SECTION DESIGN OF
RECONTOURED SMALL TAILINGS PILE

Source: Figure 3-2 in FINAL RADON BARRIER DESIGN FOR THE SMALL TAILINGS PILE, Environmental Restoration Group, Inc. and AK GeoConsult Inc 1996.

K:\AC000120_Grants\Illustrations\2012_DRP\Figure 2.2-7 Design Details of Reclamation Plan - LTP.ai @ 10/29/2012 FORMATTED BY: JC

Typical Cross Section of Soil and Rock Cover on Top of Tailings Piles

(Not to Scale)

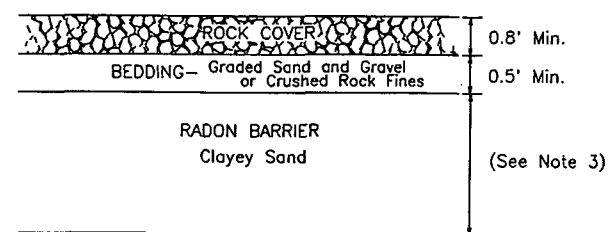


NOTES:

- 1) COVER SOIL TO BE COMPACTED TO AT LEAST 95% DENSITY PER ASTM D-698.
- 2) ROCK COVER CONSTRUCTED OF BASALT WITH d_{50} NOT LESS THAN 1.0 INCHES.
- 3) INTERIM COVER IS SANDY SOIL (SM, SP, OR SC).
- 4) RADON BARRIER THICKNESSES ARE THOSE CONTAINED IN LICENSE AMENDMENT NO. 22 (LICENSE CONDITIONS 37A AND 37b) OF 10/10/95. ACTUAL THICKNESSES BASED ON ADDITIONAL FIELD TESTING AND ANALYSES.

Typical Cross Section of Soil and Rock Cover on Side Slopes of Tailings Piles

(Not to Scale)

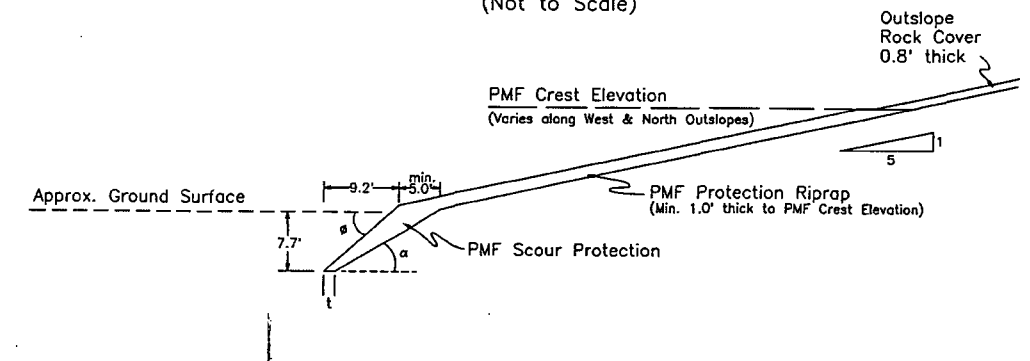


NOTES:

- 1) COVER SOIL TO BE COMPACTED TO AT LEAST 95% MAXIMUM DENSITY PER ASTM D-698.
- 2) ROCK COVER OF NOT LESS THAN 0.80 FEET OF BASALT WITH $d_{50} \geq 4.7$ INCHES OVER BEDDING LAYER OF GRADED SAND AND GRAVEL OR CRUSHED ROCK FINES.
- 3) RADON BARRIER THICKNESSES ARE THOSE CONTAINED IN LICENSE AMENDMENT NO. 22 (LICENSE CONDITIONS 37A AND 37b) OF 10/10/95. ACTUAL THICKNESSES BASED ON ADDITIONAL FIELD TESTING AND ANALYSES.

Side Slope Scour Protection and Riprap Design

(Not to Scale)

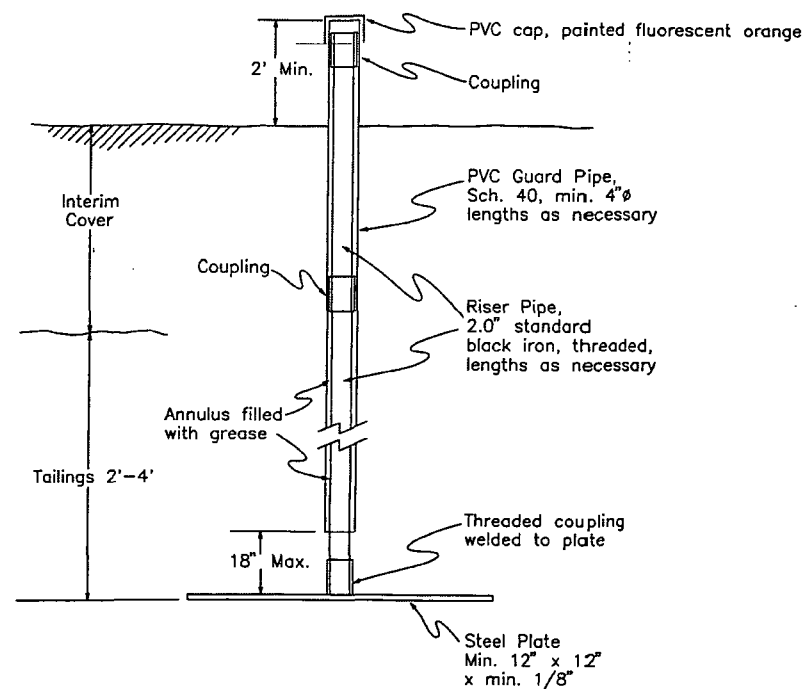


NOTES:

- 1) SCOUR PROTECTION ROCK DUMPED IN EXCAVATED TRENCH TOP WIDTH MINIMUM 5.0 FEET AND BOTTOM WIDTH MINIMUM 1.0 FEET; TRENCH BACKFILLED AFTER ROCK PLACEMENT.
- 2) $d_{50} \geq 4.7$ INCHES FOR OUTSLOPE COVER, RIPRAP, AND SCOUR PROTECTION.
- 3) ϕ = NATURAL ANGLE OF REPOSE OF ANGULAR ROCK; ASSUMED = 40° (CONSERVATIVE).
 α = 30° OR LESS.
 t = 2.0 FEET.
- 4) ROCK SIZES WILL BE INCREASED, IF NECESSARY, TO SATISFY OVERSIZING STANDARDS RELATED TO DURABILITY SCORES.
- 5) RADON BARRIER THICKNESSES ARE THOSE CONTAINED IN LICENSE AMENDMENT NO. 22 (LICENSE CONDITIONS 37A AND 37b) OF 10/10/95. ACTUAL THICKNESSES BASED ON ADDITIONAL FIELD TESTING AND ANALYSES.

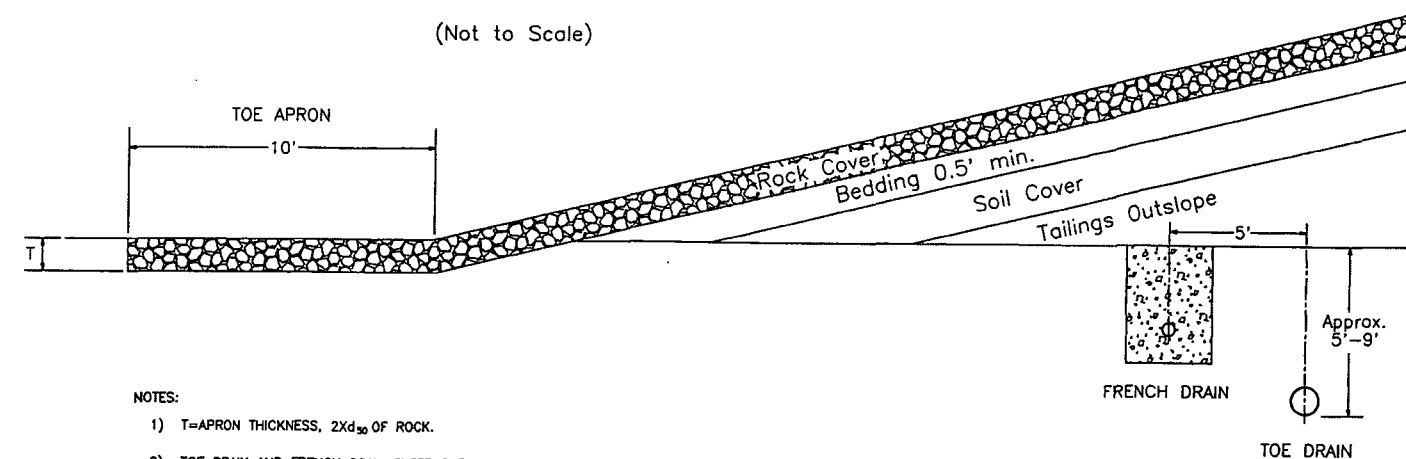
Settlement Monitoring Point

(Not to Scale)



Side Slope Toe Detail

(Not to Scale)



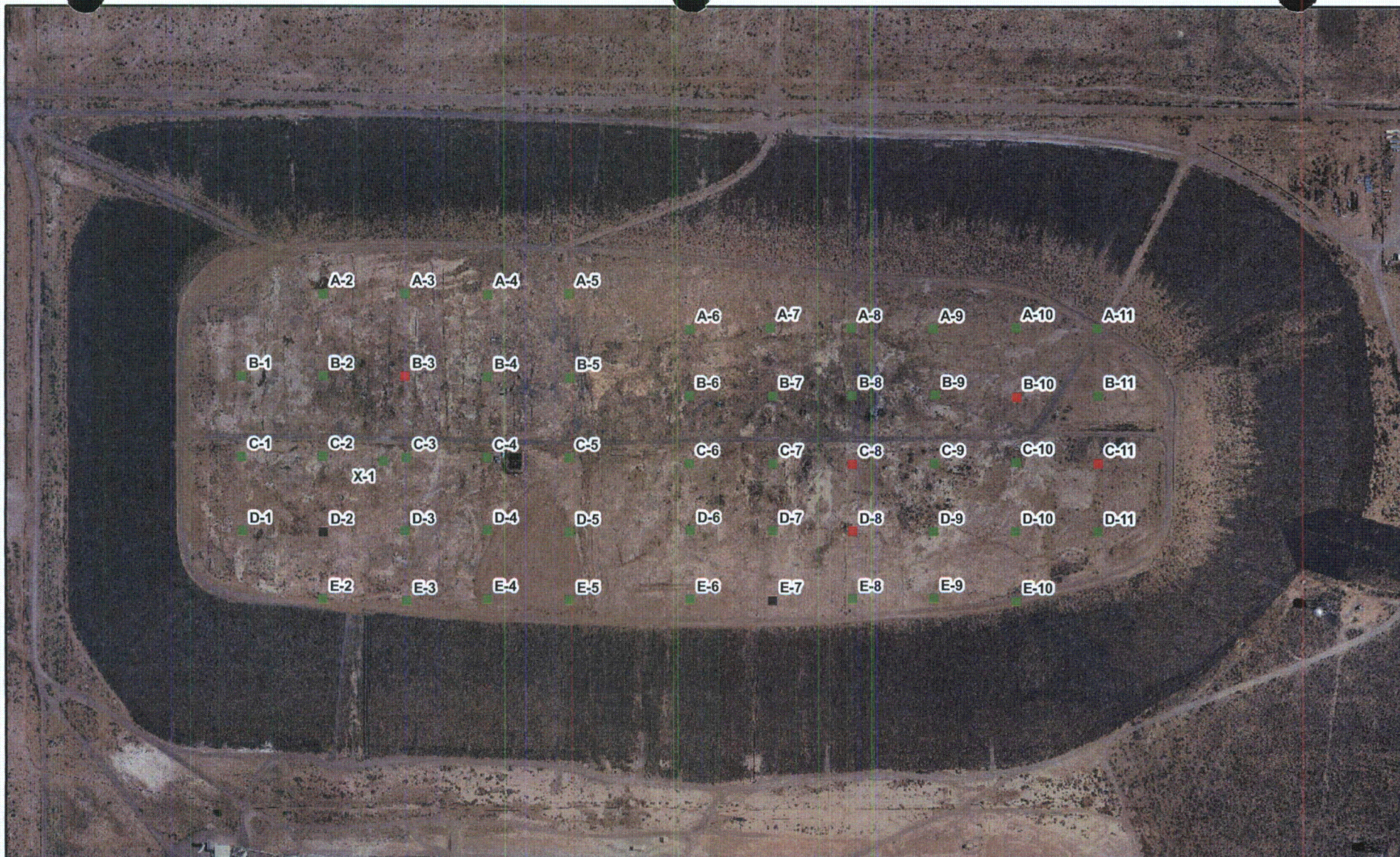
NOTES:

- 1) T=APRON THICKNESS, $2Xd_{50}$ OF ROCK.
- 2) TOE DRAIN AND FRENCH DRAIN SYSTEMS EXTEND AROUND ENTIRE PERIMETER.
- 3) FRENCH DRAIN TO BE INSTALLED IN 1993. 2" DIA. PVC SLOTTED PIPE 4 TO 6 FEET DEEP IN TRENCH FILLED WITH GRADED SAND AND GRAVEL.
- 4) TOE DRAIN INSTALLED IN 1992. 6" DIA. CORRUGATED HDPE SLOTTED PIPE WITH FILTER CLOTH.

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Updated Decommissioning and Reclamation Plan (DRP)

FIGURE 2.2-7 DESIGN DETAILS RECLAMATION PLAN LARGE TAILINGS PILE

Prepared by AK GeoConsult, Inc.
Revised 08/2011.

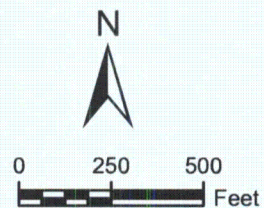


LEGEND:

Status

- Operating
- Damaged
- Destroyed

Aerial Source:
2011 High Resolution Aerials from HMC.



GRANTS RECLAMATION PROJECT
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FIGURE 2.2-8
SETTLEMENT MONITORING
POINT LOCATIONS

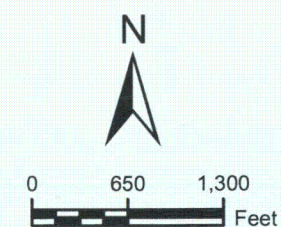
CITY: Boulder, CO; D:\AFTER: J. CHEN
Path: C:\Users\jchen\Documents\PROJECTS\KVA0000120-Grants\GIS\ArcMaps\2012 DRP\Figure 2.2-9 Site Drainages and Scour Trench Location.mxd



LEGEND:

- County Road 63 Drainage Crossing
- Diversion Levee
- Scour Trench
- West Drainage Channel
- North Drainage Channel
- Proposed South Drainage Channel
- Small Tailings Pile Drainage Channel

Aerial Source:
Bing Maps Hybrid (photo updated in
November 2010; serviced by ESRI ArcGIS
Online).



GRANTS RECLAMATION PROJECT
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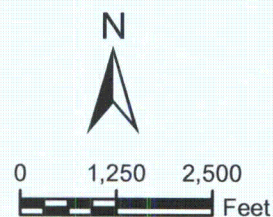
FIGURE 2.2-9
SITE DRAINAGES AND
SCOUR TRENCH LOCATIONS



LEGEND:

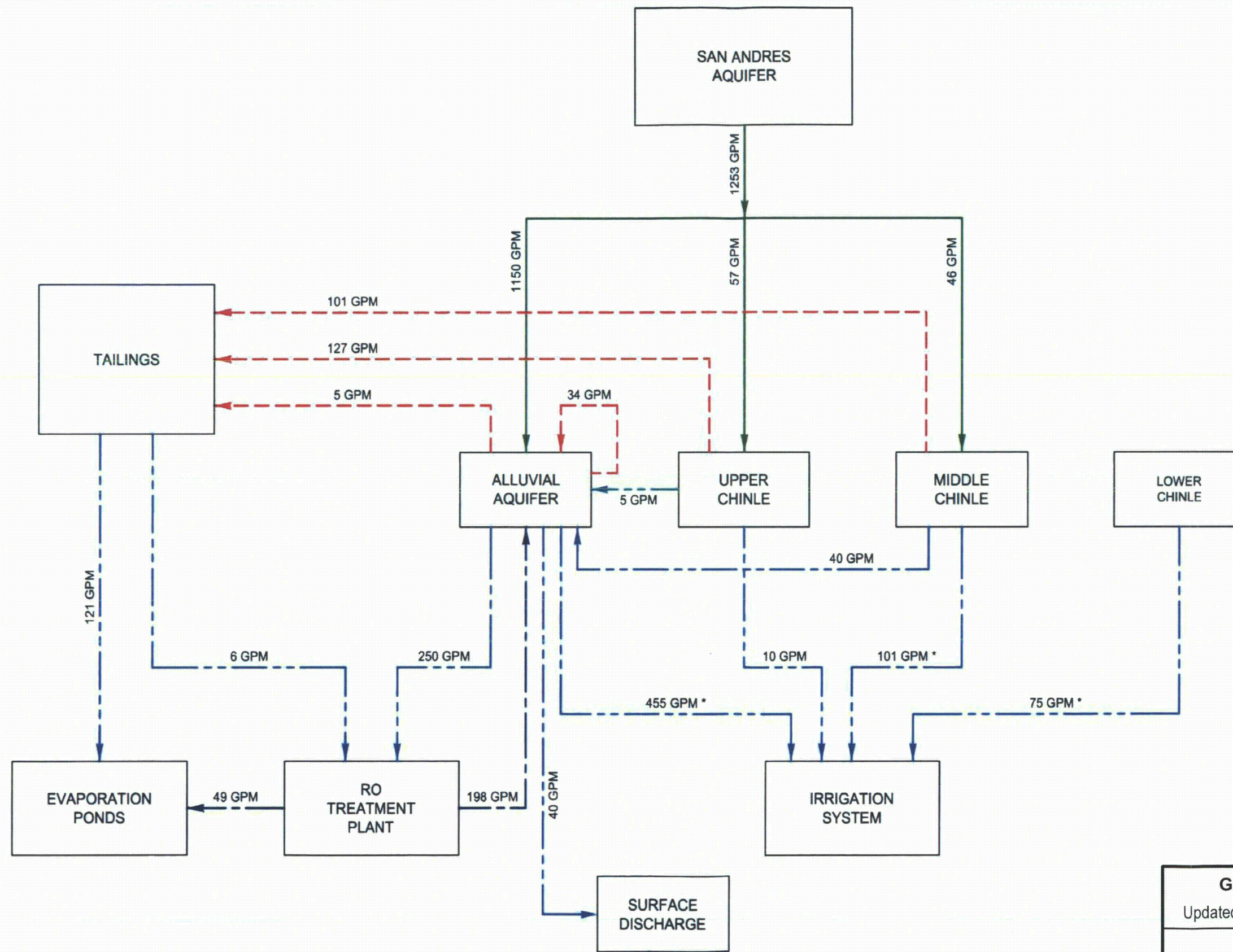
- Project Boundary
- 100 Year Floodplain

Aerial Source:
Bing Maps Aerial (photo updated in
November 2010; serviced by ESRI ArcGIS
Online), overlaid with 2011 High Resolution
Aerials from HMC.



GRANTS RECLAMATION PROJECT
Updated Decommissioning and Reclamation Plan (DRP)

FIGURE 2.2-10
100-YEAR FLOODPLAIN (FEMA 2010) MAP
FOR HMC PROJECT AREA

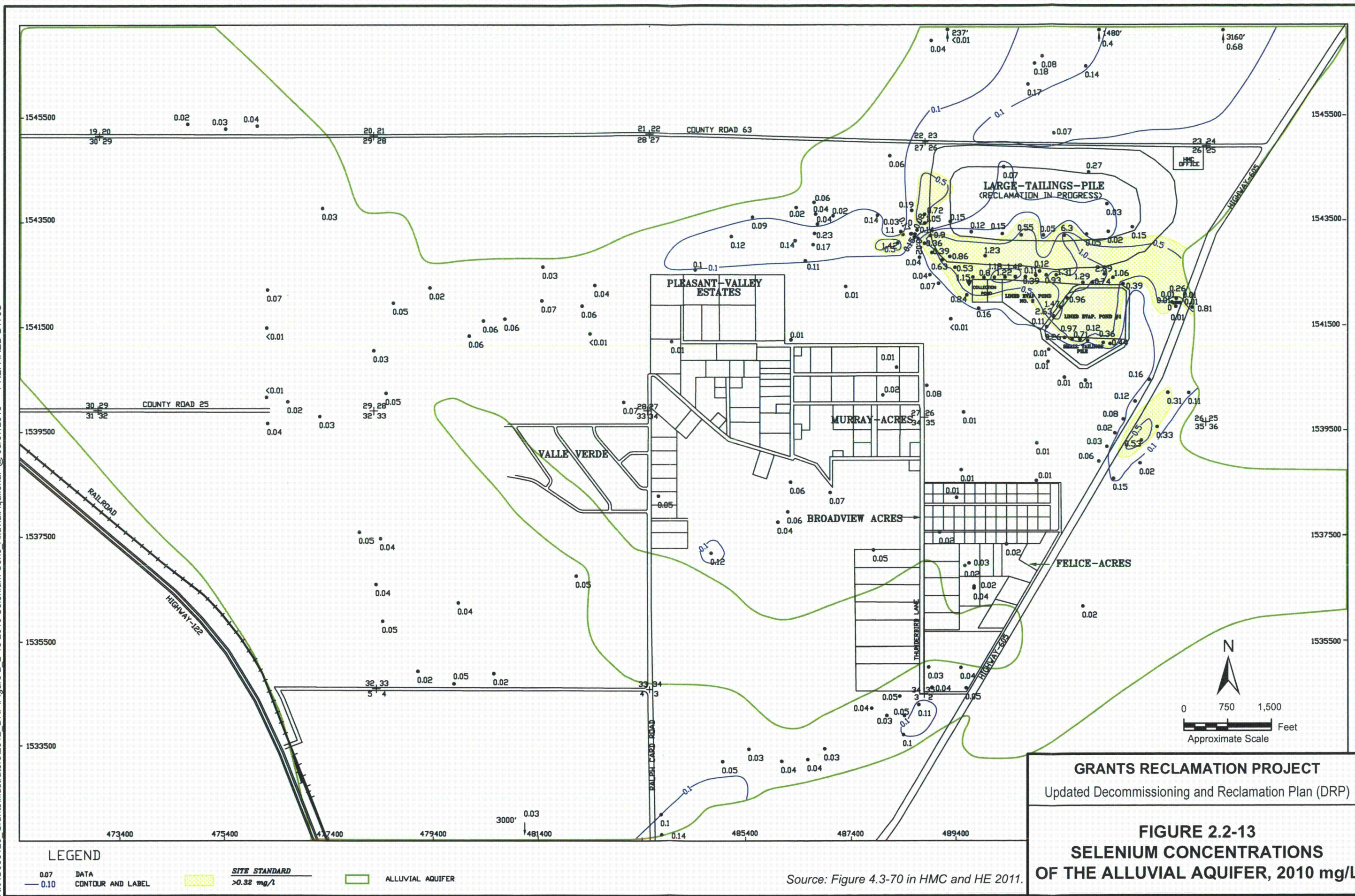


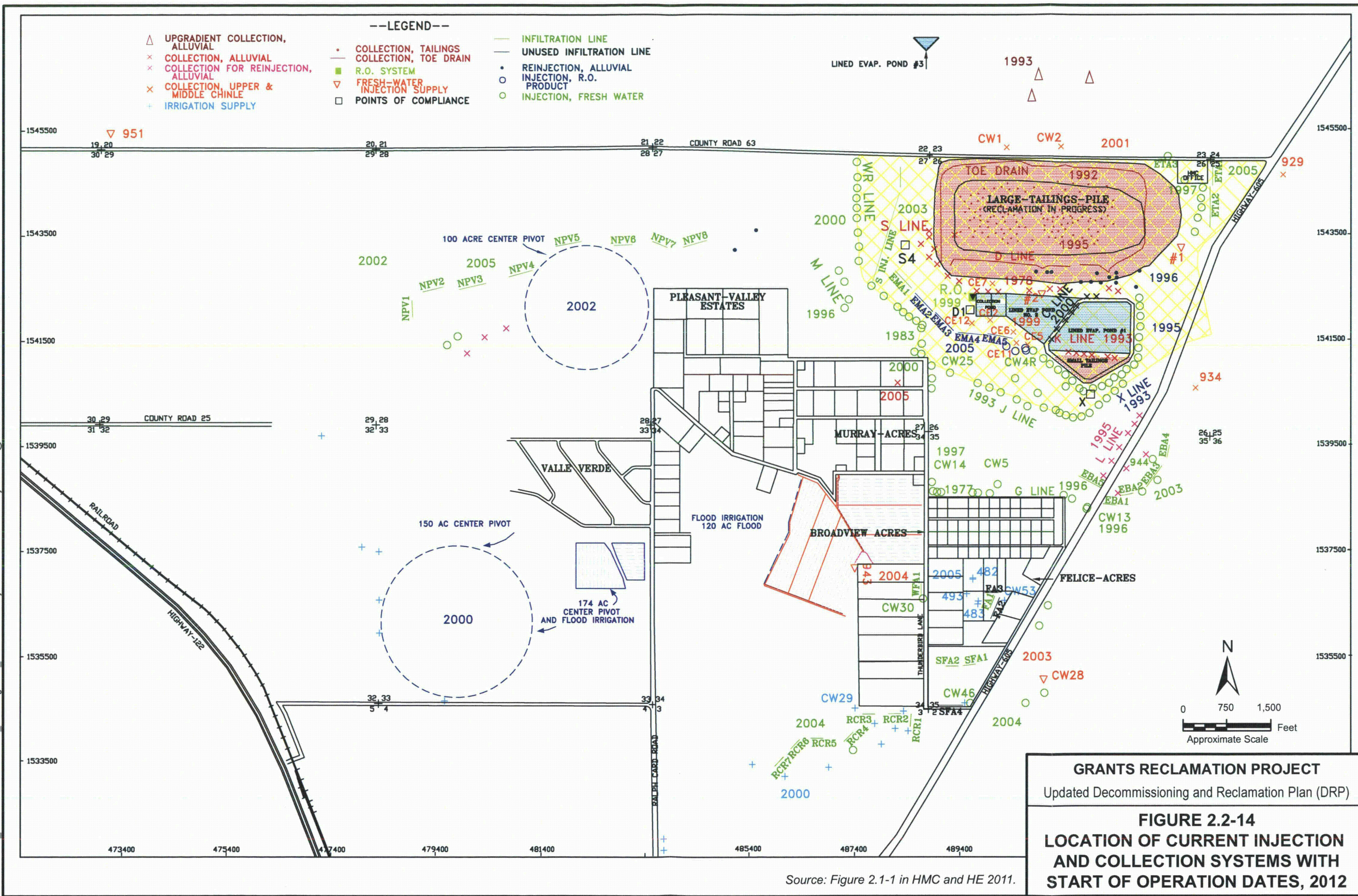
* AVERAGE ANNUALIZED RATES
PUMPING TO IRRIGATION SYSTEM
OCCURS OVER 8 MONTH PERIOD.

GRANTS RECLAMATION PROJECT
Updated Decommissioning and Reclamation Plan (DRP)

FIGURE 2.2-11
HMC PROJECT
FLOW DIAGRAM FOR
2006 GROUNDWATER CAP

Source: Figure 4.3-53 in HMC and HE 2011.







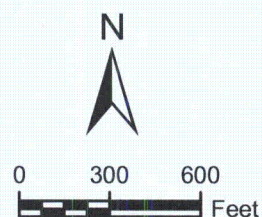
LEGEND:

Tailings Spill Key

-  No Spill
-  Sand-Slimes
-  Slimes
-  Solutions

 Project Boundary

Aerial Source:
2011 High Resolution Aerials from HMC.



GRANTS RECLAMATION PROJECT
Updated Decommissioning and Reclamation Plan (DRP)

FIGURE 2.2-15
RELEASE OF TAILINGS FROM
HMC LARGE TAILINGS PILE
IN 1977

