

***Comments to the U.S. EPA Region 9 Superfund Program  
Regarding the Engineering Evaluation/Cost Analysis Mine Waste Removal Action,  
Elem Indian Colony Sulphur Bank Mercury Mine Superfund Site in  
Clearlake Oaks, California  
11/23/2005 Clear Lake Environmental Action Network, Inc. (CLEAN)***

**Summary**

Overall review of the EE/CA shows an excellent effort on the part of the EPA to take into account the health and safety of the Elem Indian Colony tribal members. The selected alternative appears to be an option that meets many of the property use and risk issues created by the material. The residential use of the area requires a remediation that only removal can provide, as encapsulation and cover methods often require ongoing maintenance in rural areas. Nearby disposal at the Sulphur Bank Mine Site reduces the costs.

Although the proposed method appears to be appropriate for this area, there are some limitations in scope which we have highlighted below. The following points are further explained in the numbered comments:

- The removal of soil known to contain mine waste is from a limited number of yards and roadways. This is not a comprehensive response to contaminated soil on the Elem Indian Colony and leaves open the prospect for additional removal actions within the area.
- EPA's site description does not identify the North West Waste Rock Pile (NWWRP) as being part of Elem Indian Colony. This leads to an inaccurate assessment of the "impact of non-removal."
- Some alternatives such as removal of all mine waste along and under BIA 120 should be included or discussed.
- Other alternatives require additional explanation/assessment such as the potential removal of mine material from the Northwest Waste Rock Pile.

Some of our comments apply to the format and presentation of the data in the document. The intent of these comments - such as providing more detail on important data used in decision making - is to improve the efficiency and ease of review for this and future documents.

The final set of comments may more appropriately apply to the work plan to be prepared for the project. They can be used as a notification of public and citizen group concerns for work in this area.

Additionally, we feel strongly that potential health and safety risks could be avoided by temporarily housing all willing tribal members off-site during clean-up activities.

CLEAN requests responses to the numbered comments below. Comments 8-18 are identified as appropriate for being addressed in the work plan, the expected response for these comments is discussion on how this information will be included in the work plan.

## General Comments on Alternatives

1. Excavation of the mine waste at the Northwest Waste Rock Pile (NWWRP) is included in Combined Alternative 7. It is later stated that this action is part of another phase of the remediation, OU1. Since this is the only difference between Combined Alternative 6 and 7, is Combined Alternative 7 a realistic option? The option should either be removed or clarified.
2. Decisions regarding actions are based on results of the 1992, 1997 and 2002 sampling event and a recent field survey event. Although the data is found in other reports, the actual results could be better summarized in this document in the form of one or more brief summary tables. The figures are already provided, but tables of the actual results would streamline review and build a more effective document.
3. It is not clear why mine waste under BIA 120 will only be removed on the Colony instead of along the length of the road. It can be presumed that this action is limited to areas with more residential development, but clarification is required.
4. Table 1 (following) shows confidence intervals from data provided in TetraTech 2003 (data from previous studies). Although the data is limited to a few samples from single lots, it indicates the potential for a high degree of variability of values for these single lots. Subsequently, screening areas for mine waste requires multiple samples or adequate safety factors applied to action levels to account for this variability. This variability may also be a factor in the un-described field inspection used for identification of mine waste; mixed fill sources could have been used. More clarification on the screening process here or in subsequent work plans is required since it appears that this project is not accompanied by a comprehensive assessment for the Elem Indian Colony.
5. Previous sampling events by the Tribe indicate elevated levels of mercury along the shoreline north of Lots 3, 4 and 5. Was this area screened or considered for part of this removal?

## Specific Comments on Alternatives

6. EPA'S site description fails to identify the North West Waste Rock Pile (NWWRP) as being part of Elem Indian Colony. Two thirds of the NWWRP is on Tribal lands. This misrepresentation needs to be corrected throughout the document. Corrections to be made to the document should include, but are not limited to:
  - a) Figure 2-1 should show the location of the NWWRP as well as the reservation boundaries.
  - b) Page 3, third paragraph: "*From the residential area to the eastern EIC property boundary (at the west end of the North Waste Rock Pile)*". The boundary is closer to the east end, at least 2/3 of way from west end of the pile.

- c) Page 5, Reasons for selection of alternative 6, item 1: *"Combined alternative 6 provides for removal of all the identified waste on EIC."* Since NWWRP is on Elem Indian Colony this statement is incorrect.
  - d) Page 25, section 2.3.3: *"The North West Waste Rock Pile (NWWRP) is located approximately 800 feet east of the EIC"*. The actual location is approximately 800 feet east of the residential area of the EIC and on the EIC, as is part of the nearby wetlands.
  - e) Page 28, section 3.3 paragraph 4: *"The NWWRP is included in OU-1 of SBMM but is located in the vicinity of the EIC..."* It is not located in the vicinity of the EIC, it is a part of the EIC.
  - f) Page 59, section 4.4,1: Description of Alternative: *"Alternative N1 is the no action alternative for clean up of the mine wastes that are located in the NWWRP, that are not located on the EIC"*. Again the incorrect statement that the NWWRP is not located on EIC.
7. Inaccurate evaluation of impact of non removal of NWWRP at the time of clean-up actions at EIC. Many of the impact inaccuracies spring from the fact that this document does not accurately identify the NWWRP as being part of the EIC.
- a) Page 60 paragraph 3: *"EIC residents are not likely to be exposed to waste during excavation and transport of the excavated mine waste due to the distance from the NWWRP to the EIC residential area."* Since there is only about 800 feet between the NWWRP and the residential area this statement is misleading. Also, all residents must travel on the road where the NWWRP is located to get to their homes. It also should be noted that by planning to address this pile in a later phase, EPA will realize additional costs for a second phase of traffic control, Colony health and safety measures and other redundant efforts.
  - b) Page 73, Combined Alternative 6, Surface Soils: *"Eliminates risks due to mining waste exposure. All mining waste removed from site. Use restrictions would not be required to ensure the effectiveness of the remedy."* These statements are not accurate; NWWRP will remain on EIC land. Until the NWWRP is removed there will be land use restrictions in that area.
  - c) Page 73, Combined Alternative 6, Groundwater: *"Eliminates all potential for groundwater to be impacted due to mine waste at EIC"*. As long as NWWRP remains the potential for groundwater impacts due to mine waste at EIC remains.

### **Comments on Proposed Activities**

*These comments may be addressed in the work plan*

8. Groundwater has not been monitored on the Elem Indian Colony. Although groundwater resources are not utilized at the Colony, groundwater in the area can affect Clear Lake water quality and the nearby intake of the Clearlake Oaks water system. Removal actions such as the one planned can have an effect on groundwater flow and quality. In addition, the absence of mine associated contaminants in soils below the mine fill (in general) can be attributed to groundwater leaching. Since this is only one of many reasons to install

wells in the area, this plan may need to at least discuss planned installations if not include them.

9. Surface water/storm water management and related grading need to be planned for each area. Should any improvements be included as the fill is added?
10. Surface water/storm water management must account for the relatively short distance to the drinking water intake for the Clearlake Oaks water treatment plant.
11. Dust control and air monitoring measures are expected to be described.
12. Medical monitoring, air sampling (indoor and outdoor) and sampling of dust in homes can all be used to indicate the effect of this and other remediation measures. Tracking to determine changes in these measures as well as estimate short term effects of construction can all be important. How will this program integrate with this kind of data collection or include these programs? Are there other measures of the effectiveness of this project?
13. Multiple analysis of fill material for all site specific parameters such as the list used in the TetraTech 2002 samples is expected.
14. Fill sources and truck routes will need to be provided as part of the public outreach. Efforts should be made to ensure that truck/construction traffic is routed east of Clearlake Oaks, and not along the Clear Lake north shore of Hwy 20.
15. An outreach program for local businesses should be considered. Involving local businesses with site activities not only provides positive local support, it creates additional public involvement and understanding. This can include insuring that CH2M Hill;
  - a) Advertises for local subcontractors in a local publication.
  - b) Coordinates with local business organizations such as the Business Outreach Response Team (see \* below) to identify training needs in a timely manner.
  - c) Attempts to buy supplies in Lake County.
  - d) Offers to meet minority subcontracting requirements through interested and qualified members of the Elem Tribe.
16. An extensive outreach program to local citizens should be created and include:
  - a) Direct mailings to local residents on Sulphur Bank Road including Orchard Shores and Lakeview Estates and residents on Sulphur Bank Mine Road.
  - b) Postings at the post office and other local bulletin boards (CLEAN can assist with locations and postings)
  - c) Provides school education material that groups such as CLEAN can distribute and/or present

- d) Place appropriate traffic control signs that indicate truck traffic at either end of Sulphur Bank Drive. This would ensure that local commuters are aware of construction activities.

Mailings and postings should briefly describe activities and provide schedules as well as contact information.

- 17. Safety issues should include safety measures for Elem residents that accounts for the unusually large number of children present at the Colony during the summer and considerations for heavy equipment and truck traffic. The most efficient option may be to temporarily relocate all the families from the Colony eliminating this important risk.
- 18. Develop a civil engineering report on Sulphur Bank road and the intended truck traffic that considers the width of the road, current traffic and the ability of the road to handle the weight of the trucks. Accommodations and/or modifications may be required to prevent an additional road maintenance expense from Lake County Public Works.
- \* The Lake County Business Outreach Response Training Program (BORT) is Lake County's non-profit economic development group. BORT is involved with all local job groups, ongoing public education and interfacing with local community college training programs. BORT has job information databanks useful in hiring local subcontractors. We also suggest that BORT coordinate a 40-Hour HazWopper training program - either funded by EPA, or with EPA-supported grants - which can be offered in as a 40-hour one-week program, or a 3-weekend course, for potential construction site workers. The contact person is Chuck Doty, Executive Director BORT, 707-262-1090.

Table 1. Confidence intervals for samples from the same lots. For arsenic the confidence interval exceeds the action level (Arsenic action level is 23 mg/Kg) and for both mercury and arsenic the confidence interval exceeds the average for multiple data sets.

<b>Arsenic Results from Tetra Tech 2002</b>						
Lot Number or Label	<b>19</b>	<b>20</b>	<b>22</b>	<b>25</b>	<b>26</b>	<b>Casino</b>
Results in mg/Kg	11.9	52.8	9.5	16.7	19.6	15.0
	13.8	70.4	84.4	124.0	32.1	10.5
	4.7	38.0	10.9	9.4	49.7	8.7
			4.2		67.6	33.3
			5.0		32.2	
		8.0		43.5		
				54.5		
Significance Level (95% CI)	0.05	0.05	0.05	0.05	0.05	0.05
Standard Deviation	4.80	16.22	31.49	64.16	16.15	11.27
Number of samples	3.00	3.00	3.00	3.00	7.00	4.00
Confidence Interval	5.43	18.35	35.63	72.60	11.96	11.04
Average	10.13	53.73	20.33	50.03	42.74	16.88

<b>Mercury Results from Tetra Tech 2002</b>						
Lot Number or Label	<b>19</b>	<b>20</b>	<b>22</b>	<b>25</b>	<b>26</b>	<b>Casino</b>
	44.9	92.3	7.9	12.4	157.0	134.0
	17.8	196.0	15.7	17.5	54.4	57.0
	11.1	158.0	19.0	12.6	133.0	24.0
			9.5		177.0	5.0
			84.4		61.5	38.6
		10.9		107.0		
				160.0		
Significance Level (95% CI)	0.05	0.05	0.05	0.05	0.05	0.05
Standard Deviation	17.90	52.46	29.60	2.89	48.76	56.88
Number of samples	3.00	3.00	3.00	3.00	7.00	4.00
Confidence Interval	20.25	59.37	33.50	3.27	36.12	55.74
Average	24.60	148.77	24.57	14.17	121.41	55.00