

SOUTHEAST CORNER SEISMIC RISK REDUCTION NOTIFICATION PLAN

SUMMARY

This Southeast Corner Seismic Upgrade Notification Plan (Plan) presents the Southeast Corner Task Force's approach to notifying third parties of the measures Kennecott Utah Copper Corporation (Kennecott) intends to implement to mitigate the effects of a significant seismic event near the Magna Tailings Impoundment. The plan consists of:

- Notification schedule,
- List of parties to be notified,
- Letter inviting parties to public meetings to be held in Magna and site tours,
- One page handout for public meetings, tours, response to requests for information (now a separate document).
- Materials to be used at public meetings.

Possible difficult questions or requests from third parties and Kennecott's answers have been prepared under direction from the Kennecott Law Department and are a separate document.

NOTIFICATION SCHEDULE

The objectives of the notification schedule are to obtain technical support from Utah seismic authorities and to provide information to all interested parties in a consolidated time frame. Dates may shift after contact with the entities identified below.

| MEETING OR CONTACT | TO BE COORDINATED BY | TO ATTEND |
|--|--------------------------|---|
| Week of June 15, 1998 Rio Tinto External Affairs | L. Cononelos | |
| Tuesday, June 16, 1998 Met with State Engineer | R. Dunne | T. Albanese R. Dunne Z. Zavodni |
| Tuesday, June 23, 1998 Met with Salt Lake County Commissioners Messrs. Horiuchi & Overson, separately | L. Cononelos | T. Albanese L. Cononelos R. Dunne |
| Met with Magna Area Council Jay Leavitt, Chairman, prep. for July 2 | L. Cononelos | T. Albanese L. Cononelos R. Dunne |
| Tuesday, June 23, 1998 Mailed letter inviting parties to public meetings and tours. | O. Davidson B. Hanson | |
| Wednesday, June 24, 1998 Met with Salt Lake County Commissioner Ms. Callahan & | L. Cononelos | T. Albanese L. Cononelos |

SL City County Health Department**R. Dunne****Friday, June 26, 1998**

Pre-meeting to explain community meetings and site tours:
 Magna Copper Club Golf Course Mgr. L. Cononelos
 Ms. Mariene Norcross
 Magna Community Council, Laura Jo
 McDermaid, Chairperson, prep. for June 30

L. Cononelos
R. Dunne

Saturday, June 27, 1998

Joint meeting and site tour with:
 Utah Seismic Safety Commission and
 Utah Geological Society

Z. Zavodni

T. Albanese
R. Dunne
Z. Zavodni

Monday, June 29, 1998

Press release to be prepared by
 L. Cononelos and released if Kennecott
 management deems appropriate.

L. Cononelos**Tuesday, June 30, 1998**

Meet with:
 Magna Community Council (pm)
 Magna Senior Center

L. Cononelos

T. Albanese
L. Cardey-Yates
L. Cononelos
R. Dunne

Thursday, July 2, 1998

Meet with:
 Magna Area Council (pm)
 Arbor Park Library

L. Cononelos

T. Albanese
L. Cononelos
R. Dunne

Wednesday, July 1 or Thursday, July 2, 1998

Meet with:
 Salt Lake County Development Services
 (only if conditional use permit required)

L. Cononelos

L. Cononelos
R. Dunne
D. Stauffer

Salt Lake County Flood Control**R. Dunne**

R. Dunne
D. Stauffer
O. Davidson

Courtesy contact:**Mine Safety and Health Administration****R. Hansen****No meeting****U. S. Environmental Protection Agency****B. Williams****No meeting****Division of Oil, Gas and Mining****B. Williams****No meeting****U. S. Army Corps of Engineers****R. Dunne****No meeting**

Thursday, July 2, 1998 or Monday July 6, 1998**Meet with:**

Utah Comprehensive Emergency Mgt. B. Williams

T. Albanese
R. Dunne
B. Williams

Utah Highway Patrol, Sheriff, Fire Dept. M. Brophy

M. Brophy
R. Dunne**Week of July 6, 1998****Meet with:**

Utah Department of Transportation R. Dunne

R. Dunne

Union Pacific Railroad R. Dunne

R. Dunne

Questar Gas R. Dunne

R. Dunne
D. Stauffer

U.S. West Communications R. Dunne

R. Dunne
D. Stauffer**Thursday, July 9, 1998**

Meet with groups listed below and other interested parties. Kennecott to provide box lunch and tour. Convene at Copper Club, 11:30am.

Magna Tourism & Economic Devel. Corp. L. Cononelos

Magna Chamber of Commerce

Magna Water Co. & Improvement Dist.

Magna Copper Club Golf Course

T. Albanese
L. Cononelos
R. Dunne
D. Stauffer
B. Williams
Z. Zavodni**Friday, July 10, 1998**

Site tour at 6:00pm for public

L. Cononelos
B. HansonL. Cononelos
R. Dunne
D. Stauffer
B. Williams
Z. Zavodni**Saturday, July 11, 1998**

Site tour at 9:00am for public

L. Cononelos
B. HansonL. Cononelos
R. Dunne
D. Stauffer
B. Williams
Z. Zavodni**Week of July 13, 1998****Meet with or contact:**

Division of Air Quality B. Williams

B. Williams
R. Dunne
D. Stauffer

Follow-up Meetings
Schedule as appropriate.

LIST OF PARTIES TO BE NOTIFIED

Parties to be notified by telephone contact and meetings. Asterisk * indicates parties will be notified by letter.

State Engineer
Salt Lake County Commissioners
Utah Department of Transportation
Utah State Seismic Safety Commission
Utah Comprehensive Emergency Management

Magna Area Council, Jay Leavitt
Magna Community Council, Laura Jo McDermid
Magna Water Company and Improvement District
Magna Copper Club Golf Course
Utah Highway Patrol
Sheriff
Fire Department
Magna Tourism and Economic Development Corporation
Magna Chamber of Commerce

68 Residents of Meadow Green Estates*
Mr. William H. Harding*
Ms. Marlene Norcross*

Union Pacific Railroad
Questar Gas
U.S. West Communications

Utah Geological Survey
Salt Lake County Flood Control
Salt Lake County Development Services
Division of Air Quality
Division of Water Quality, to be notified by Notice of Intent to Discharge Storm Water under permit.
Mine Safety and Health Administration (courtesy)
U. S. Environmental Protection Agency (courtesy)
Division of Oil, Gas, and Mining (courtesy)
U. S. Army Corps of Engineers (courtesy)

Kennecott Utah Copper Corporation
8315 West 3595 South
P.O. Box 6001
Magna, Utah 84044-6001
Tel: (801) 252-3006
Fax: (801) 252-3014

Tom Albanese
Vice President
Engineering and Technical Services

Kennecott

June 23, 1998

Eduardo and Norma Aldrete
800 West Melville Drive
Magna, UT 84044

Dear Eduardo and Norma Aldrete:

Subject: Update on Kennecott's Tailings Modernization Project

Kennecott Utah Copper Corporation (Kennecott) has been modernizing its tailings impoundment since the late 1980's. The Tailings Modernization Project started construction of the North Expansion about two years ago. Kennecott is providing an update on this and other aspects of the modernization program to the community.

North Expansion construction is progressing well and the wetlands mitigation site, the Inland Sea Shorebird Reserve, is providing improved wildlife habitat. Recently, there has been an increased concern regarding seismic risks in the Salt Lake Valley. Kennecott also has recently conducted extensive studies of the possible effects of a major earthquake on its tailings impoundment. Kennecott plans to implement proactive measures to further mitigate the effects should a significant earthquake occur in the vicinity of the tailings impoundment. You are encouraged to attend one of the meetings listed below or to contact Kennecott for information.

- Joint meeting of Magna Community Council and Magna Area Council, Tuesday, June 30, 1998, 7:00 PM, Magna Senior Center.
- Site tour on Thursday, July 9, 1998 at 11:30 AM. Meet at the Copper Club for an approximate 90 minute tour.
- Site tours on Friday, July 10 at 6:00 PM and Saturday, July 11, 1998 at 9:00 AM. Meet at the lobby of Kennecott's Arbor Park Office Building "A" for an approximate 90 minute tour.

If you wish to go on one of the site tours, reserve seats with Beth Hanson at 252-2802. For more information, contact Bob Dunne at 252-2801 or Louis Cononelos at 252-3103.

Very truly yours,

Thomas Albanese

KENNECOTT TAILINGS IMPOUNDMENT MODERNIZATION PROJECT UPDATE JUNE 1998

Kennecott Utah Copper Corporation has been modernizing its tailings impoundment since the late 1980's. The goals of the modernization program are to control dust and to update tailings management in accordance with new knowledge, technology, and a new understanding of earthquake risk in the Salt Lake Valley.

In a copper mine, rock containing copper is removed from the ground and transported to a concentrator. In the concentrator, the rock is ground up and mixed with water to produce a slurry. Then the copper, molybdenum and other minerals are recovered from the slurry for further processing and eventual sale. The remaining ground rock is called tailings and is transported at Kennecott by pipeline to the tailings impoundment north of Magna. In the tailings impoundment, the ground up rock settles down and the water is decanted off the top for reuse or discharge in accordance with environmental regulations. If tailings become dry, they may become airborne on a windy day. In the late 1980's Kennecott developed a system for storing tailings that keeps the surface of the tailings impoundment wet. Dust from the tailings impoundment has not been a problem since that time.

Tailings management techniques have developed considerably since the tailings impoundment was first used in the early 1900's. The size of Kennecott's operations has also increased. About two years ago, Kennecott started construction of the new North Expansion to provide tailings storage for approximately the next 25 years. North Expansion construction is nearly 80% complete. Kennecott anticipates shifting tailings storage from the tailings impoundment to the North Expansion over an approximate five year period beginning in early 1999. As placement of tailings in the existing tailings impoundment decreases, it will be revegetated in an orderly sequence to control dust and provide wildlife habitat.

Water was introduced to the Inland Sea Shorebird Reserve, the approximate 3800 acre wetlands enhancement site north of the North Expansion, in February of 1997. To date, the improvement in wildlife habitat and increased site usage by shorebirds and other wildlife has been an exciting success story. A nine-fold increase in bird usage and a substantial increase in species diversity has been observed.

Recently there has been an increased public concern with seismic risks within the Salt Lake Valley. The City County Building and many public schools have been seismically upgraded while in 1994 the State legislature created the Utah Seismic Safety Commission. In line with this growing concern, Kennecott retained two independent renowned geotechnical engineering firms to conduct extensive studies of the possible effects of a significant earthquake on its tailings impoundment. These geotechnical engineers consider a significant earthquake in this area to measure approximately 7 on the Richter scale. This magnitude earthquake is projected to occur on average only once every 1350 years in this area and would generally cause well designed frame structures to be thrown out of plumb, buildings to shift off foundations, masonry structures and dwellings to be severely damaged, underground pipes to be broken, and conspicuous ground cracking to occur. If this unlikely significant earthquake were to occur at the tailings impoundment, the independent geotechnical engineers have projected "probable" runout of tailings from the impoundment and "worst case" runout. Kennecott proposes to implement the following measures to mitigate the worst possible extent of runout resulting from this unlikely significant earthquake:

- Accelerated dewatering of the southern slope of the southeast corner. Previously Kennecott has installed over 1500 drains and 31 dewatering wells along this part of the tailings impoundment. Kennecott has also moved the storage of new tailings away from the edge of the impoundment. This dewatering program has successfully improved the dynamic stability of the impoundment in the event of a significant earthquake. As a result, Kennecott is installing 15 additional dewatering wells to accelerate dewatering activities. This accelerated dewatering program is expected to reduce the extent of runout substantially during the next few years.
- North and South 80th West Berms. Kennecott's two independent geotechnical engineers projected that runout from the tailings impoundment would not reach any residential areas under probable consequences of a significant earthquake. Under an unlikely scenario, one geotechnical engineer's worst case assumptions led to a projection that runout could potentially reach a very limited portion of the northwest section of Meadow Green Estates and a residence east of the tailings impoundment,

if the major earthquake were to occur within the next five years. South of Highway 201, Kennecott is planning to build the South 80th West Berm, an L shaped tapered berm about ten to fifteen feet high to divert this potential runoff. East of the existing tailings impoundment, Kennecott is planning to build a similar structure, the North 80th West Berm. These earthen berms will be constructed in 1998 and will eliminate potential runoff resulting from unlikely worst case consequences of a significant earthquake from reaching any residential areas. After construction, the berms will be landscaped to complement the nearby grazing and farming countryside. The 80th West Berms are precautionary measures to address an unlikely worst case scenario during the next few years until the accelerated dewatering program reduces the potential runoff distance.

- **Roadway notification system.** Based on case studies of similar events around the world, runoff from the tailings impoundment could occur immediately after a significant earthquake or potentially at any time for up to 24 hours following such an event. Kennecott is proposing to install warning signs along roadways at a number of locations. The signs would not transmit warnings unless there was a significant earthquake. If a significant earthquake were to occur, pre-programmed messages would be sent to the signs to advise motorists not to enter or to get out of potentially hazardous areas.

A significant earthquake is unlikely. Kennecott has been addressing these risks throughout North Expansion planning and design. The substantial measures already taken are enhanced by these additional measures described above. Kennecott has discussed these issues and proposed remedial steps with appropriate government authorities, including the Utah Seismic Safety Commission and the State Engineer, and is pleased to be a proactive company in reducing potential consequences of a significant earthquake.

