Welcome to the CLU-IN Internet Event

Innovative Approaches to Mining Site Remediation and Reuse Workshop: Opening Plenary Session

Sponsored by: U.S. EPA Office of Superfund Remediation and Technology Innovation (OSRTI) and the International Committee on Contaminated Land

Delivered: October 6, 2011, 8:30 AM - 10:30 AM, EDT (12:30-14:30 GMT)

Presenters:

Barnes Johnson, Deputy Director, U.S. EPA Office of Superfund Remediation and Technology Innovation (johnson.barnes@epa.gov)

Velma M. Smith, Officer, Government Relations, Pew Environment Group (vsmith@pewtrusts.org)

Kelly Payne, Manager - Environment, Kennecott Utah Copper LLC (paynek@kennecott.com)

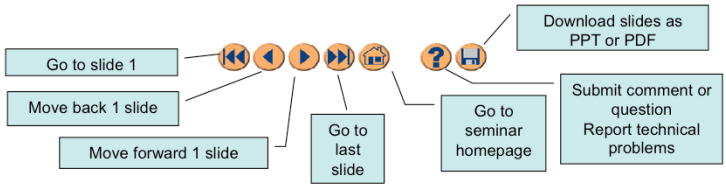
Moderator:

Carlos Pachon, U.S. EPA, Technology Innovation and Field Services Division (pachon.carlos@epa.gov or (703) 603-9904)

Visit the Clean Up Information Network online at www.cluin.org

Housekeeping

- Q&A :
  - Submit questions to the moderator using the button.
  - You may submit questions at ANY time.
  - You may also report technical problems using this method.
- Turn off any pop-up blockers
- Move through slides using # links on left or buttons



- This event is being recorded
- Archives accessed for free http://cluin.org/live/archive/

2

Although I'm sure that some of you have these rules memorized from previous CLU-IN events, let's run through them quickly for our new participants.

Please mute your phone lines during the seminar to minimize disruption and background noise. If you do not have a mute button, press *6 to mute #6 to unmute your lines at anytime. Also, please do NOT put this call on hold as this may bring delightful, but unwanted background music over the lines and interupt the seminar.

You should note that throughout the seminar, we will ask for your feedback. You do not need to wait for Q&A breaks to ask questions or provide comments. To submit comments/questions and report technical problems, please use the ? Icon at the top of your screen. You can move forward/backward in the slides by using the single arrow buttons (left moves back 1 slide, right moves advances 1 slide). The double arrowed buttons will take you to 1st and last slides respectively. You may also advance to any slide using the numbered links that appear on the left side of your screen. The button with a house icon will take you back to main seminar page which displays our agenda, speaker information, links to the slides and additional resources. Lastly, the button with a computer disc can be used to download and save today's presentation materials.

With that, please move to slide 3.

CLU-IN.org Live Event

This is the opening plenary session for the Innovative Approaches to Mining Site Remediation and Reuse Workshop.

There is an in-room audience for this event, please be patient. There will be an online moderator to assist with any confusion or disruption that the live event may cause. You may reach the online moderator either through the "?" button (and submit your comment) or at: adam.michael@epa.gov. You may also consult the "Housekeeping" information on the previous slide.

Today's event is hosted by Bruce Means (U.S. EPA) and after he introduces our first speaker, go to the next slide. The first two speakers do not have slides, but we have inserted title slides for them. Enjoy the plenary!

To submit questions to the moderator, use the button at the top of the screen.

3

Opening Remarks

Barnes Johnson

Deputy Director, U.S. EPA Office of Superfund Remediation and Technology Innovation

Note: Barnes does not have slides to follow
To submit questions to the moderator, use the button at the top of the screen.

4

Global Challenges in Mine Land Remediation: Pew Campaign for Responsible Mining

Velma M. Smith

Officer, Pew Environmental Group, Pew Charitable Trusts, Washington, DC; and

International Council on Mining and Metals (ICMM) Sustainable Development Framework

Note: Velma does not have slides to follow
To submit questions to the moderator, use the button at the top of the screen.

5

Global Challenges in Mine Land Remediation: Mine Site Remediation and Reuse

Kelly Payne

Manager – Environment, Kennecott Utah Copper LLC, Salt Lake City, UT

Note: Kelly's slides follow
To submit questions to the moderator, use the button at the top of the screen.

6

Rio Tinto

Mine Site Remediation and Reuse: A Global Miner's Approach

Innovative Approaches to Mining
Site Remediation and Reuse Workshop

October 6, 2011

Rio Tinto

Who we are

- We are a leading global business delivering value at each stage of mineral and metal production.
- We employ approximately 77,000 people in over 40 countries
- We fulfil vital consumer needs and improve living standards
- Wherever we operate, safety is our key priority
- Sustainable development is at the heart of our business
- Underlying earnings in 2010 were a record US$14.0 billion
- Record first half 2011 underlying earnings of US$7.8 billion

RioTinto

Our diverse products


Bauxite, alumina and aluminium


Borates


Coal


Copper


Diamonds


Gold and silver


Gypsum


Iron ore


Molybdenum


Salt

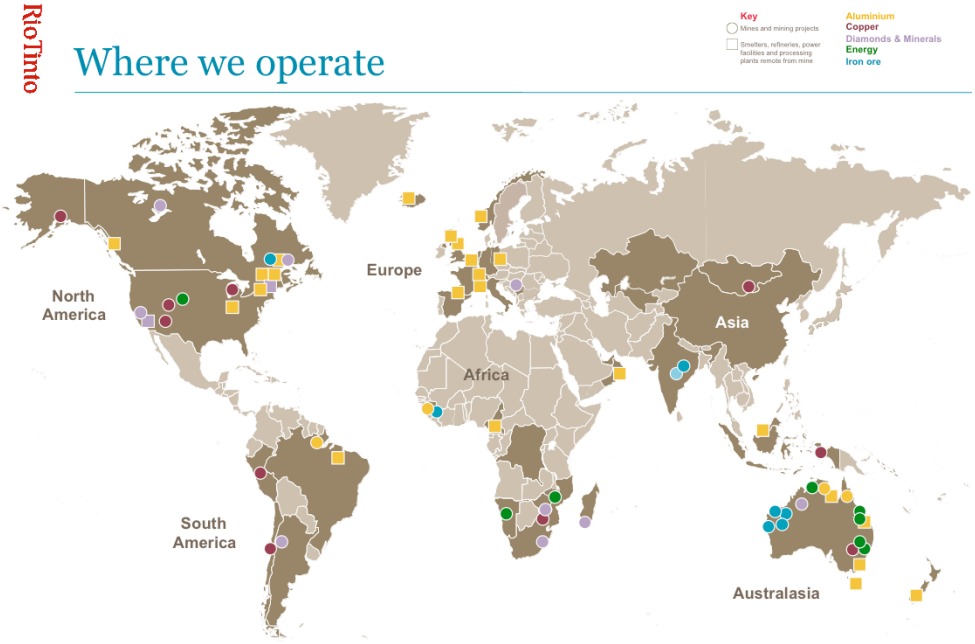

Titanium dioxide


Uranium


Other products, including nickel

Rio Tinto

Where we operate



10

The International Council on Mining and Metals

ICMM
International Council on Mining & Metals

> ICMM'S MISSION IS TWO-FOLD – TO DISTINGUISH ITS MEMBERS AS INDUSTRY LEADERS AND TO MAKE A CONTRIBUTION TO RAISING STANDARDS ACROSS THE INDUSTRY AS A WHOLE

Vision:

A viable mining, minerals and metals industry that is widely recognised as essential for modern living and a key contributor to sustainable development.

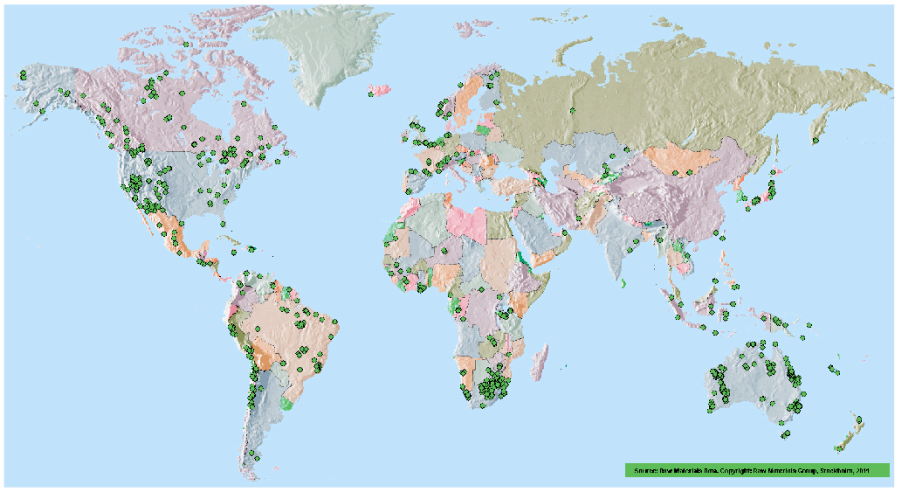
11

ICMM member companies

Australia: BHP Billiton	Norway: Hydro
Brazil: Vale	South Africa: African Rainbow Minerals, AngloGold Ashanti, Gold Fields
Canada: Barrick, Goldcorp, Teck	Switzerland: Xstrata
Chile: Codelco	United Kingdom: Anglo American, Lonmin, Rio Tinto
China: MMG	United States: Freeport-McMoRan Copper & Gold, Newmont
France: AREVA	
Japan: Mitsubishi Materials, JX Nippon Mining & Metals, Sumitomo Metal Mining	

12

Location of member operations



Over 800 sites in 62 countries

What does SD leadership look like?

Leadership means walking the talk: a public statement of SD commitments supported by actions that deliver on the public promise of the CEO

Leadership means addressing both what is done (the substance) and how you do it (the process)

ICMM member commitments

10 principles for sustainable development + 6 position statements

1. Implement ethical business practices and apply good corporate governance
2. Integrate SD in corporate decision-making
3. Uphold fundamental human rights
4. Manage risks based on sound science

5/6. Improve environment, health and safety performance continuously

7. Conserve biodiversity & contribute to integrated land use planning
8. Encourage a life cycle approach to materials management
9. Contribute to community development
10. Publicly report, independently assure and engage openly and transparently

- Mining and Protected Areas
- Mining: Partnerships for Development
- Climate Change
- Mining and Indigenous Peoples
- Mercury Risk Management
- Transparency of Mineral Revenues

Rio Tinto

Rio Tinto's Approach to Mined Land Remediation and Reuse

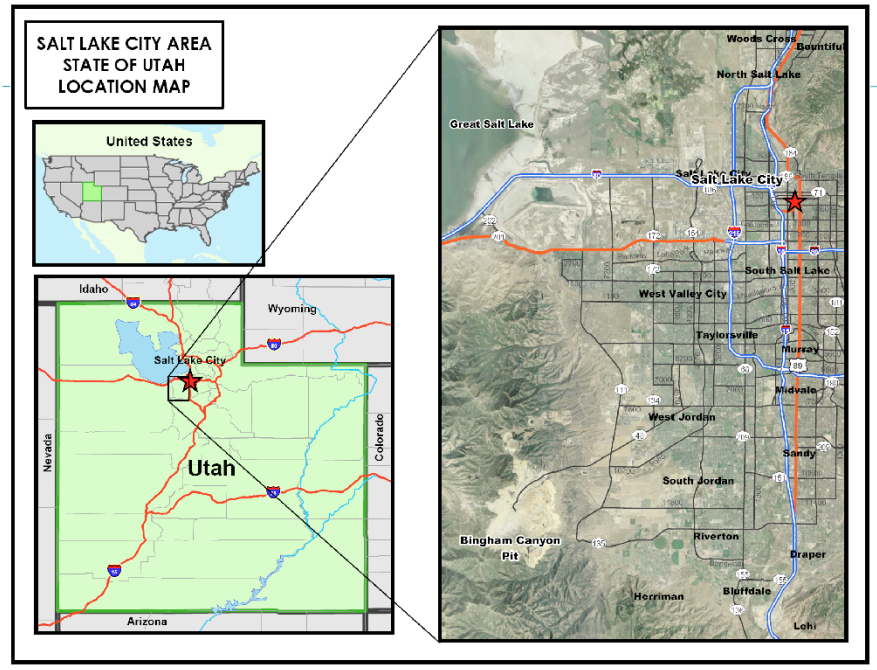
- Robust prevention of new land and water contamination
- Robust and sustainable remedies for contaminated land and water
- Transparency and cooperation with regulatory bodies
- Investments in technology and innovation
- Active community engagement and consultation

RioTinto

The Kennecott Utah Copper Experience

Salt Lake Tribune File Photo

Rio Tinto


SALT LAKE CITY AREA
STATE OF UTAH
LOCATION MAP
United States
Idaho
Wyoming
Salt Lake City
Nevada
Utah
Colorado
Arizona
Woods Cross
Bountiful
North Salt Lake
Great Salt Lake
Salt Lake City
South Salt Lake
West Valley City
Taylorsville
Murray
Midvale
West Jordan
Sandy
South Jordan
Riverton
Bingham Canyon
Pit
Draper
Herriman
Bluffdale
Lehi

18

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Since the early 1990s

- More than $500 million spent to clean up historic mining wastes and install source-control measures
- 16.25 million cubic yards of mining wastes isolated, excavated, relocated, disposed of and/or permanently stabilized in place
- 6.25 million cubic yards of clean materials trucked in to support the cleanup work
- More than 3,340 acres of land restored, reclaimed or revegetated, including some 1,000 acres of new wildlife habitat and open space
- Nearly five million square feet of synthetic liner installed on about 100 acres to contain contaminated water and wastes in permitted repositories
- More than 10,000 cubic yards of concrete used to create cutoff walls and reservoir spillways at the Bingham Canyon Mine
- Some 580 groundwater monitoring wells installed throughout the North and South Ends of the property
- More than 5.8 billion gallons of treated groundwater supplied as drinking water to local communities during first 5 years of a 40 year deliver commitment.

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Robust and Sustainable Remedies

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Robust and Sustainable Remedies

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Robust and Sustainable Remedies

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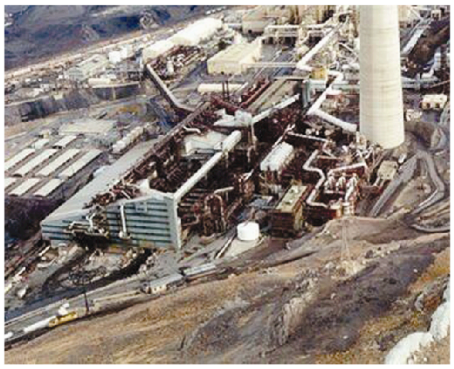
Robust and Sustainable Remedies



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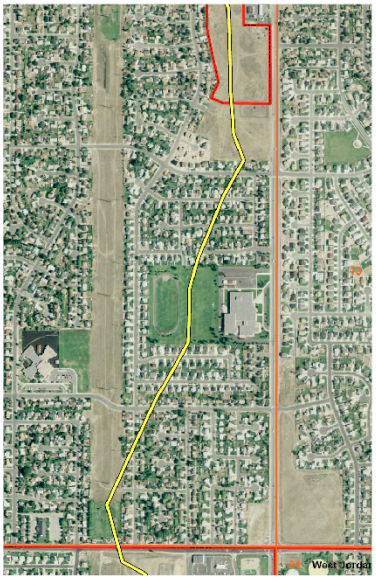
Robust and Sustainable Remedies

DESERET
Morning News

Arsenic found in buried ditch

Kennecott promises to help with cleanup on private land

By Joe Bauman
Deseret Morning News



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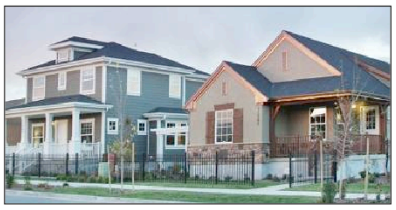
Innovative Reuse
Daybreak Residential Development

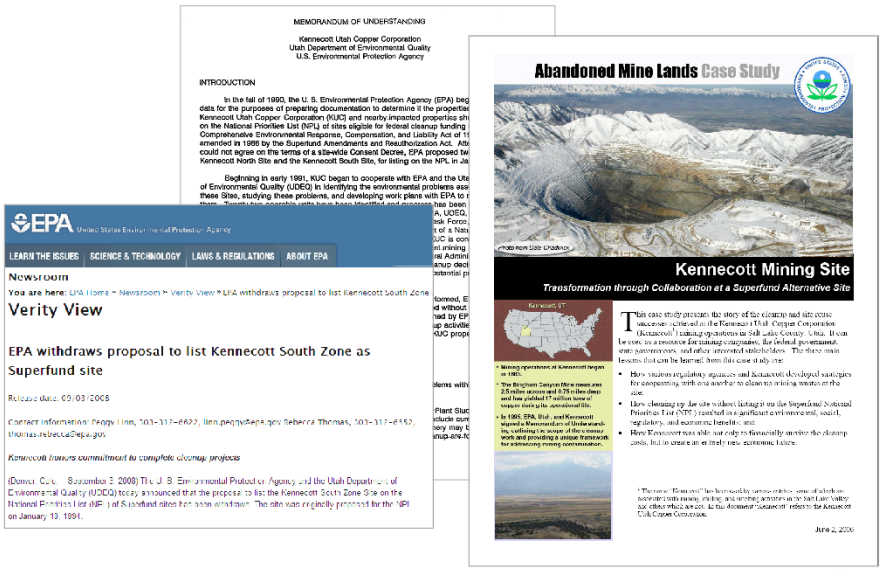
Rio Tinto

Daybreak Development

- Energy Star certified homes
- Over 1,000 acres of open space
- Secondary irrigation of public open spaces
- Over 80% of residential and commercial construction waste recycled
- All storm water retained on-site
- Light Rail Line Service
- Renewable energy sources
- Solar & Geo-exchange



Transparency and Cooperation



MEMORANDUM OF UNDERSTANDING

Kennecott Utah Copper Corporation
Utah Department of Environmental Quality
U.S. Environmental Protection Agency

INTRODUCTION

EPA United States Environmental Protection Agency

LEARN THE ISSUES | SCIENCE & TECHNOLOGY | LAWS & REGULATIONS | ABOUT EPA

Newsroom

You are here: EPA Home > Newsroom > Verity View > EPA withdraws proposal to list Kennecott South Zone

Verity View

EPA withdraws proposal to list Kennecott South Zone as Superfund site

Release date: 09/03/2008

Kennecott Utah Copper Corporation

Abandoned Mine Lands Case Study

Photo from Utah Chamber

Kennecott Mining Site

Transformation through Collaboration at a Superfund Alternative Site

June 2, 2006

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Technology and Innovation

Rio Tinto

Community Engagement

- Public Meetings and Open Houses
- Technical Review Committees
- Technical Assistance Grants
- Stakeholder Forum
- Newsletters

WEST JORDAN'S CITY NEWSLETTER

WEST JORDAN Journal

West Jordan's Own Community Newspaper

Good Neighbor News

Pages 14 & 15

www.valleyjournals.com

2007 The Valley Journals

Year 7 Issue 6 | June 2007 | *FREE!*

Contaminated ditch under investigation

This map shows an approximate location of the Bingham-Magna Ditch. The 17-mile long ditch contains elevated levels of arsenic. An investigation is under way to locate the extent of the contamination and determine a remediation plan.

By Kim Wells

A 17-mile ditch containing elevated arsenic levels has been uncovered on the west side of town. The Bingham-Magna Ditch was used as part of mining operations in the 1930s. After 1957 the ditch was no longer used, and the various easements were relinquished back to a number of property owners.

"The ditch was buried piecemeal by the individual property owners, and the land was then used for agricultural activities," said Doug Bacon, an environmental scientist with the Department of Environmental Quality. "Since we found out about this, we've been using aerial photos to track it backward to assess the alignment."

For years the ditch has remained undisturbed. But when developers started digging in the area, they encountered dirt that is "very distinct in color," said Bacon. Soil samples revealed elevated arsenic levels.

According to Bacon, the DEQ and the Environmental Protection Agency are drafting a work plan to assess the nature and the extent of the contamination.

"Once we have a work plan in place, we'll be initiating a public outreach program," Bacon said. "But we like to have

Continued page 9 "Ditch"

Council votes to keep rodeo arena alcohol-free

By Kim Wells

After a week to mull it over and get feedback from residents, the City Council voted 5-2 on May 1 to keep the city's rodeo arena alcohol-free. Council members Melissa Johnson and Mike Kellermeyer cast the dissenting votes.

At its April 24 meeting, the council directed the city attorney to compose an ordinance amendment that would allow craft beer sales in the rodeo arena. That vote passed 4-3 with Mayor Dave Newton, Council members Rob Bennett and Ken Rolfe voting to keep alcohol out of the arena.

Allowing alcohol sales would help improve the arena's marketability and was recommended by the city's celebration committee, said Johnson. The committee is planning a two-day event Aug. 17-18 to celebrate the city's population reaching the 100,000 mark.

Johnson said the arena isn't like the city's other parks and could be classified as something else to eliminate prohibition in the arena.

"I would say the arena isn't a park."

Continued page 22 "Arena"

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Prevention of New Contaminated Land and Water

Wherever possible we prevent, or else minimise, reduce and remedy the disturbance of the environment.

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Environmental Performance Standards

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Rio Tinto HSE

Page 1 of 35

Standard

HSE performance standards - ENVIRONMENT

December 2008

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- Air quality control
- Acid rock drainage prediction and control
- Greenhouse gas emissions
- Hazardous materials and contamination control
- Noise and vibration control
- Non-mineral waste management
- Mineral waste management
- Land use stewardship
- Water use and quality control

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Closure Standard


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Closure Standard

May 2009

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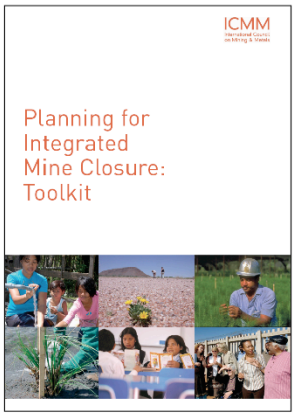
Effective Date: 01 May 2009
Status: Final Version for 3
Document No: STC 0
Authorised by: Dan Larson on behalf of Closure Steering Committee
Prepared by: Closure Working Group

The intent of this standard is to ensure that Rio Tinto managed activities are left in a condition which minimises adverse impacts on the human and natural environment, and that a legacy remains which makes a positive contribution to sustainable development.

New Closure Toolkit Published August 2008

- Promoting a more disciplined approach to integrated closure planning
- Apply to both large and small companies
- Useful for Greenfield projects, but can also be used for Brownfield projects/ operating mines



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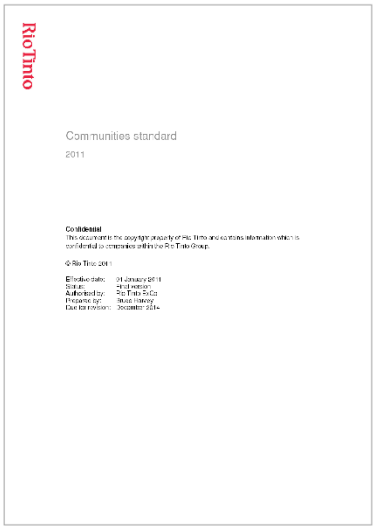
Communities Policy and Standard


Rio Tinto

Communities standard

2011

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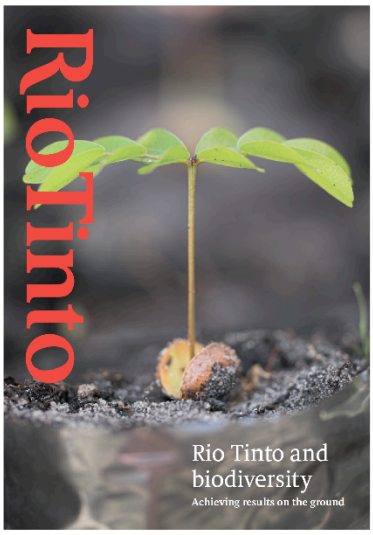
We set out to build enduring relationships with our neighbours that are characterised by mutual respect, active partnership and long term commitment.

Biodiversity Strategy



Our goal is to have a net positive impact on biodiversity by minimising the negative impacts of our activities and by making appropriate contributions to conservation in the regions in which we operate.

RioTinto

www.riotinto.com

www.kennecott.com

www.icmm.com

Global Challenges in Mine Land Remediation: Mine Site Remediation and Reuse

Question and Answer Session

Hosted by:

Bruce Means, U.S. EPA Office of Superfund Remediation and Technology Innovation

Moderator:

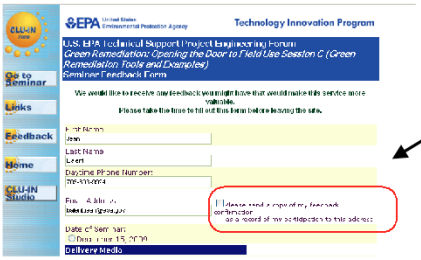
Carlos Pachon, U.S. EPA, Technology Innovation and Field Services Division

To submit questions to the moderator, use the button at the top of the screen.

38

Resources & Feedback

- Thank You for attending today's event!
- To view a complete list of resources for this seminar, please visit the **Additional Resources**
- Please complete the **Feedback Form** to help ensure events like this are offered in the future



Need confirmation of your participation today?

Fill out the feedback form and check box for confirmation email.

39