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December 5, 2003

VIA EMAIL AND U.S. MAIL

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The Hannon Law Firm, LLC
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Linn D. Havelick
Director, Environmental Health and Safety
Colorado School of Mines
1500 Illinois Street
Golden, Colorado 80401-1887

Re: Comments on Selected Remedial Investigation Materials
CSMRI Site, Golden, Colorado

Gentlemen:

This letter presents comments of the group of companies, identified on Attachment 1, which previously settled for past costs regarding the CSMRI Site. By letter of October 31, 2003 these parties were provided notice of availability of information regarding investigations at the site and an opportunity to provide comments. We appreciate the opportunity to provide you our comments on the limited available information.

The Colorado School of Mines (the "School") has advised us that, since the parties' settlement with the School, the School has been conducting a remedial investigation of remaining contamination issues at the CSMRI Site and has also undertaken a Feasibility Study, the results of which we understand will be available in the next month. Only limited information about the remedial investigation was available at the open house and on the School's web page and our comments and questions are limited to that information. Please note that due to the limited information available, we are not able to comment on whether the School's activities at the site are in conformance with the National Contingency Plan. The commenters reserve all rights with regard to this issue and all other issues relating to liability for costs incurred at the CSMRI Site.

These comments will not address an evaluation of past costs incurred by the School or cost projections for remedial alternatives. We will reserve comments on those issues until more information is available in the Feasibility Study. Rather, the comments and questions in this letter will focus mostly on the alternatives apparently being studied by the School for remedy of the CSMRI Site, which alternatives we find very deficient and which need enhancement before the RI/FS Report is completed.

Comments on the Remedial Investigation:

The information available is characterized by the School as a Remedial Investigation (RI). It was unclear how this Remedial Investigation relates to earlier work at the CSMRI Site. Only the resulting data is available and not the rationale or methodology for the work. Further, we have not reviewed the Work Plan for the work. (It is unclear whether the document listed on the School's web page as available, *Characterization Survey Work Plan, URS Corp., July 23, 2001*, is the work plan for the Remedial Investigation.) Notwithstanding those limitations, we have a few comments on the limited RI information which is available.

1. It is our understanding that previous characterization work was conducted by URS Corporation. The summary information, however, suggests that the work now reported was conducted after the URS investigation. To what extent was the URS effort utilized to focus the current studies? If the URS work was utilized, was a data gap analysis completed to support the need for additional work or was the URS work insufficient or deficient?

2. The information provided is presented as a formal RI/FS process. Why was an RI/FS selected in lieu of utilizing existing data to direct the removal action?

3. Based upon the summary information, it appears that surface sampling was predicated on a grid system with samples analyzed for radionuclides and other constituents of concern, thus characterizing the surface for all constituents of interest. However, the location of test pits was largely predicated on surface gamma indications and subsurface structures, with sampling in the pit stratification selected on that same premise. Given the absence of direct correlation between surface gamma data and the presence of metal constituents, why was the test pit work necessary? Why didn't the School rely on the prior URS analyses?

4. The *CSMRI Characterization Summary* states that subsurface hydrocarbon contamination was discovered at a groundwater monitoring well site which was initially chosen for the background well (CSMRI 06). No information is provided regarding whether petroleum constituents were determined to be present in the impacted soil. Also, no information was provided regarding whether that contamination arose off-site and whether the discovered contamination will be addressed as part of the RI/FS.

Comments on Risk Evaluations:

The School and its contractors have conducted risk evaluations based on sampling data collected at the CSMRI Site. For the limited purpose of these comments, we assume the data gathered is valid and adequate for site characterization. We reserve, however, the right to provide additional comments regarding the data and the site characterization based on that data as more information becomes available. We also note that our ability to interpret the risk assessment charts is limited by the lack of textual information or context for the risk evaluations. Nevertheless, we have a few comments.

1. The information on the tables captioned *CSMRI Radionuclide Dose/Risk Assessment* ("Dose/Risk Assessment") and *Summary of Alternatives for the Management of Materials at the CSMRI Site* ("Summary of Alternatives") appears to be inconsistent. The seven numbered alternatives do not appear to coincide with the majority of the screening alternatives identified on the Dose/Risk Assessment table. Furthermore, the descriptions of the seven alternatives listed in the Summary of Alternatives table do not enable a full understanding and evaluation of the nature of the alternatives being considered by the School.

2. The Dose/Risk Assessment table, in a footnote, states, "Land restrictions prohibit this type of construction", apparently referring to development of a residence directly on top of a landfill. The RI should identify the source of the land restrictions referenced. The RI should also identify and evaluate the full range of potential land restrictions and how they might impact each of the alternatives being studied.

3. As you know, the risk scenario is a critical component of the Dose/Risk Assessment. The only scenario listed (except for Alternative 1) is the residential scenario. Please provide the criteria (*e.g.*, source, nature and parameters) for the residential scenario used in the Dose/Risk Assessment. Also, CSM advised us that a "recreational scenario" is also being considered. Please provide the criteria for such recreational scenario. Finally, a commercial scenario should also be evaluated.

4. Risk from radionuclides was determined using the RESRAD model. The input parameters, pathways, exposure times and defaults used in this analysis should be provided.

5. If a combined standard for Ra-226 plus Ra-228 is established at 5 pCi/g, will this replace the risk-based approach for radionuclides?

6. In the Dose/Risk Assessment table, the risks indicated for Alternatives 3(a), 3(b), 4(a), 4(b), 5(a) and 5(b) are greater with a protective backfill than with no backfill. The RI should provide an explanation of the assumption used in conducting the assessment. Without accompanying explanation in the RI, such results would appear to be anomalous.

7. We are unable to comment on the risk of trace metals because we are unable to determine how the stated trace metals risk is determined in relation to the stated excavation standard. However, it appears that the remedial alternatives will be driven more by radiation than metals contaminants.

8. We were unable to determine how the alternatives being evaluated will address any groundwater protection issues.

Comments on Alternatives Evaluation:

Only limited information is available regarding the alternatives that apparently have continued to the Feasibility Study for further evaluation. However, if the *Summary of Alternatives for the Management of Materials at the CSMRI Site* is the full range of alternatives being considered in the Feasibility Study, we believe the alternatives being studied are too restricted.

1. Alternatives 4-7 of the Summary of Alternatives table appear to be essentially the same except for the contaminated materials disposal location and the indication in Alternatives 6 and 7 that there might be 500 cubic yards of materials exhibiting radioactivity above background. None of these four alternatives (Alternatives 4-7) identify an excavation standard.

2. The disposal locations being considered include only BFI, CSI and US Ecology. Are BFI and CSI authorized to receive low-level radioactive material? Are sites other than US Ecology also being considered for disposal of radioactive material?

3. There is no need to have four of the seven alternatives address offsite disposal. For offsite disposal components of any alternative, the evaluation can simply present a range of disposal costs and issues. We recommend that any offsite disposal be put to public bid after remedy selection. Furthermore, the company awarded the contract should be required to accept full ownership of the excavated materials once loaded onto transport vehicles and to indemnify the CSMRI Site parties from future liability arising from the transport and ultimate disposal of those materials. Without such

indemnification, it may not make sense to send materials off of the CSMRI Site for disposal.

4. From the Dose/Risk Assessment table, it appears that unrestricted use of the property (namely residential) is the only land use that is being evaluated in the Feasibility Study. We do not have good information about land ownership patterns of the CSMRI Site. For example, we understand that a portion of the CSMRI Site is owned by Mr. Parfet. Mr. Parfet is a potential responsible party, yet the School apparently has not sought contribution from Mr. Parfet for any response costs. We assume that Mr. Parfet has leased property to the School, CSMRI or other parties and therefore derived financial benefit from such lease. Should that property be remediated to an unrestricted use, the property owner would unjustly derive a windfall from the remediation, in spite of being a potentially responsible party. *See City of Detroit v. Simon*, 247 F.3d 619, 630 (6th Cir. 2001) (Affirms district court's limitation on defendants' total liability for future costs to what would be necessary to reach State's industrial cleanup level for property with long history of industrial use. "To require former occupants to assume liability for cleanup costs going beyond the level necessary to make the property safe for industrial use would be to provide an unwarranted windfall to the beneficiary of the cleanup.") The alternatives evaluation should distinguish private property from State owned property.

5. Mixed land uses should also be considered in the Feasibility Study alternatives analysis. For example, it might make sense to dispose of high level radiation wastes offsite and consolidate lower level contaminated materials in an engineered onsite repository on a smaller portion of the property, leaving other portions of the property for unrestricted use.

6. Radon mitigation systems are commonly used to address radon risks. The Feasibility Study should evaluate the feasibility and cost of simply installing radon mitigation systems to reduce potential risk in buildings (*e.g.*, ventilation and sub-slab depressurization systems). The cost to install those systems is small, particularly when the system can be installed as part of new building construction.

7. Institutional controls are mentioned only in the context of Alternative 1, the No Action Alternative. We assume that institutional controls will also apply to Alternatives 2 and 3, but as noted in the prior comment, institutional controls should also be evaluated in other mixed land use alternatives.

8. Because of the above limitations, the alternatives apparently being evaluated will not cover a broad enough mix of alternative remedial actions to ensure that

appropriate remedial options are developed and evaluated. This deficiency must be corrected before the RI/FS Report is completed.

9. We understand that all samples taken "passed" the Hazardous Waste TCLP Test, meaning that they are not hazardous waste. Therefore, all of the materials, unless exceeding the radiation standard, should be suitable materials for municipal landfill disposal. Offsite disposal of these materials in a solid waste landfill should not be a highly expensive undertaking if the volume estimates stated in Alternatives 4-7 are accurate. Again, a bidding process would keep offsite disposal costs competitive.

In sum, we believe that the RI/FS process should address all potential uses of the property and should not be limited to solely residential use. Further, based on our knowledge of the property and our prior evaluation of appropriate and feasible response options, we believe that any remaining contamination on the property can be addressed in an efficient and cost effective manner. To that end, we are willing to assist the School in arriving at sound remedial decisions. Members of our group have extensive experience managing remediation projects and we would be pleased to meet with the drafters of the RIFS report while it is being prepared to provide further comment on the remedial alternatives. In the alternative, we request early review of a draft RIFS Report prior to formal public comment.

We appreciate your consideration.

Sincerely,

BURNS, FIGA & WILL, P.C.

J. Kemper Will

J. Kemper Will

JKW:aa
Attachment

ATTACHMENT 1

GROUP OF COMPANIES JOINING IN COMMENTS

Asarco Incorporated
ExxonMobil Corporation
Industrial Minera Mexico, S.A. f/k/a Asarco Mexicana, S.A.

Phelps Dodge Corporation
Cyprus Amax Minerals Company
Florida Crushed Stone Company
Amax Chemical Corporation
Amax Lead Company
Amax Metals Recovery, Inc.
Chemetall Foote Corporation
Cyprus Foote Mineral Co.
Climax Uranium Company
Cyprus Mines Corporation
Cyprus-Climax Metals Co. d/b/a Climax Molybdenum Company
Phelps Dodge Exploration
Western Nuclear, Inc.

Amoco Oil
Amoco Production Company
Amoco Research Center
BP America, Inc.
BP Amoco PLC, Inc.

Cotter Corporation

Elf Aquitaine, Inc.

Inspiration Consolidated Copper Company,
a subsidiary of Terra Industries, Inc.
and Terra Industries, Inc.

Mexicana de Cobre