

When Recorded Return To:

Kennecott Utah Copper LLC  
Attn: Environmental Manager  
4700 West Daybreak Parkway  
South Jordan, UT 84095

12320190  
7/14/2016 8:21:00 AM \$58.00  
Book - 10452 Pg - 3059-3083  
Gary W. Ott  
Recorder, Salt Lake County, UT  
FIRST AMERICAN TITLE  
BY: eCASH, DEPUTY - EF 25 P.

With Copies To:

U.S. EPA – Region 8  
Attn: Regional Institutional Control Coordinator & Kennecott Remedial Project Manager  
Mail Code: 8EPR-SR  
1595 Wynkoop Street  
Denver, CO 80202

Utah Department of Environmental Quality  
Division of Environmental Response and Remediation  
Attn: Kennecott Project Manager  
195 North 1950 West  
P O Box 144840  
Salt Lake City, UT 84114-4840

Tax Parcel Nos.: 26-15-300-012-0000 and 26-22-100-006-0000

## ENVIRONMENTAL COVENANT

Pursuant to the Utah Uniform Environmental Covenants Act, Utah Code Ann. Section 57-25-101 et seq., (the Utah Act), Kennecott Land Company, a Delaware corporation (Grantor) makes and imposes this Environmental Covenant upon portions of the parcels located in Salt Lake County and identified by Tax Parcel Nos. 26-15-300-012-0000 and 26-22-100-006-0000 (Parcels) encompassing approximately 1.087 acres and more particularly described and illustrated in Exhibit A attached hereto (Property), subject to the terms and conditions stated herein.

1. Notice. Notice is hereby given that the Property is or may be contaminated with Hazardous Substances, as described below, and, therefore, this Environmental Covenant must be imposed to mitigate the risk to the public health, safety and the environment.
2. Environmental Response Project. Elevated levels of lead and arsenic have been found within the Lark Railroad Spur adjacent to the boundaries of Operable Unit 17 of the Kennecott South Zone Site (the "Site"), also referred to as Bastian Sink, as described in the Record of Decision (ROD), executed on November 3, 1998. The Environmental Covenant outlined herein is necessary to fully implement the response actions selected for the Site, which include among other things, soil cleanup levels of 100 ppm arsenic and 700 ppm lead for residential use established for properties within the Daybreak Development as documented in a letter from Mr. Douglas Bacon and Ms. Rebecca Thomas to Mr. Francisco Benavides dated November 17, 2006, attached hereto as Exhibit B.

3. Grantor. Kennecott Land Company, is the Grantor of this Environmental Covenant and is also the Owner as defined in Paragraph 4. The property interest is defined further in Exhibit A.

4. Owner. The “Owner” of the Property is a person who controls, occupies, owns or holds an interest (other than this Environmental Covenant) in the Property at any given time. Consistent with Paragraph 9 of this Environmental Covenant, the obligations of the Owner are imposed on assigns, successors in interest, including without limitation, future owners of an interest in fee simple, mortgagees, lenders, easement holders, lessees, and any other person or entity who acquires any interest whatsoever in the Property, or any portion thereof, whether or not any reference to this Environmental Covenant or its provisions are contained in the deed or other conveyance instrument, or other agreements by which such person or entity acquires its interest in the Property or any portion thereof (the “Transferees”), during that person’s period of ownership.

5. Holder. Kennecott Utah Copper LLC is the Holder of this Environmental Covenant. The Holder may enforce this Environmental Covenant. The Holder shall not incur liability under state law or otherwise solely by virtue of being a Holder under this Environmental Covenant. Pursuant to the Utah Act, a Holder may also be an Owner.

6. Agency. The EPA and the DEQ each enter into this Environmental Covenant as an Agency as defined in Section 57-25-102(2) of the Utah Act. EPA and DEQ may be referred to herein collectively as the “Agencies”. The Agencies may enforce this Environmental Covenant. The Agencies assume no affirmative duties through the execution of this Environmental Covenant.

7. Administrative Record. The Administrative Record for this environmental response project is available in the files for response actions in the Daybreak Community (associated with the December 2006 O&M plan) Kennecott (South Zone), EPA ID: UTD000826404 by appointment at the following information repository:

EPA Superfund Records Center – Region 8  
1595 Wynkoop Street  
Denver, CO 80202-1129  
(303) 312-7273

Some records are also available by appointment for public inspection at:

Utah Department of Environmental Quality  
Division of Environmental Response and Remediation  
195 North 1950 West  
P O Box 144840  
Salt Lake City, UT 84114-4840  
(801) 536-4100

8. Activity and Use Limitations. As part of the Environmental Response Project described above, the Owner agrees to implement, administer, and maintain all of the following activity and use limitations on the Property. The purpose of this Environmental Covenant is to ensure protection of human health and the environment by minimizing the potential for exposure to any Hazardous Substances that remain on the Property. In the event the Owner conveys or transfers

an interest in the Property or any portion thereof to another party, the Transferee will implement, administer, maintain and be subject to the following activity and use limitations. Failure of the Owner to comply with these activity and use limitations shall be considered interference with the Environmental Response Project constituting a release or threatened release of a Hazardous Substance for which the Owner is liable under CERCLA § 107(a), 42 U.S.C. § 9607(a).

8.1 Groundwater Limitations. Owner shall not drill any well that would extract, or is capable of extracting, water on or in the Property without prior written consent from the Agencies and the Holder. Also, Owner shall comply with any well restriction covenants identified in Paragraph 10 of Exhibit B to that certain Deed dated October 16, 2002 from Kennecott Utah Copper Corporation, as grantor, to OM Enterprises Company, as grantee, recorded in the Official Records of Salt Lake County on December 2, 2002 as Entry No. 8442505 in Book 8695 at Page 7730, prohibiting drilling of any well that would extract, or is capable of extracting, water on that portion of the Property because it is located within Township 3 South, Range 1 West, SLB&M and Township 3 South, Range 2 West, SLB&M. This provision shall not apply to shallow construction dewatering so long as such shallow construction dewatering does not interfere with or contradict the well restrictions contained within the well restriction covenants.

8.2 Land Use and Construction Limitations. The Property shall remain paved. Any excavation of soils exceeding unrestricted use/unrestricted exposure standards (as defined in the DEQ and EPA December 29, 2015 tech memo, attached hereto as Exhibit C) shall require written consent from the Agencies. Written consent will require the submission of a work plan, for review and approval by the Agencies, and the work will be in compliance with all applicable laws, regulations and requirements of Salt Lake County, DEQ, EPA and any other governmental entity having jurisdiction over the Property and the Environmental Response Project. Except as otherwise approved by the Agencies, work plan shall include:

- A summary of readily available site characterization data and any limitations of the data,
- A sampling and analysis plan & quality assurance project plan for characterizing the site before (if no data is available) and after the pending response action to delineate contamination,
- A description of the soil management procedures to be implemented based on the proposed change in land use and/or excavation,
- A description of environmental controls to be employed during the project, and
- A list of submittals which at a minimum will include a post response action report for the Agencies' review.

Owner shall be solely responsible, in all respects, for implementing the work plan and complying with applicable laws, regulations, and requirements associated with such development or change of land use as set forth in this Environmental Covenant.

9. Running with the Land. This Environmental Covenant shall run with the land, pursuant to and subject to the Utah Act and Utah Code Ann. Section 57-25-105.

10. Compliance Enforcement. This Environmental Covenant may be enforced pursuant to the Utah Act or CERCLA § 107, 42 U.S.C. § 9607. Failure to timely enforce

compliance with this Environmental Covenant or the Activity and Use Limitations contained herein by any party shall not bar subsequent enforcement by such party, and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict the Agencies from exercising any authority under applicable law.

11. Rights of Access. The right of access to the Property is granted to the Holder, the Agencies, and their representatives for necessary response actions, inspections, implementation and enforcement of this Environmental Covenant.

12. Notice upon Conveyance. The Owner shall notify the Agencies and the Holder within thirty days after each conveyance of an interest in any portion of the Property to another Owner. Owner's notice to the Agencies and the Holder shall include the name, address and telephone number of the new Owner, a copy of the deed or other documentation evidencing the conveyance, and an un-surveyed plat that shows the boundaries of the property being transferred. Instruments that convey any interest in the Property (fee, easement, etc.,) shall include a notification to the person or entity who acquires the interest that the Property is subject to this Environmental Covenant and shall identify the date, entry number, book and page number at which this document is recorded in the records of the Salt Lake County Recorder, in the State of Utah.

13. Compliance Reporting. Upon request by the Agencies or the Holder, Owner shall submit written documentation to the Agencies and the Holder verifying that the activity and use limitations remain in place and are being followed.

14. Representations and Warranties. Grantor hereby represents and warrants to the other signatories hereto:

- a. that the Grantor is the sole owner of the Property;
- b. that the Grantor holds fee simple title to the Property free, clear and unencumbered except for those interests of record existing at the time of execution by Grantor;
- c. that the Grantor has the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;
- d. that the Grantor has identified all other persons that own an interest in or hold an encumbrance on the Property, and notified such persons of the Owner's intention to enter into this Environmental Covenant; and
- e. that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document, or instrument to which Grantor is a party or by which Grantor may be bound or affected;

15. Amendment or Termination. This Environmental Covenant may be amended or terminated pursuant to provisions of the Utah Act as in effect on January 1, 2016. Pursuant to this Paragraph, Holder may assign its interest in this Environmental Covenant with the written consent of the Agencies, which consent shall not be unreasonably conditioned or withheld, and

the Agencies waive consent as to all other parties pursuant to sections 57-25-110(1)(b) and 57-25-110(4) of the Utah Act as in effect on January 1, 2016.

16. Effective Date, Severability and Governing Law. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant is recorded as a document of record for the Property with the Salt Lake County Recorder. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Utah.

17. Recordation and Distribution of Environmental Covenant. Within *thirty (30)* days after the date of the final required signature upon this Environmental Covenant, Grantor shall file this Environmental Covenant for recording in the same manner as a deed to the Property, with the Salt Lake County Recorder's Office. The Grantor shall distribute a file and date stamped copy of the recorded Environmental Covenant to the Agencies.

18. Notice. Unless otherwise notified in writing by or on behalf of any of the Agencies, the Grantor, the Owner, or the Holder, any document or communication required by this Environmental Covenant shall be submitted to:

**EPA:**

U.S. EPA – Region 8  
Attn: Regional Institutional Control Coordinator & Kennecott Remedial Project Manager  
Mail Code: 8EPR-SR  
1595 Wynkoop Street  
Denver, CO 80202

**DEQ:**

Utah Department of Environmental Quality  
Division of Environmental Response and Remediation  
Attn: Kennecott Project Manager  
195 North 1950 West  
P O Box 144840  
Salt Lake City, UT 84114-4840

**GRANTOR AND OWNER:**

Kennecott Land Company  
Attn: Environmental Manager  
4700 West Daybreak Parkway  
South Jordan, UT 84009

**HOLDER:**

Kennecott Utah Copper LLC  
Attn: Environmental Manager  
4700 West Daybreak Parkway  
South Jordan, UT 84009

19. Governmental Immunity. In executing this covenant, the DEQ and EPA do not waive governmental immunity afforded by law. The Grantor, for itself and its successors,

assigns, and Transferees, hereby fully and irrevocably releases and covenants not to sue the State of Utah (State) or EPA, its agencies, successors, departments, agents, and employees from any and all claims, damages, or causes of action arising from, or on account of the activities carried out pursuant to this Environmental Covenant except for an action to amend or terminate the Environmental Covenant pursuant to Utah Code Ann. Sections 57-25-109 and 57-25-110 or for a claim against the State arising directly or indirectly from or out of actions of employees of the State that would result in (i) liability to the State of Utah under Section 63G-7-301 of the Governmental Immunity Act of Utah, Utah Code Ann. Section 63G-7-101 et seq. or (ii) individual liability for actions not covered by the Governmental Immunity Act as indicated in Utah Code Ann. Sections 63G-7-202 and -902, as determined in a court of law.

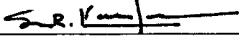
20. Payment of Costs. Owner shall reimburse the Agencies and the Holder for technical reviews, inspections and other actions, performed by the DEQ, EPA or Holder pursuant to the enforcement of this Environmental Covenant or performed at the request of the Owner.

*[signatures on following pages]*

The undersigned representative of Kennecott Land Company, a Delaware Corporation, Grantor and Owner herein represents and certifies that it is authorized to execute this Environmental Covenant.

**IT IS SO AGREED:**

Kennecott Land Company

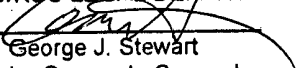
By: 

Name: Scott Kaufmann

Title: Vice President Commercial

Date: July 8<sup>TH</sup>, 2016

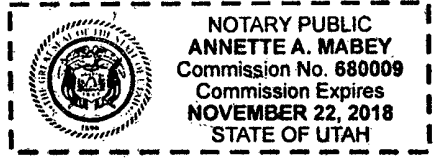
APPROVED AS TO FORM  
RIO TINTO/KUC LEGAL DEPARTMENT

By:   
George J. Stewart

Senior Corporate Counsel  
Date: 7/8/2016

STATE OF UTAH)  
: ss.  
COUNTY OF SALT LAKE)

On this 08 day of July, 2016, appeared before me, Scott Kaufmann of Kennecott Land Company, the Grantor and Owner herein, who, his/her identity and position having been satisfactorily established to me, affirmed to me upon oath that the governing body of Kennecott Land Company, has authorized him/her to execute the foregoing Environmental Covenant, and did duly acknowledge before me having executed the same for the purposes stated herein.



  
NOTARY PUBLIC

The undersigned representative of Kennecott Utah Copper LLC, Holder, herein represents and certifies that it is authorized to execute this Environmental Covenant.

**IT IS SO AGREED:**

Kennecott Utah Copper LLC

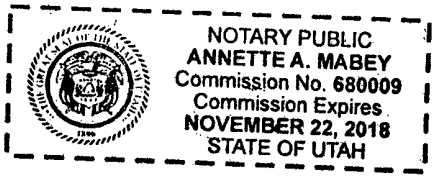
By: *[Signature]*  
Name: Jon Brennan  
Title: General Manager Finance

8 JULY 2016  
Date

APPROVED AS TO FORM  
RIO TINTO/KUC LEGAL DEPARTMENT  
By: *[Signature]*  
George J. Stewart  
Senior Corporate Counsel  
Date: 7/8/2016

STATE OF UTAH)  
: ss.  
COUNTY OF SALT LAKE)

On this 8<sup>th</sup> day of July, 2016, appeared before me, Jon Brennan of Kennecott Utah Copper LLC, the Holder herein, who, his/her identity and position having been satisfactorily established to me, affirmed to me upon oath that the governing body of Kennecott Utah Copper LLC, has authorized him/her to execute the foregoing Environmental Covenant, and did duly acknowledge before me having executed the same for the purposes stated herein.



*[Signature]*  
NOTARY PUBLIC



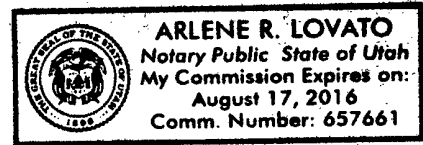
UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY

The Utah Department of Environmental Quality authorized representative identified below hereby approves the foregoing Environmental Covenant pursuant to Utah Code Ann. Sections 57-25-102(2) and 57-25-104(1)(e).

Brent H. Everett  
Brent H. Everett, Director  
Division of Environmental Response and Remediation  
Utah Department of Environmental Quality

13 July 2016  
Date

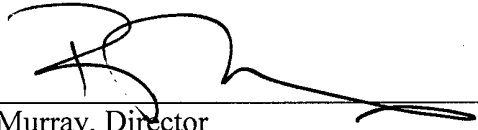
State of Utah)  
: ss.  
County of Salt Lake)



On this 13<sup>th</sup> day of July, 2016 appeared before me Brent H. Everett, an authorized representative of the Utah Department of Environmental Quality, personally known to me, or whose identity has been satisfactorily established to me, who acknowledged before me that he executed the foregoing Environmental Covenant.

Arlene R. Lovato  
Notary Public

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



Bill Murray, Director  
Superfund Remedial Program  
U.S. EPA Region 8

7/12/2016

Date

The foregoing instrument was acknowledged before me in the State of Colorado, City and County of Denver, this 12th day of July, 2016.

by Bill Murray, Director – Superfund Remedial Program, U.S. EPA Region 8.

*Ellen Paul Wells*

(Notary's Official Signature)

**ELLEN PAUL WELLS**  
NOTARY PUBLIC - STATE OF COLORADO  
Notary Identification # 20144025517  
My Commission Expires 6/27/2018

*06/27/2018*

(Commission Expiration)

Notary Seal

EXHIBIT A

LEGAL DESCRIPTION OF PROPERTY

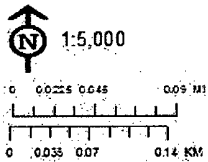
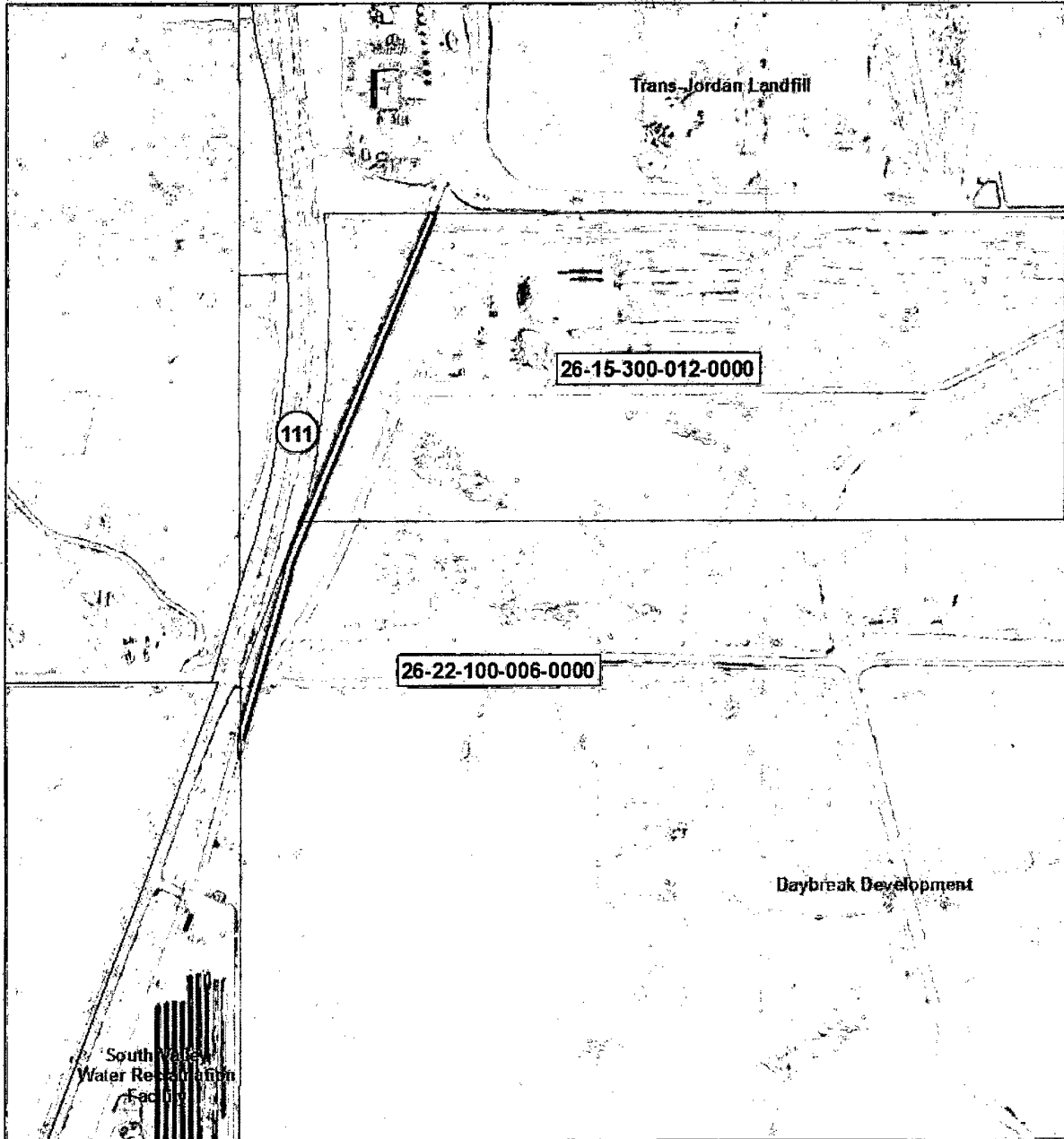
THAT LAND WITHIN TAX PARCEL NOS. 26-15-300-012-0000 AND 26-22-100-006-0000,  
DESCRIBED AS:

THE BOUNDARY OF SAID EASEMENT BEING A STRIP OF LAND 26 FEET IN WIDTH, BEING  
13 FEET ON EACH SIDE OF AND PARALLEL WITH THE CENTERLINE OF SAID STRIP OF  
LAND BEING DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT THAT LIES SOUTH 00°14'20" EAST 1124.547 FEET ALONG THE  
SECTION LINE AND EAST 629.517 FEET FROM THE WEST QUARTER CORNER OF SECTION  
15, TOWNSHIP 3 SOUTH, RANGE 2 WEST, SALT LAKE BASE AND MERIDIAN AND  
RUNNING THENCE SOUTH 22°11'31" WEST 1158.266 FEET TO A POINT ON A 1000.000 FOOT  
RADIUS TANGENT CURVE TO THE LEFT, (RADIUS BEARS SOUTH 67°48'29" EAST);  
THENCE ALONG THE ARC OF SAID CURVE 112.295 FEET THROUGH A CENTRAL ANGLE  
OF 06°26'03"; THENCE SOUTH 15°45'28" WEST 550.335 FEET TO THE POINT OF TERMINUS.  
(NOTE: THE BOUNDARY LINES OF SAID STRIP EASEMENT SHALL BE EXTENDED AND/OR  
SHORTENED TO BEGIN AND END ON, AND CONFORM TO ANY ABUTTING PROPERTY  
LINES.)

PROPERTY CONTAINS 1.087 ACRES.

**DAYBREAK DEVELOPMENT  
LARK RAILROAD SPUR ENVIRONMENTAL COVENANT**



- Lark Railroad Spur Environmental Covenant (1.087 acres)
- Parcel Boundary

The information on this map is based on the most current information available to Kennecott and should be used for planning purposes only. No warranty, expressed or implied, is made regarding the accuracy or utility of the data for general or scientific purposes, nor shall the act of distribution constitute any such warranty.

EXHIBIT B



State of Utah

Department of  
Environmental Quality

Dianne R. Nielson Ph.D.  
*Executive Director*

DIVISION OF ENVIRONMENTAL  
RESPONSE AND REMEDIATION  
Brad T. Johnson  
*Director*

JON M. HUNTSMAN JR.  
*Governor*

GARY HERBERT  
*Lieutenant Governor*

ERRC-241-06

November 17, 2006

Mr. Francisco Benavides, Manager - Sustainable Development and Environment  
Kennecott Land  
5295 South 300 West, Suite 475  
Murray, Utah, 84107

**RE Request (October 18, 2006) to clarify the use of the previously accepted residential standard for lead and arsenic in soils**

Dear Mr. Benavides:

The Division of Environmental Response and Remediation (DERR) and the U.S. Environmental Protection Agency, Region VIII (EPA) (respectively referenced as the Agencies) received your request to clarify the interpretation of and use of the September 2006 accepted residential lead and arsenic standards for certain lands within the Daybreak community. Based upon your inquiry, the Agencies provide the following information:

Institutional controls or environmental covenants are typically required when there are environmental contaminants at concentrations that do not allow for unlimited land use and unrestricted exposures. As previously noted in the Agencies' letter dated September 22, 2006, institutional controls were requested for those certain lands (designated by Kennecott Land) intended to be remediated to the accepted commercial land use standard (2000 ppm and 450 ppm for lead and arsenic, respectively) established for the Daybreak Development. Since September 22, 2006, Kennecott Land has notified the Agencies that the designated lands intended to be remediated to the commercial land use standards have been remediated to the accepted residential land use standard (700 ppm and 100 ppm for lead and arsenic, respectively) established for the Daybreak Development. Lands cleaned up to the residential land use standard (at Daybreak) do not require the incorporation of institutional controls because such concentrations (for lead and arsenic) allow for unlimited land use and unrestricted exposure.

Please note that the Agencies still await the submission of a revised Operation & Maintenance Plan (O&M Plan). The O&M Plan needs to make reference to the September 2006 accepted residential and commercial land use standards and to depict (graphically) the designated lands which will be cleaned up to those standards.

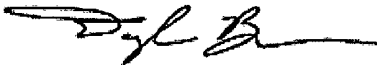
168 North 1950 West PO Box 144840 Salt Lake City UT 84114-4840 phone (801) 536 4100 fax (801) 339 8853  
TDD (801) 536-4414 [www.deq.utah.gov](http://www.deq.utah.gov)

Page 2

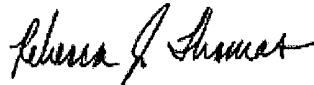
Currently, the Agencies understand that Kennecott Land still intends to comply with the EPA, Region VIII previously accepted unrestricted land use standard (500 ppm and 50 ppm for lead and arsenic, respectively) during the clean-up of the two South-Jordan Evaporation Ponds consolidation areas and the Bastian sink. Please be advised of the Agencies desire to have these two areas depicted graphically in the revised O&M Plan.

If you have any questions regarding this letter, please do not hesitate to contact either Mr Douglas Bacon (801-536-4282) or Ms Rebecca Thomas (303-312-6552)

Sincerely



Douglas Bacon  
Project Manager  
Division of Environmental Response and  
Remediation



Rebecca Thomas  
Remedial Project Manager  
U S Environmental Protection Agency,  
Region VIII

DB/RT/eds

cc Gary L. Edwards M S Director, Salt Lake Valley Health Department  
Mary Pat Buckman, Salt Lake Valley Health Department

EXHIBIT C



State of Utah

GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

Department of  
Environmental Quality

Alan Matheson  
Executive Director

DIVISION OF ENVIRONMENTAL  
RESPONSE AND REMEDIATION

Brent H. Everett  
Director

TECHNICAL MEMORANDUM

**SUBJECT:** Compilation of soil and groundwater action levels

**FROM:** Douglas Bacon, UT DEQ-DERR *DCB*

Kerri Fiedler, U.S. EPA Region 8 *KF*

**TO:** Kennecott North and South Zones Administrative File

**DATE:** December 29, 2015

Since 1998, four records of decision (RODs) have been issued for the Kennecott North and South Zone operable units (OUs). Under each of these RODs various land use action levels for metals in soils were selected. Similarly, various action levels for groundwater contaminants were established under the RODs or by the State of Utah's Groundwater Protection Program (GWPP). This technical memorandum compiles all the action levels into a single document and clarifies inconsistencies determined during recent five-year reviews.

The UT DEQ-DERR and the EPA Region 8 (Agencies) have compiled the soil action levels for OUs 1, 3-15, 17-20, 22, and 24 (Attachment 1). Listed action levels are obtained from existing risk assessment and risk management documents which are part of the administrative record. There are footnotes at the end of the soil action levels table which explain the applicability of the action levels and define the action which can be performed to address an exceedance. Numbered notes on the table provide reference where each of the listed action levels are obtained.

The Agencies have compiled the groundwater action levels for OUs 2, 12, 16, and 23 (Attachment 2). Listed action levels are obtained from existing human health and ecological risk assessment and risk management documents which are part of the administrative record. The listed action levels also take into account the Agencies' selected remedy to rely on the permitting restrictions of the State of Utah's GWPP, overseen by the UT DEQ - Division of Water Quality (UT DEQ-DWQ) for OUs 12 and 16. Remedial actions being implemented at OUs 12 and 16 are being overseen by UT DEQ-DWQ under the permit program to ensure that OU2 is not further impacted.

It is the intent of the Agencies that this technical memorandum will be used as reference under various site-wide and OU-specific management plans, to ensure the mining impacted soils and groundwater are effectively managed until such time that unrestricted use/unlimited exposure action levels are attained. The action levels listed in the two attachments are amendable by the Agencies premised on further risk assessment and risk management decisions, or recommendations by UT DEQ-DWQ.

195 North 1950 West • Salt Lake City, UT • Mailing Address: P.O. Box 144840 • Salt Lake City, UT 84114-4840  
Telephone (801) 536-4100 • Fax (801) 359-8853 • T.D.D. (801) 903-3978 • [www.deq.utah.gov](http://www.deq.utah.gov)  
Printed on 100% recycled paper

**Attachment 1**  
**Table of Soil Action Levels**  
**for Kennecott North and South Zones**



Site Wide Summary of Soil Action Levels for Kennecott North and South Zones								
Land Use, Media or Receptor	As	Cd	Cr	Cu	Mo	Pb	Se	Zn
<b>OU1 Bingham Creek (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Commercial <sup>2</sup>	-	-	-	-	-	2000	-	-
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
Residential <sup>2</sup>	100	-	-	-	-	1100	-	-
Discrete Bingham Creek Channel Parcels (Daybreak Community) - Residential <sup>6</sup>	100	-	-	-	-	700	-	-
Discrete Bingham Creek Channel Parcels (Daybreak Community) - Commercial <sup>6</sup>	450	-	-	-	-	2000	-	-
Discrete Daybreak Commerce Park Parcels <sup>9</sup>	450	-	-	-	-	2000	-	-
<b>OU2 South End Groundwater (SOUTH ZONE)</b>								
Groundwater	See Groundwater Action Levels Table							
<b>OU3 Butterfield Waste Rock (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
Residential, Day Care and Playgrounds <sup>3</sup>	100	-	-	-	-	1200	-	-
<b>OU3 Butterfield Canyon Creek (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
Residential, Day Care and Playgrounds <sup>3</sup>	100	-	-	-	-	1200	-	-
<b>OU3 Herriman Residential and Agricultural (SOUTH ZONE)</b>								
Industrial <sup>5</sup>	850	2794	8381	10.3%	13972	4000	13972	83%
Agricultural <sup>5</sup>	300	2148	6444	79689	10740	10,000	10740	64%
Recreational <sup>5</sup>	300	758	114	25.2%	34067	10,000	34067	100%
Residential, Day Care and Playgrounds <sup>3</sup>	100	-	-	-	-	1200	-	-
<b>OU4 Large Bingham Reservoir (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU5 Anaconda Tailings (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU5 Bastian Ditch (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU5 Bastian Ditch Daybreak Area (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Commercial <sup>4</sup>	450	-	-	-	-	2000	-	-
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
Residential <sup>4</sup>	100	-	-	-	-	700	-	-
<b>OU6 Lark Waste Rock and Tailings (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%

Table of Soil Action Levels for Kennecott North and South Zones

Site Wide Summary of Soil Action Levels for Kennecott North and South Zones								
Land Use, Media or Receptor	As	Cd	Cr	Cu	Mo	Pb	Se	Zn
<b>OU7 South Jordan Evaporation Ponds (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Commercial <sup>4</sup>	450	-	-	-	-	2000	-	-
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
Residential <sup>4</sup>	100	-	-	-	-	700	-	-
<b>OU8 Waste Water Treatment Plan and Sludge Ponds (NORTH ZONE)</b>								
Industrial <sup>5</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>5</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>5</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU9 Magna Soils (NORTH ZONE)</b>								
Industrial <sup>5</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>5</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>5</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU10 Copperton Soils (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU11 Historic Facilities (SOUTH ZONE)</b>								
Industrial <sup>7</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>7</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>7</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU12 Eastside Collection System (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
Groundwater	See Groundwater Action Levels Table							
<b>OU13 Smelter and Acid Plant (NORTH ZONE)</b>								
Industrial <sup>5</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>5</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>5</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU14 Refinery (NORTH ZONE)</b>								
Industrial <sup>5</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>5</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>5</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU15 Magna Mills and Tailings Ponds (NORTH ZONE)</b>								
Industrial <sup>5</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>5</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>5</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU16 Bingham Creek Underflow (SOUTH ZONE)</b>								
Groundwater	See Groundwater Action Levels Table							
<b>OU17 Bastian Sink (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Commercial <sup>4</sup>	450	-	-	-	-	2000	-	-
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
Residential <sup>4</sup>	100	-	-	-	-	700	-	-
<b>OU18 Acid Mine Drainage (Tooele County Areas) (SOUTH ZONE)</b>								
Industrial <sup>1</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>1</sup>	100	2148	6444	79689	10740	8500	10740	64%

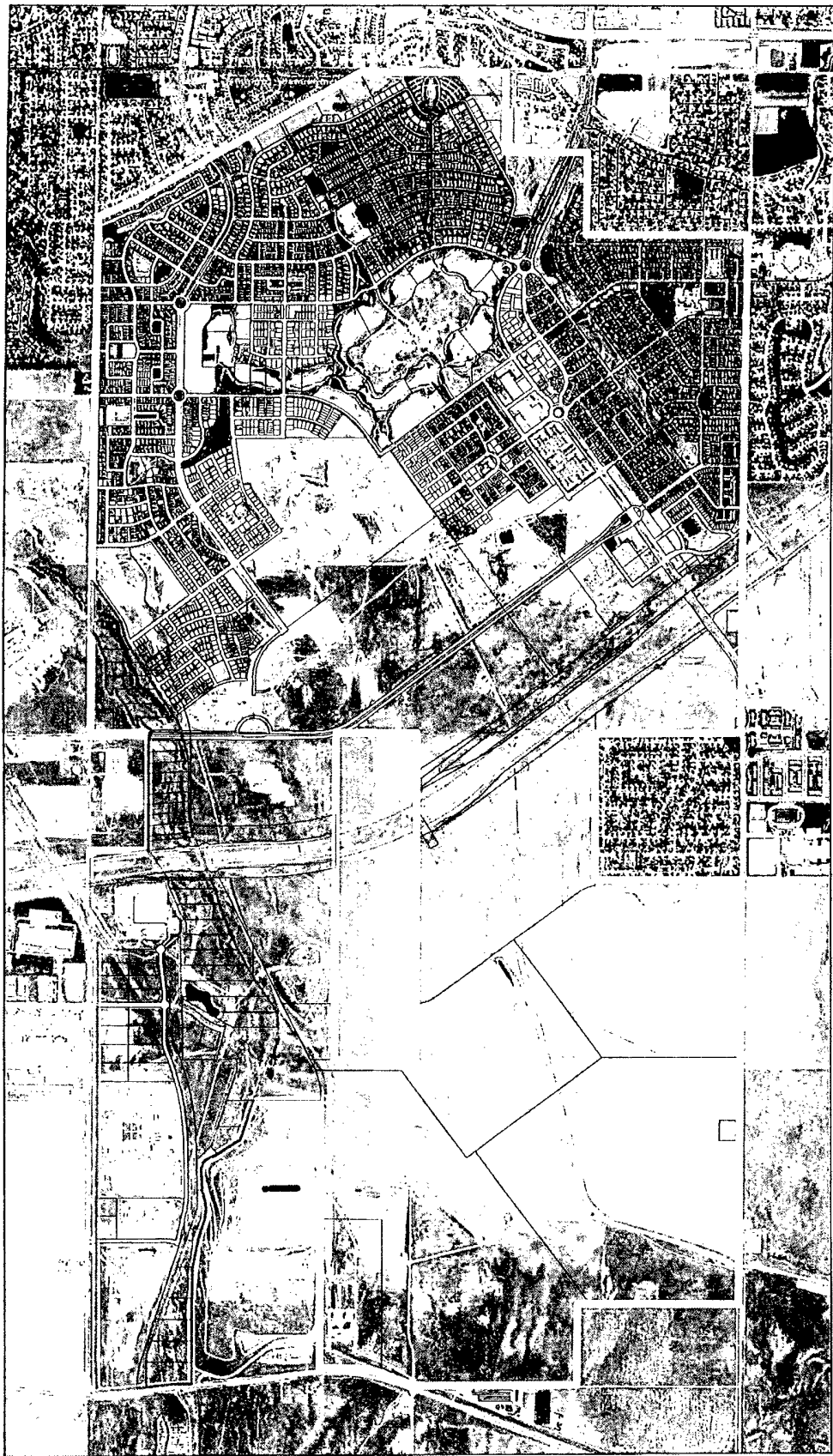
Table of Soil Action Levels for Kennecott North and South Zones

Site Wide Summary of Soil Action Levels for Kennecott North and South Zones								
Land Use, Media or Receptor	As	Cd	Cr	Cu	Mo	Pb	Se	Zn
Recreational <sup>1</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU19 Smelter Fallout (NORTH ZONE)</b>								
Industrial <sup>6</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>6</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>6</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU20 Pine Canyon (SOUTH ZONE)</b>								
Industrial <sup>6</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>6</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>6</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU22 Great Salt Lake and Wetlands (NORTH ZONE)</b>								
Industrial <sup>6</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>6</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>6</sup>	283	758	114	25.2%	34067	2207	34067	100%
<b>OU23 North Zone Groundwater (NORTH ZONE)</b>								
Groundwater	See Groundwater Action Levels Table							
<b>OU24 Precipitation Plant (SOUTH ZONE)</b>								
Industrial <sup>6</sup>	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural <sup>6</sup>	100	2148	6444	79689	10740	8500	10740	64%
Recreational <sup>6</sup>	283	758	114	25.2%	34067	2207	34067	100%

Notes for Site Wide Summary of Soil Action Levels for Kennecott North and South Zones
<p><sup>1</sup> The table provides a listing of the action levels for various metals of concern which can be found in soils located in the operable units of the Kennecott South and North Zones. The table provides concentration levels (or percentage values) to compare against soil characterization results. If a particular land use action level is exceeded, then, prior to redevelopment a person will have to undertake action to assess and/or mitigate the potential for exposure risk.</p> <p>The term "action" may include but is not limited to: further site characterization, further site specific risk assessment, remedial/response action to mitigate exposure risk, implementation of institutional controls (ICs), and/or ongoing site management after development activities.</p>
<p><sup>11</sup> The soil action levels listed in this table can <u>only</u> be used when comparing metals concentrations in soils/sediments collected from the operable units of the Kennecott South and North Zone. As part of assessing the potential exposure risk caused by the listed metals of concern, certain variables specific to the Kennecott operable units were considered. These variables include, but are not limited to, the following: speciation and bioavailability of the metals of concern, the industrial processes that produced the specific mine waste with the metals of concern, and the types of specific land use activities that are likely to take place in each operable unit.</p> <p>The listed action levels presented herein do not apply to other sites within the State of Utah located beyond the boundaries of the Kennecott operable units (except as otherwise explained below as it pertains to the site wide unrestricted land use action levels).</p>
<p><sup>111</sup> Default site wide (Kennecott South or North Zone) unrestricted land use action levels for arsenic (50 mg/kg), cadmium (70 mg/kg), lead (500 mg/kg), and selenium (390 mg/kg) have been derived for those portions of the site where a site specific, risk based, residential action level has not been established and for locations not modeled during the site specific risk assessments. Using default numbers for exposure parameters, conservative values for bioavailability and intake ratios under standard risk assessment and management methodology, the Agencies calculated the default unrestricted land use action levels. The unrestricted land use action levels are protective of public health for all land uses without restrictions, including relocation beyond the Kennecott boundaries. It is important to note, that while the arsenic, cadmium, lead, and selenium unrestricted land use action levels may be protective for a residential land use, they may not be protective of other exposure scenarios (e.g., ecological risk).</p> <p>Both the arsenic and lead unrestricted land use action levels are based on risk assessment and risk management methods. Due to possibility of contaminated media associated with mining and smelting operations and the uncertainty associated with the limited environmental information (i.e., bioavailability) these unrestricted land use action levels should be used when limited characterization data is available and potential off-site (meaning beyond the Kennecott boundaries) relocation is being considered. The arsenic and lead unrestricted land use action levels are derived from the September 2002 Record of Decision.</p> <p>The cadmium and selenium unrestricted land use action levels have been calculated by using a residential exposure scenario based on the "Risk Assessment Guidance for Superfund (RAGS) part B" (<a href="http://www.epa.gov/swerrims/riskassessmen/ragsb/index.htm">http://www.epa.gov/swerrims/riskassessmen/ragsb/index.htm</a>). Also considered were the screening values that are found in the Regional Screening Levels Tables dated May 2014. The unrestricted land use action levels for cadmium and selenium are the residential RSLs.</p>
<p><sup>1</sup> The listed industrial, agricultural, and recreational land use action levels are located in the document entitled, <i>Final Preliminary Remediation Goals Report for Addressing Risks to Human Health From Exposure to Chemicals In Kennecott Soils</i>, December 30, 1999. These action levels are applicable site wide, absent operable unit specific risk based concentrations listed in the November</p>

Table of Soil Action Levels for Kennecott North and South Zones

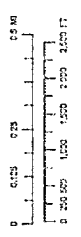
Notes for Site Wide Summary of Soil Action Levels for Kennecott North and South Zones
1998, September 2001, and September 2002 Records of Decision.
<sup>2</sup> For Operable Unit #1, the residential and commercial action levels for lead (respectively 1100 mg/kg and 2000 mg/kg lead) are obtained from two documents: (1) U.S. EPA Region 8 June 1995 Action Memo for the Bingham Creek Phase III residential removal action, and (2) U.S. EPA Region 8 February 1993 Unilateral Administrative Orders to Kennecott and ARCO (CERCLA-VIII-93-10) for the Bingham Creek Channel removal action. The residential action level for arsenic (100 mg/kg) is obtained from the November 1998 Record of Decision for Operable Unit 1.
<sup>3</sup> For Operable Unit #3, the action levels for residential, day care and playground land use application are obtained from the September 28, 2001 Record of Decision. The arsenic and lead action levels for these land use applications are based on speciation and exposure pathways which were considered as part of the risk assessment performed for the City of Herriman.
<sup>4</sup> Commercial and Residential action levels for undeveloped areas within the Daybreak Master Planned Community were proposed by Kennecott Utah Copper in the May 26, 2006 Exponent document entitled <i>Evaluation of Cleanup Levels for Arsenic and Lead in Soil for Undeveloped Portions of the Daybreak Area</i> and accepted by the CERCLA Agencies in a letter dated September 22, 2006.
<sup>5</sup> The listed industrial, agricultural, and recreational land use action levels are located in the document entitled, <i>Final Preliminary Remediation Goals Report for Addressing Risks to Human Health From Exposure to Chemicals in Kennecott Soils</i> , December 30, 1999, and as modified in the <i>Record of Decision</i> dated September 28, 2001 for Operable Unit #3.
<sup>6</sup> The listed industrial, agricultural, and recreational land use action levels are located in the document entitled, <i>Final Preliminary Remediation Goals Report for Addressing Risks to Human Health From Exposure to Chemicals in Kennecott Soils</i> , December 30, 1999, and as modified in the <i>Record of Decision Kennecott North Zone Site/Kennecott South Zone Site</i> , September 26, 2002.
<sup>7</sup> The listed industrial, agricultural and recreational land use action levels are obtained from the document entitled, <i>Final Preliminary Remediation Goals Report for Addressing Risks to Human Health From Exposure to Chemicals in Kennecott Soils</i> , December 30, 1999. At the time of land use change, the location of a historic site needs to consider the operable unit specific applicable land use standards (listed in the November 1998, September 2001 and September 2002 Records of Decision) to ascertain if an operable unit specific risk based land use standard is applicable.
<sup>8</sup> There are discrete parcels located within the Bingham Creek Channel and in the Daybreak Commerce Park that were considered in 2006 to be part of the overall Daybreak Community. The May 26, 2006 Exponent document entitled <i>Evaluation of Cleanup Levels for Arsenic and Lead in Soil for Undeveloped Portions of the Daybreak Area</i> addressed the establishment of residential and commercial land use action levels for the Daybreak Community as defined in the Exponent document and represented herein on Figure 1-A. Though limited, site specific data from the portions of Bingham Creek Channel and the Daybreak Commerce Park areas (located within the Daybreak Community) were included in the risk assessment. The CERCLA Agencies in a letter dated September 22, 2006 accepted the proposed land use action levels for the Daybreak Community. Figure 1-B herein portrays those portions of OU1 which are subject to the residential and commercial land use action levels for arsenic and lead, for the Daybreak Community.



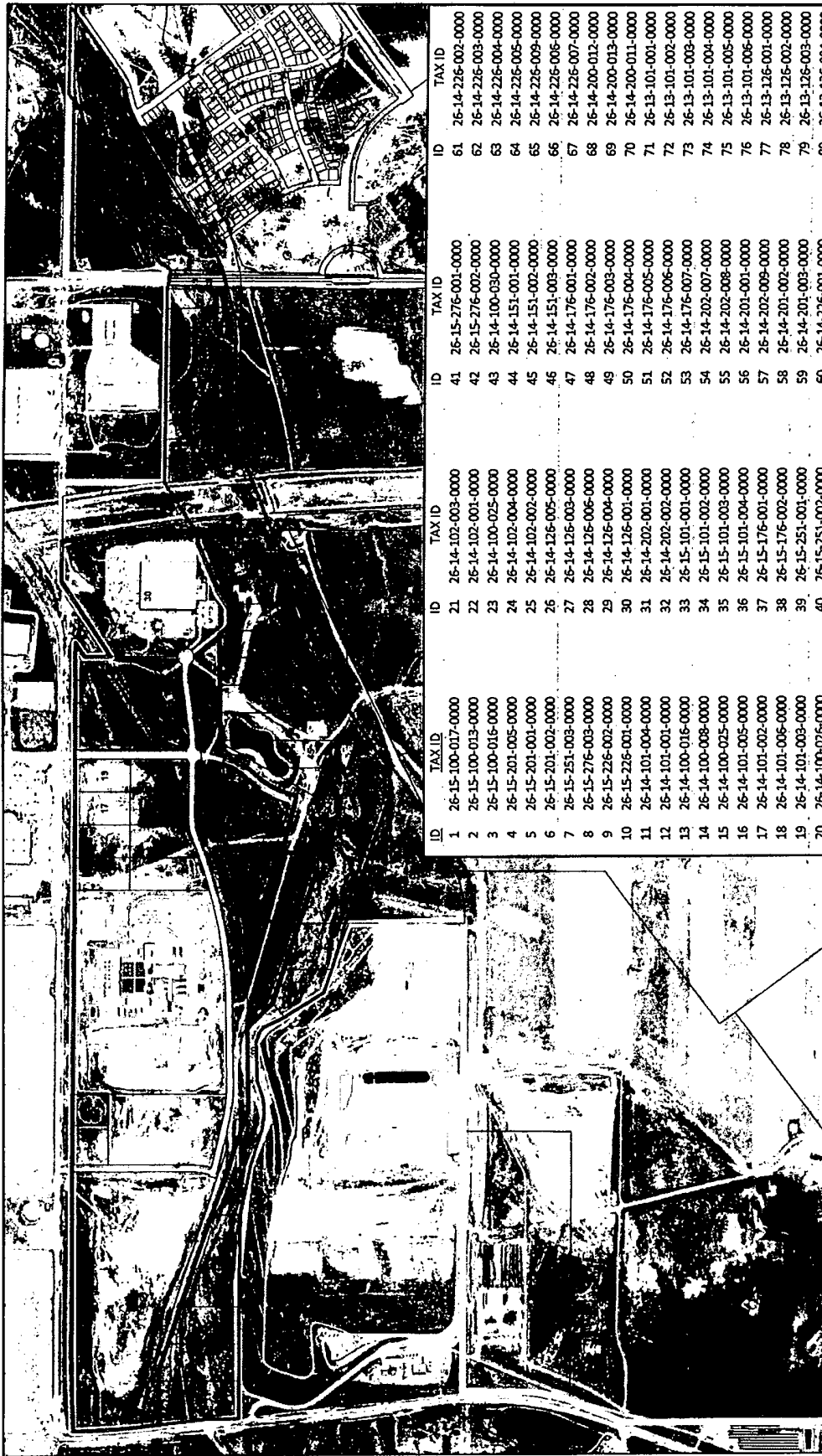
**DAYBREAK DEVELOPMENT**  
FIGURE 1-A

Commerce Park  
Bingham Creek Drainage

Daybreak Development



Kennecott Copper



ID	TAX ID	ID	TAX ID	ID	TAX ID	ID	TAX ID
1	26-15-100-017-0000	21	26-14-102-003-0000	41	26-15-276-001-0000	61	26-14-226-002-0000
2	26-15-100-019-0000	22	26-14-102-001-0000	42	26-15-276-002-0000	62	26-14-226-003-0000
3	26-15-100-016-0000	23	26-14-100-025-0000	43	26-14-100-030-0000	63	26-14-226-004-0000
4	26-15-201-005-0000	24	26-14-102-004-0000	44	26-14-151-001-0000	64	26-14-226-005-0000
5	26-15-201-001-0000	25	26-14-102-002-0000	45	26-14-151-002-0000	65	26-14-226-009-0000
6	26-15-201-002-0000	26	26-14-126-005-0000	46	26-14-151-003-0000	66	26-14-226-006-0000
7	26-15-251-003-0000	27	26-14-126-003-0000	47	26-14-176-001-0000	67	26-14-226-007-0000
8	26-15-276-003-0000	28	26-14-126-006-0000	48	26-14-176-002-0000	68	26-14-200-012-0000
9	26-15-226-002-0000	29	26-14-126-004-0000	49	26-14-176-003-0000	69	26-14-200-013-0000
10	26-15-226-001-0000	30	26-14-126-001-0000	50	26-14-176-004-0000	70	26-14-200-011-0000
11	26-14-101-004-0000	31	26-14-202-001-0000	51	26-14-176-005-0000	71	26-13-101-001-0000
12	26-14-101-001-0000	32	26-14-202-002-0000	52	26-14-176-006-0000	72	26-13-101-002-0000
13	26-14-100-016-0000	33	26-15-101-001-0000	53	26-14-176-007-0000	73	26-13-101-003-0000
14	26-14-100-008-0000	34	26-15-101-002-0000	54	26-14-202-007-0000	74	26-13-101-004-0000
15	26-14-100-025-0000	35	26-15-101-003-0000	55	26-14-202-008-0000	75	26-13-101-005-0000
16	26-14-101-005-0000	36	26-15-101-004-0000	56	26-14-201-001-0000	76	26-13-101-006-0000
17	26-14-101-002-0000	37	26-15-176-001-0000	57	26-14-202-009-0000	77	26-13-126-001-0000
18	26-14-101-006-0000	38	26-15-176-002-0000	58	26-14-201-002-0000	78	26-13-126-002-0000
19	26-14-101-003-0000	39	26-15-251-001-0000	59	26-14-201-003-0000	79	26-13-126-003-0000
20	26-14-100-026-0000	40	26-15-251-002-0000	60	26-14-226-001-0000	80	26-13-126-004-0000

**Rio Tinto**  
Kennecott Copper

DaybreakDevelopment Commerce Park  
 Bingham Creek Drainage

Scale: 0 250 500 1000 1500 2000 2500 3000 3500 FT  
 0 0.125 0.25 0.5 1.0 M

**DAYBREAK DEVELOPMENT**  
FIGURE 1-B

**Attachment 2**  
**Table of Groundwater Action Levels**  
**for Kennecott North and South Zones**

Site Wide Summary of Groundwater Action Levels for Kennecott North and South Zones													
Groundwater Use	std units	mg/L	mg/L	Reported mg/L (Dissolved)									
	pH	Sulfate <sup>a</sup>	TDS <sup>a</sup>	D-As	D-B <sup>b</sup>	D-Ba-	D-Cd	D-Cr	D-Cu	D-Pb	T-Hg	D-Ni	D-Se
	Std. Unils	mg/L	mg/L	Reported mg/L (Dissolved) (except where noted)									
<b>OU2<sup>1</sup> South End Groundwater, Zone A Acid Plume (SOUTH ZONE)</b>													
Drinking	6.5 - 8.5	1500 (A) // 500 (P) <sup>A</sup>	NA <sup>A</sup>	0.01 <sup>B</sup>		2.0	0.005	0.1	1.3 <sup>C</sup>	0.015 <sup>D</sup>	0.002	0.1	0.05
<b>OU2<sup>1</sup> South End Groundwater, Zone A Sulfate Plume (SOUTH ZONE)</b>													
Drinking	6.5 - 8.5	1500 (A) // 500 (P) <sup>A</sup>	NA <sup>A</sup>	0.01 <sup>B</sup>		2.0	0.005	0.1	1.3 <sup>C</sup>	0.015 <sup>D</sup>	0.002	0.1	0.05
<b>OU2<sup>1</sup> South End Groundwater, Zone B Plume<sup>2</sup> (SOUTH ZONE)</b>													
Drinking	6.5 - 8.5	500	1000	0.01 <sup>B</sup>		2.0	0.005	0.1	1.3 <sup>C</sup>	0.015 <sup>D</sup>	0.002	0.1	0.05
<b>OU12<sup>3</sup> Eastside Collection System (SOUTH ZONE)</b>													
Non-Drinking <sup>4</sup>	Refer to Footnote 4												
<b>OU16<sup>3</sup> Bingham Creek Underflow (SOUTH ZONE)</b>													
Non-Drinking <sup>5</sup>	Refer to Footnote 5												
<b>OU23<sup>3</sup> North Zone Groundwater (NORTH ZONE)</b>													
Non-Drinking <sup>6</sup>	Refer to Footnote 6												
Drinking <sup>7</sup>	6.5 - 8.5	500	1000	0.01 <sup>B</sup>		2.0	0.005	0.1	1.3 <sup>C</sup>	0.015 <sup>D</sup>	0.002	0.1	0.05

Notes for Site Wide Summary of Groundwater Action Levels for Kennecott North and South Zones
<sup>†</sup> This table summarizing CERCLA selected action levels and State of Utah protection limitations for groundwater is intended for use only at the Kennecott South and North Zones where mining influenced groundwater is managed.
<sup>1</sup> The action levels listed are derived from UAC R309-200-5 (State of Utah Primary Drinking Water Standards) and the June 2007 ESD for OU2. Review of the April 2014 remedial progress report determined that for the 2012 and 2013 data sets there were some samples of groundwater extracted from the Zone A acid plume which contained un-specified chromium results in exceedance of the State Primary Drinking Water Standard. Thus chromium is added until it can be demonstrated that this standard is complied with throughout the entirety of the Zone A plume.
<sup>2</sup> The December 2000 Record of Decision denotes that EPA Region 8 was deferring the selection of a remedy for the Zone B Plume pursuant to the State of Utah's Natural Resource Damage project addressing the mining influence to the aquifer in Zone B. The project being implemented in Zone B pursuant to the 2004 NRD Three Party Agreement (as amended in 2009) is producing treated water (in compliance with municipal water quality standards) from extracted groundwater from the impacted aquifer in Zone B. The contaminant specific limitations listed are derived from R309-200-5 for reference purposes (and are applicable for the treated water).
<sup>3</sup> The action levels listed (or referenced) are pursuant to the selected remedies for these three operable units and the 1995 Memorandum of Understanding. Kennecott manages mining influenced groundwater (in part) under the requirements of the State of Utah Groundwater Protection Program.
<sup>4</sup> Pursuant to the Utah Groundwater Protection Program, to ensure the protection of the underlying aquifer, discharge limits for the following contaminants are listed in Table 1 of Permit #UGW350010: pH, Sulfate, TDS, Cd-D, Cu-D, and Zn-D. The compliance limits are established from background concentrations at each compliance well (pursuant to R317-6-4). The permit can be found at: <a href="http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm">http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm</a>
<sup>5</sup> Pursuant to the Utah Groundwater Protection Program, to ensure the protection of the underlying aquifer, discharge limits for the following contaminants are listed in Table 2 of Permit #UGW350010: pH, Sulfate, TDS, Cd-D, Cu-D, and Zn-D. The compliance limits are established from background concentrations at each compliance well (pursuant to R317-6-4). The permit can be found at: <a href="http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm">http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm</a>
<sup>6</sup> Pursuant to the Utah Groundwater Protection Program, to ensure the protection of the underlying aquifer, discharge limits for the following contaminants are listed in Table 3 of Permit #UGW350008 (Smelter): pH, Chloride, Sulfate, TDS, As-D, Ba-D, Ba-D, Cd-D, Cr-D, Cu-D, Pb-D, Se-D, Zn-D; Table 1 of Permit #UGW350011 (Tailings Impoundment): pH, Sulfate, TDS, As-D, Ba-D, Cd-D, Cr-D, Cu-D, Pb-D, Se-D, Zn-D; Table 1 of Permit #UGW350015 (North Concentrator): pH, Sulfate, TDS, As-D, B-D, Cd-D, Cr-D, Cu-D, Pb-D, Se-D, Zn-D. The compliance limits are established from historical trends at each compliance well (pursuant to R317-6-4). The permits can be found at: <a href="http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm">http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm</a>
<sup>7</sup> Absent the mining influence and naturally occurring elevated TDS at OU23, the aquifer represents a potential source of drinking water for nearby communities. Though a drilling restriction (to prevent the development of the aquifer as a source of drinking water) is pending, the State of Utah Primary Drinking Water Standards (R309-200-5) are relevant if the impacted aquifer is somehow developed as a source of drinking water in the future.
<sup>8</sup> Pursuant to R309-200-5 (1)(c)(2) & (1)(c)(3) the State of Utah Primary Drinking Water Standards for Sulfate (500 mg/L) and TDS (1000 mg/L) can be allowed by the Division of Drinking Water Board to be higher. As it pertains to sulfate, (1)(c)(2), if the primary standard is to be set to 1000 mg/L a supplier will demonstrate: (a) no better quality water is available, and (b) the water is not for human consumption from commercial establishments. As it pertains to TDS, (1)(c)(3), if TDS is greater than 1000 mg/L (i.e. 2000 mg/L), a supplier shall demonstrate that no better water is available.



Notes for Site Wide Summary of Groundwater Action Levels for Kennecott North and South Zones
<p><sup>a</sup> Pursuant to the Groundwater Protection Permit #UGW350015 DWQ has established a permit limitation for Dissolved Boron due to the storage and use of coal at the RTKC Power Plant. Refer to note 6 and the reference to Permit #UGW350015 therein.</p>
<p><sup>A</sup> The OU2 selected remedy (Dec. 2000 Record of Decision) requires active ("A") cleanup of the Zone A plume (extract and treat) until it can be demonstrated that sulfate concentrations comply with the site specific action level of 1,500 mg/L and drinking water standards for metals are attained. Thereafter, a passive ("P") cleanup requirement (monitored natural attenuation) is to be used to document that sulfate concentrations comply with the State of Utah Primary Drinking Water Standard for sulfate of 500 mg/L. No TDS action level was established under the selected remedy.</p>
<p><sup>B</sup> Pursuant to R309-200-5(5) the primary drinking water standard for arsenic is 0.010 mg/L as of January 23, 2006.</p>
<p><sup>C</sup> Pursuant to UAC R309-200-5(2)(b) "the copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with R309-210-6(3) is greater than 1.3 mg/L (i.e. if the 90th percentile copper level is greater than 1.3 mg/L).</p>
<p><sup>D</sup> Pursuant to UAC R309-200-5(2)(a) "the lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with R309-210-6(3) is greater than 0.015 mg/L (i.e. if the 90th percentile lead level is greater than 0.015 mg/L).</p>