TES
Site: Hanley Area #2
ID: M0321009038
Break: 1.0
Other:
8-12-03
A716

Comment Responses – 89th RRC - August 12, 2003
Preliminary Assessment/Site Investigation Former St Louis Ordnance Plant – Report date - October, 2001

Tom Lorenz
U.S. Environmental Protection Agency

Com. No.	Comment	Response
1	Site Description, page 2-1, para 1: The discussion includes the most general information concerning the activities and chronology of events that took place there. SLOP built this area in 1941 and operated it as an explosive production and storage area until 1959. In 1959 Hanely Industry, Inc leased the property for the purpose of receiving, loading, pressing, and testing explosives. The PA/SI state that in 1979 the U.S. Army Reserves acquired the property. The PA/SI state that 89th Regional Support Command, USAR is the current owner.	See Section 2.3. This Section describes the operational history in more detail.
2	Site Description, Building 218 Series, page 2-2, para 1: The names of production stock compounds and the final product explosives should be listed for this series of buildings in subsequent CERCLA documents.	Noted, comment will be address in subsequent CERCLA documents.

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3 3 cont.	Site Description, Building 219 Series, Page 2-2, para 1: The PA/SI states that primer and tracer mixing was done in these buildings. The manes of the production stock and chemicals and the final explosive product should be listed for these buildings in subsequent CERCLA documents. Building 219A should be sampled for dinitrotoluene (DNT) which was a component of smokeless powder.	Composited soil samples collected around the perimeter of Building 219A were analyzed for TAL metals, VOCs and explosives. Explosives testing on surface soils was accomplished with Method 8330, which includes 2,4-dinitrotoluene and 2,6-dinitrotoluene. Section 7.4 will be expanded to discuss the results of the explosive sampling. The PA/SI focus on the sampling of the soil and groundwater outside the buildings and not the actual sampling of buildings. In a past investigation for building contamination, swipe samples from Building 219A tested positive for heavy metals such as Pb, Ag, Ni, Hg, and Cr and negative for the explosives Tetryl, HMX, and PETN.
4	Para 2: The PA/SI states that Buildings 219 B, C, and H were used for explosives drying from 1959 to 1979 (by Hanley). There is no mention of what SLOP used the buildings for, nor is there any mention of the specific explosives being dried there from 1959 to 1979. An inventory of production stock and final explosive products should be included in subsequent CERCLA documents.	The May 1989 RI/FS SLOP Installation Restoration Program Work Plan by U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) lists Compounds Utilized (Exhibit 1-10), Explosive Trains and Components Designed by Hanley Industries (Exhibit 1-5) and Explosive Components Loaded for the Military and NASA by Hanley Industries (Exhibit 1-6). These 3 Exhibits will be be available to the EPA under separate cover.

5	Site Description, Building 220, page 2-2, para 1: There is no mention of samples being collected in Building 220 in the drains and sewers. That area should be sampled at least for chlorinated solvents for the Remedial Investigation (RI). During a site visit on April 26, 2002, it appeared that the Job Corp was using this building. If this is true, is there an agreement governing this relationship and if so does it inform the Job Corps of the potential hazards of the building?	Bld 220 belongs to the army-it is vacant and the doors are welded shut. The transformer building 244 belongs to the Job Corp.
6 6 cont.	Site Description, Building 227 Series, page 2-2, para 1: The specific explosives mixed there by SLOP and those stored there by Hanley should be named in subsequent CERCLA documents. Aerial photographs taken in 1968 of the SLOP area show eight (8) more buildings in the 227 series occupying the north end of what is the current football field of the Job Corps. In addition the 1968 photos show that the area occupied by the current Job Corps gym was used as foot paths between the 228 series buildings and the 227 series buildings. These areas should be investigated and included in subsequent documents. Evaluation of these properties for potential CERCLA actions should not be based on ownership (in this case the USCOE excluding the U.S. Department of Labor property) but on operational units and the releases and potential releases that occurred or may occur.	The 89th RRC is currently initiating discussions with the DOL concerning the history and future plans in this area.
7	Site Description, Building 228 Series, page 2-3, para 1: As noted in the previous comment, the 1968 aerial photographs show six (6) additional buildings in the 228 series. Those six buildings appear to be where the south end of the Job Corps football field is now. In addition the 1968 photos show six (6) buildings, the 228 and 227 series and the six buildings in the northwest corner of the athletic field were built and operated by SLOP. They may or may not have been used by Hanley, but their evaluation should be included in subsequent CERCLA documents.	See response to Comment #6.

8	Site Description, Operational History, page 2-5, para 2: The PA/SI states that Hanley did not use the existing sumps and powder wells for wastewater disposal. How did they dispose of their wastewater.	Hanley reportedly did not use the powder wells for wastewater disposal, but used some of the on-site magazines for storage of explosives and other materials and used several of the buildings for ammunition production and storage activities. All explosive wastes generated by Hanley were reported to have been transported to Ft. Leonard Wood for disposal (USATHAMA,1981).
9	Para 3.The PA/SI states that the wash water from the decontamination of the buildings was discharged onto the ground outside of the buildings. That action constitutes a release of contaminates. The nature of those contaminates should be evaluated in subsequent CERCLA documents.	The intent of the metal and explosive testing of the soils outside the buildings (at locations were washout water may have accumulated) was to determine if the decontamination process constituted a release. Lead and arsenic concentrations greater than the preliminary remedial goals (PRGs) were detected in surface soils outside of several buildings on-site. Section 7.4 summarizes these results, and they are tabulated in Table 7-1.
10	Groundwater Pathway, Targets, page 5-4, para 1, line 5: The PA/SI states "The onsite groundwater sampling showed no contaminated groundwater leaving the site." Is the meaning of this sentence that the on-site groundwater samples were devoid of contamination and as such the groundwater leaving the site must also be devoid of contaminates.	Contamination (metals, VOCs, and explosives) was not found in the groundwater in the down gradient wells GMW105 and GMW103, hence, groundwater sampling showed no contaminated groundwater leaving the site.

what about other than explosive waste?

11 11 cont.	Surface Water Pathway, Sample Locations, page 6-1, para 1: Why weren't samples analyzed for persistent pesticides?	There is no known information that the Hanley Area or Hazardous Chemical Area #2 ever maintained a pesticide control facility. Therefore, large quantities of pesticides were not stored or managed in this area. Although pesticides may have been used in this area, the 89th RRC does not consider the proper application of pesticides for pest management sufficient justification for sampling and analysis of pesticides in surface soils or water.
12	Surface Water Pathway, Conclusion, page 6-4, para 1: The PA/SI statement that "the surface water, sediment, and runoff are collected and treated by the storm/sanitary sewer system of St. Louis District prior to release to the surface drainage" is partially correct for the present time frame. At the time that SLOP was built and operated the area was serviced by combined sewer which conveyed the storm/sanitary sewer directly to the Mississippi River without any treatment. At the present time the combined sewer system is configured to bypass a portion of the storm/sanitary water without any treatment to surface drainage in the event of high flows (associated with high volume run-off events).	Noted.
13	Soil Exposure Pathway, Site Conditions, pare 7-1: The PA/SI states that "The site is surrounded by chain link fence with razor wire in good condition and there is a locked entrance gate into the facility." Artifacts (holes in the chain link fence and bottles and cans littering the area) in plain sight on the site attest to the fact that the site **is not secure**. In addition the part of the Hanle-`y site that is presently controlled by the U.S. Department of Labor, Job Corps Facility is not secure either. In fact twenty (20) buildings on the ground leased by Hanley Industry Inc have been removed and the land area is being used as an athletic field by the Job Corps	The 89th RRC has installed a chain link fence with a barbed wire canopy. Still trespassing and vagrancy persist at the site. The present five-year plan for the Hanley Area includes the demolition of all building and the sealing off of the tunnels and powder wells.

14	Soil Exposure Pathway, Targets, page 7-1, para 2 line 3: The PA/SI uses the factor of 3.81 persons per home to arrive at a target of 38 people. Since that neighborhood is a low income minority dominated neighborhood those houses should be surveyed for actual residents for subsequent CERCLA documents and risk calculations.	We will estimate the number of persons living in this area by utilizing current 2000 US census data.
15 15 cont.	Soil Exposure Pathway, Conclusions, page 7.5: The property included in this PA/SI consist of that owned by the 89th Regional Support Command, USAR. The property Leased by Hanley Industry, Inc. from 1959 to 1979 included part of what is now owned by the U.S. Department of Labor, Job Corps Training Facility. Specifically that area where the Job Corp Gym and their athletic field currently is, was in the Hanley Leased Area. In addition the entire areas known as the Hanley area, the Job Corps area (referred to historically as Hazardous Chemical Area #2 and the Wherry Housing Area [used only as housing]) were owned and operated by SLOP for the manufacture and storage of explosives and chemicals. Hazardous Chemical Are #2 is now owned by the Job Corps and students are dormitoried on that property. These areas (with the exception of the Wherry Housing area) have a common history of being used for the manufacturing and testing and storage of explosives. They should be considered a common unit when evaluated for possible regulatory driven remedial actions. We therefore urge the Department of Defense to complete a PA/SI on the entire area that was part of the SLOP.	See Response to Comment #6.

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James R. Harris
Missouri Department of Natural Resources

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1	The list of contaminants identified, and the levels at which they were found, indicates a Remedial Investigation must be conducted to define the vertical and horizontal extent of the contamination both on and off-site. The Remedial Investigation should satisfy EPA guidance for conducting Remedial Investigations.	Extensive surface soil sampling and metals analysis has been completed at the site. Several areas of lead and arsenic soil contamination have been identified. Limited additional soil sampling on-site may be required to fully characterize metals contamination. Off-site soils sampling has not been accomplished and may be warranted. Based on ground water data from the site and local hydrology, the 89th does not feel that additional ground water investigation is needed. The 89th is willing to discuss further investigation and the scope of such an investigation.
2	The anti-static material on the walls, and the mastic used on the floors tiles, should be analyzed for PCBs during the Remedial Investigation.	We have never heard of PCBs being used in these building materials. Has the MDNR encountered this? What is your justification for this additional sampling and analysis expense? The Hanley Area was used for explosives production. PCBs were used for milling operations associated with ordnance manufacture and assembly.

3	The departments Cleanup Action Levels for Missouri should be added to Table 1-1 and used as preliminary remediation goals. Given the proximity of residences, and the Job Corps, which can be viewed as residence, a risk assessment is necessary to determine accurate cleanup objectives.	Surface soil contamination on-site and off-site and associated health risks would potentially be a part of any additional investigation. Cleanup Action Levels for Missouri will be added to Table 1-1 as a reference.
4	The department requests that Army provide a detailed description of the production processes that occurred at the Hanley area and list of all materials used and stored at the Hanley area and their chemical composition.	The production processes, materials used and stored, and their chemical composition is provided in Section 1.3 and Tables 1-1, and 1-2 of the QAPP. The PA/SI shall be expanded to include a new Section 2.3 with the information from Section 1.3 of the QAPP.
5	The department would prefer the Army refer to the site as the manufacturing plant at the Hanley Area of the St. Louis Ordnance Plant (SLOP). The department believes this is a more accurate description since the preliminary assessment/site inspection (PA/SI) was not inclusive of the entire former plant and only a portion of the Hanley area at the SLOP.	Paragraph 2 of the Section 1.0, Introduction, shall be changed to the following: "In accordance with the United States Army Corps of Engineers (USACE) SOW, TapanAm conducted a field investigation to complete this PA/SI report. This report describes work performed at the manufacturing plant at the Hanley Area of the former St. Louis Ordnance Plant (SLOP) presently under the jurisdiction of the Department of Defense."
6	Section 2.1, 1st Paragraph: The document should also note the Job Corps property, and the remainder of the Sverdrup Army Reserve Center property that was not investigated, was also part of the Hanley Area.	Text will be revised.
7	Section 2.2, 1st Paragraph: Some of the buildings in disrepair have experienced roof structural failure, potentially resulting in the release of asbestos to the environment and the surrounding populous.	A new paragraph 2 shall be added to Section 2.1 identifying the current condition of the property.
8	Section 2.2, Building 220: Is Building 220 still a part of the property owned by the 89th Regional Support Command (RSC) or does the Job Corps currently own and use the building?	Bld 220 belongs to the Army, it is secured with doors welded shut. A small guard house has been erected just outside Building 220 that is being used by the Job Corps. Bld 244 , a transformer station, belongs to the Job Corp and is used daily.

9	Section 2.2 Building 218 Series: What compounds were used in the manufacture of tracer rounds.	Tracer mixes dependent on the composition used, may contain the following compounds: strontium peroxide, magnesium powder, barium peroxide, strontium nitrate, strontium oxalate, magnesium carbonate, and aluminum powder.
10	Section 2.2, Building 219 Series: The department does not understand why powder loading was occurring in a primer production area. Please explain.	These activities were taking place at different times. Primer and tracer mixing during 1941-1945. Loading and mixing of explosives 1959-1979.
11	Section 2.3, 1st Paragraph: The department was under the impression the SLOP did not operate during the Korean War or the Vietnam War, but the St. Louis Army Ammunition Plant did operate during these conflicts, producing 105 mm Howitzer shells. Is this correct?	This paragraph summarizes all of the original SLOP property (including the St Louis Army Ammunition Plant that was in operation through the Vietnam War) and not just the Hanley Area. A majority of SLOP, including the Hanley Area, was deactivated and decontaminated in 1945. Although an attempt was made to rehabilitate the Hanley Area for small arms production, production never commenced. Paragraph 1 shall be rewritten to focus on the history of the Hanley Area.
12	Section 2.3 2nd Paragraph: It is critical the Army determines what compounds Hanley Industry used, and where they were used, to be sure the list of potential contaminants of concern is complete. In addition, the Army should determine what Hanley Industry did with wastewater generated during their tenure at the site, if the existing sewers and powder wells were not used.	A review of available sources indicates all explosives wastes generated by Hanley were reported to have been transported to Ft. Leonard Wood for disposal (USATHAMA, 1981). This information shall be included in this paragraph.

13	Section 2.3, 3rd Paragraph: All the walls, floors and ceilings of the structures should be investigated during the Remedial Investigation to verify they do present an unacceptable risk and for waste profiling.	Demolition plans shall review past reports regarding building sampling and make recommendation for additional sampling. Hazardous materials associated with building materials will be characterized prior to demolition. Work Plans will include personnel safety and waste profiling based on past and future analytical results.
14	Section 2.4: The department does not have copies of any of these previous studies. The department requests a copy of each of the reports, including the USACE archive search report, be submitted for review and addition to our files.	Documents will be provided under a separate cover.
15	Section 2.4.1: The site maps indicate there are 33 magazines and 19 powder wells in the current study area, where are the other 21 magazines and 9 powder wells USATHAMA surveryed in 1981?	Since 1979, the Department of Labor expanded into the former Hanley Area. As part of the DOL expansion the following buildings, with their associated powder wells and concrete barricade walls, have been demolished: 226A to H, 228N to S,227-T and 229 H,J,K,L,M, and N. (USATHAMA, 1981).A new paragraph 4 of Section 2.3, Operational History, shall be added outlining the previous and present status of the Hanley Area.
16	Section 2.4.2: Were confirmation samples collected after the removal of PCB contaminated soils by USATHAMA in 1991? Does the army have documentation for the proper disposal of the PCB containing transformer? Have all the transformer, or other PCB containing devices, been removed from the site?	If available, the nformation about PCB/transformers at the Hanley Area will be provided under separate cover.
17	Section 2.4.2: Has the Army taken any steps to properly manage the asbestos, as was recommended by USATHAMA in 1991?	The 89th RRC has attempted to secure the site thru physical barriers, fences, lock gates and signs. The 89th is actively pursuing demolition of the affected structures.

18	Section 2.4.3: Since incineration occurred on the site, the department believes it is premature to exclude a potential contaminate(s) of concern. Future investigations should include SVOC analyses.	Past investigations have indicated that SVOCs are present only in trace amounts and are not considered contaminants of concern.
19	Section 3.2: The surface and subsurface soils immediately around all the 228, 227 and 219 series magazines should be sampled during the remedial investigation.	Surface and subsurface soil samples from these areas were taken and analyzed in the PA/SI. The exact locations of these samples are unclear on Figs. 4-1 and 4-2 and will be clearly indicated in the final report. Additional soil samples will be taken during potential future investigations to characterize these areas if required.
20	ection 3.3: The department would have preferred the samples from the backfilled sumps be analyzed, as the results would have documented the lack of contamination. Since the samples were not analyzed the army cannot document the wells are contaminate free. These sumps will have to be re-sampled and analyzed during the Remedial Investigation.	Appropriate techniques for analyzing material in the sumps will be considered in any future investigation.
21	Section 3.4: Were soil samples collected at the location of all the sewer breaks?	Subsurface sewer line and powder well sampling occurred at breaks/cracks that are most likely to be a source of contamination in the subsurface. Five (5) subsurface soil samples were collected. Three (3) adjacent to breaks in the sewer lines and two (2) adjacent to cracks in the powder wells.
22	Section 5.4.2, VOCs: MW-101 is located on property that has been under Army control since the construction of SLOP. This area was a part of the SLOP complex, and therefore will have to be investigated during the Remedial Investigation.	The 89th RSC further investigated this well and no contamination was found. Documentation is available upon request.

23	Section 6.2: Do the stormwater drains daylight into an open channel after the pipe leaves the site?	Storm drains leave the site as subsurface pipes. Sewer water samples were collected using confined space entry through manholes that are about 23 feet below ground surface. The status of the stormwater drain after leaving the site is unknown.
24	Section 6.2: The department is not convinced that storm drains collect "all" runoff and none runs off that site. Stormwater samples should be collected to determine if contamination is leaving the site. Regardless of how the contamination is leaving, a permit is required to discharge contaminates.	Stormwater impacts will continue to be evaluated.
25	Section 6.4.1: These results indicate an un-permitted discharge from the site is occurring.	Noted: See response to comment #24.
26	Section 6.4.4: The lead levels found in some of the sediment samples strongly suggest that some of these sediments are a hazardous waste.	Noted: Sewer sediments did not exceed the screen criteria. As expressed in previous responses, the Department of Defense is committed to the closure of all powder wells and sealing of the tunnels at the Hanley Area which is currently under the jurisdiction of the Department of Defense. The 89th RRC will evaluate removal of sediments from the tunnels with contaminant levels above PRGs established for industrial soils.
27	Section 6.4.5: The lead levels found in some of the powder well sediments samples strongly suggest that some of these sediments are a hazardous waste.	Noted: As expressed in previous responses, the Department of Defense is committed to the closure of all powder wells.
28	Section 6.4.5: What are possible sources for the TPH found in PW-15 and PW-22?	The source of the TPH found in PW-15 and PW-22 is unknown and was unexpected based on past site operations. This contamination does not appear to be widespread and may be the result of isolated fuel disposal.

29	Section 6.5: The department is unconvinced that the storm drains capture all surface water and sediment. Numerous young men work and reside immediately behind the site, and may be currently being exposed to unacceptable levels of contamination. The Remedial investigation must be expanded beyond the area within the site fence, both on and off Army property.	***See response to 24. The 89th will continue to evaluate potential contaminants migrating from this site.***
30	Section 7.0: During PA/SI site visits the department saw ample evidence that the site is not secure and is regularly visited by trespassers. It was apparent that trespassers are exposed to site soils, tunnel water, tunnel sediments and asbestos. Given the close proximity of the 219 series of buildings to the Job Corps it is highly likely contamination is present on the Job Corps property and the students may be receiving unacceptable exposure. Given the limited sampling even the groundskeeper may be causing hazardous waste to become airborne while mowing, and receiving inhalation and dermal exposure to hazardous waste himself.	Section 7.0 will be revised. The 89th RRC is currently initiating consultations with the DoL and Job Corps to discuss the environmental condition of effected properties and future options and plans.
31	Section 8.0: During site visits during the PA/SI the department saw evidence that the site is not secure and is regularly visited by trespassers. In addition, due to the dilapidate condition of the site buildings asbestos is exposed to the environment and is likely being released in violation of the departments air regulations.	Section 8.0 will be revised to indicate that trespassers visit the site. Asbestos was not sampled or analyzed during the PA/SI, but ACM is a common building material in buildings of this age, and further disposition of those materials will be addressed in subsuquent documents.
32	Section 9.2: The department agrees that the groundwater pathway is likely incomplete, however, a Remedial Investigation will be necessary to determine the status of the surface water and air pathways and define the vertical and lateral extent of the contamination.	If it is determined that further investigation is warranted all media pathways will be considered.