OCT 12 2001

STATE OF MISSOURI
Bob Holden, Governor • Stephen M. Mahfood, Director
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
P.O. Box 176 Jefferson City, MO 65102-0176

SUPERFUND DIVISION

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October 4, 2001

Ms. Sandy Olinger
AMCOM Engineering
Environmental & Logistics Oversight Office
AMSAM-EN
Building 3206 - Redstone Arsenal
Huntsville, AL 35898

Re: *Draft Site-Specific Environmental Baseline Survey St. Louis Army Ammunition Plant*, St. Louis, Missouri

Dear Ms. Olinger:

The Federal Facilities Section of the Hazardous Waste Program has completed its review of the above referenced document and provides the enclosed comments. I look forward to reviewing the Army's comment responses and discussing the department's objectives for this investigation.

If you have any questions regarding this letter, or need further information, you may contact me at (573) 526-2736.

Sincerely,

HAZARDOUS WASTE PROGRAM

James R. Harris, Environmental Specialist III
Department of Defense Unit

JH:dd

c: Mr. Tom Lorenz, U.S .Environmental Protection Agency - Region VII

RECYCLED PAPER

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SUPERFUND RECORDS

Missouri Department of Natural Resources Comments On
Draft Site-Specific Environmental Baseline Survey
St. Louis Army Ammunition Plant,
St. Louis, Missouri

General Comments

1) Although the Army has elected to call this field mobilization a site specific EBS, the department expects the results to fulfill the requirements of a Remedial Investigation, as defined by EPA.

2) In order to fully assess the completeness of this document the Army must indicate which structures will remain at transfer.

3) If the Army plans to transfer the buildings, an assessment of the risks within each building must be performed.

4) If the Army does not plan to dispose of transformers and other possible PCB containing/contaminated items before transfer, they must be assessed now to inform a potential buyer.

5) The document makes numerous references to SVOCs and metals being background. However, no background data is presented, nor is there any discussion of the collection of background samples to support these claims. This deficiency, along with the lack of a risk assessment section, must be addressed before the document can be approved.

6) The lack of additional groundwater investigation and monitoring is unacceptable. Several contaminants where found to be present in the groundwater during the EBS, however, no follow-up investigation is planned to define the nature and extent of the contamination.

7) In most situations, all samples should be analyzed for metals, TPH, SVOCs, PCBs and VOCs

Specific Comments

1) Sampling and Analysis Plan, Section1.4.2: What was the heat source for SLAAPs after SLOP had been excessed?

2) Sampling and Analysis Plan, Section1.4.2, Building 3: What fueled the furnaces located in Building 3? If the fuel was liquid petroleum, where was it stored?

3) Sampling and Analysis Plan, Section1.4.2, Building 3: Given the volume of solvents and other process fluids that likely entered via the loading docks, three to four sampling locations should selected at each dock.

4) Sampling and Analysis Plan, Section1.4.2, Building 3: Will all the sumps and drain traps be sampled, particularly those on the first floor?

5) Sampling and Analysis Plan, Section1.4.2, Building 3: Will the cooling equipment on the roof be sampled for PCBs, since the oils circulated could have contained PCBs? In addition to the coolers, the dust collectors should also be sampled for metals and PCBs.

6) Sampling and Analysis Plan, Section1.5: The report should discuss what PCB investigation has been performed and the remediation work that is planned. In addition, the risk assessment must address the PCB contamination that will be left in all the buildings.

7) Sampling and Analysis Plan, Section1.5: How will the risk assessment address the known and uninvestigated materials and spills (i.e. oil spills, the dried oxide material remaining in Building 3, the cracked concrete cap and peeling paint in Building 3 that was installed to abate the PCB contamination, etc.)? All of these types of problems must be included in the risk assessment if the property is to be transferred in the present condition.

8) Sampling and Analysis Plan, Section1.5: How will this work plan address the needs of the underground storage tank closure?

9) Sampling and Analysis Plan, Section 3.1.1: The problem identified is incorrect. The correct problem statement should be to identify and delineate contamination and determine what risks the contamination presents to human health and the environment, in accordance with EPA Remedial Investigation guidance. Once this is done, the Army can determine if the property is suitable for transfer.

10) Sampling and Analysis Plan, Section 3.1.2: It is premature and inappropriate to discuss a Finding of Suitability to Transfer before a remedial investigation is completed.

11) Sampling and Analysis Plan, Section 3.1.3: Process knowledge should be added as an input for deciding whether to investigate.

12) Sampling and Analysis Plan, Section 3.1.5, 4th paragraph: This paragraph should be expanded upon in much greater detail, in the risk assessment work plan being developed.

13) Sampling and Analysis Plan, Section 3.2: While soils may be an significant contributor to the risk at the site, many of the buildings if left in place may also pose significant risk and must be evaluated as thoroughly as other media

14). Sampling and Analysis Plan, Section 3.2: The Army has no data confirming groundwater contamination is limited to perched zones and has not conducted any monitoring to determine how the groundwater level fluctuates, therefore, the army cannot assume a utility worker will not come into contact with groundwater. In addition, how does the Army know a future landowner will not have a use for groundwater?

15) Sampling and Analysis Plan, Section 3.2, 2nd paragraph: The document states building surfaces present a potential exposure pathway, but since the pathway can be eliminated, no risk assessment is planned. Does this mean the Army plans to decontaminate or encapsulate all building surfaces found to have contaminants present since no determination of what levels present a risk to human health or the environment will be conducted?

16) Sampling and Analysis Plan, Section 3.2, 2nd paragraph: How will the Army proceed with the lead-based paint and asbestos contamination if the property is not transferred?

17) Sampling and Analysis Plan, Section 3.2, 2nd paragraph: The department disagrees with the Army and believes air sampling should be conducted within the buildings. Although soils may be the source of some of the airborne health risk, other surfaces may also be responsible for reduced air quality. In addition, soils that meet an ingestion or dermal contact remedial goal may still result in unacceptable air quality in a building. The bottom line is the Army does not know what structures may or may not be left standing and must evaluate all risks a building may present before it can be transferred.

18) Sampling and Analysis Plan, Section 3.2, 2nd paragraph: What standard will the Army use to determine whether an unacceptable carcinogenic and non-carcinogenic risk exists?

19) Sampling and Analysis Plan, Section 3.2, 2nd paragraph: The presence or absence of human health risk will not be the sole factor determining whether or not remediation is necessary before the property can be transferred.

20) Sampling and Analysis Plan, Section 3.2, 4th paragraph: The department suggests adding total petroleum hydrocarbons (8015 OA1 and OA2) to the analyte list. Although the data may not be beneficial from the risk assessment perspective, the data would add to the overall remedial investigation.

21) Sampling and Analysis Plan, Section 4.2, 1st paragraph: The use of specified sampling depths is fine if field screening and visual observation do not indicate contamination is present. However, samples should otherwise be collected from the zone where contamination is first encountered, the zone where screening indicates the highest contamination levels, and the greatest depth at which contamination is found. Borings must continue until the vertical extent is defined or 10 feet whichever is greater.

22) Sampling and Analysis Plan, Section 4.2, 1st paragraph: Samples should be collected along the sewer where breaches are indicated, however, a regular sampling interval should be established regardless of the survey results. Samples of the water present in the granular bedding around the sewer line should also be collected if present.

23) Sampling and Analysis Plan, Section 4.2, last paragraph: Soil cuttings may not be returned to the borehole, rather they must be disposed of IDW.

24) Sampling and Analysis Plan, Section 4.4: All oil stains within the building should be sampled if the risks in the interiors of the buildings are to be assessed.

25) Sampling and Analysis Plan, Section 4.5, third paragraph: The use of specified sampling depths is acceptable in this situation, particularly from 0-6 inches, however, field screening and visual observation should also be used to select sampling locations.

26) Sampling and Analysis Plan, Section 4.5, sixth paragraph: Once soil is excavated it must be sampled to determine its suitability for use as backfill, which in Missouri is clean (non-detect) soil.

27) Sampling and Analysis Plan, Section 4.6: The Army should consider wipe sampling all oil stains present in all the buildings to assist in the evaluation of the risks each building presents.

28) Sampling and Analysis Plan, Section 4.7: Any sewer clean out should be done after sample collection to prevent the flushing of contaminates. Has the Army assessed the risks of cleaning out the sewer lines, particularly by mechanical methods, given the possibility of explosives?

29) Sampling and Analysis Plan, Section 4.9: Wouldn't a thief tube be a more effective method of collecting liquid samples for waste profiling?

30) Sampling and Analysis Plan, Section 5.1, bullets 6 and 7: The department should be consulted before significant deviations from the approved work plans are made.

31) Sampling and Analysis Plan, Section 6.4: Which laboratory will be performing the Total Petroleum Hydrocarbon analyses (Method 8015 OA1 and OA 2)?

32) Sampling and Analysis Plan, Section 7, first bullet: IDW fluids should be profiled per the requirements of the disposal facility.

33) Sampling and Analysis Plan, Section 7, bullets 2-4: No IDW may be disposed of on-site, only at an approved disposal facility.

34) Sampling and Analysis Plan, Table 3-1, Site-wide: Samples should be collected around the drip-line of buildings to determine if the lead levels present a risk to human health or the environment.

35) Sampling and Analysis Plan, Table 3-1, Site-wide: See comment #22>

36) Sampling and Analysis Plan, Table 3-1, Site-wide: The lack of any additional groundwater investigation is unacceptable, nitrates were found above the MCL and solvents were also detected during the EBS. The limited number of monitoring wells and the complete lack of monitoring data is insufficient evidence for the Army to state that a pathway does not exist. In addition, while human health risk is important, the department is also concerned about environmental pollution and will not approve the work plan without additional groundwater investigation to further define and identify groundwater contamination.

37) Sampling and Analysis Plan, Table 3-1, Building 1: Borings should be installed through all the concrete filled sumps located beneath the breaking equipment, samples should be analyzed for metals, PCB, SVOC and TPH.

38) Sampling and Analysis Plan, Table 3-1, Building 2: The department would prefer several borings be installed at each process loop, rather than excavating only two. Borings should be installed through the fuel line vault along the entire length and near the former UST, some of the borings should be converted to monitoring wells. In addition, all samples should be analyzed for metals, PCBs, SVOCs, VOCs and TPH.

39) Sampling and Analysis Plan, Table 3-1, Building 3: Will the PCB data be used to evaluate the risks within the building. Why isn't sampling the separator tank containing the oxidized material, the sumps and floor drains, around the remote quench oil fill, along the loading docks, and the UST area listed here? Why isn't additional groundwater investigation included? What analyses will be performed?

40) Sampling and Analysis Plan, Table 3-1, Building 4: SVOC analyses should be performed, since no data exists regarding background. Without sampling, no determination of whether or not the levels are backgrounds can be made. Regardless of the source, they could still present a health risk, which should be evaluated.

41) Sampling and Analysis Plan, Table 3-1, Building 4: Additional details regarding the installation of borings and monitoring wells is needed.

42) Sampling and Analysis Plan, Table 3-1, Building 5: Has the mastic beneath the tile been investigated for PCBs? Will any groundwater investigation be performed since this and other documents have suggested the adjacent building to the south may have contributed to site contamination? How deep will the soil boring be? From what depth will the sample(s) be collected?

43) Sampling and Analysis Plan, Table 3-1, Building 6: Why isn't any investigation of the former laboratory and dark room area planned? Will the drains and sumps in these areas be investigated? Has the mastic beneath the tile been investigated for PCBs? Will any groundwater investigation be performed since this and other documents have suggested the adjacent building to the south may have contributed to site contamination? ? How deep will the soil borings be? From what depth will the sample(s) be collected?

44) Sampling and Analysis Plan, Table 3-1, Building 7: Wipe samples for TPH? Just install a boring and collect soil samples (SVOCs, TPH).

45) Sampling and Analysis Plan, Table 3-1, Building 7: The data from building 8 is limited, additional borings/monitoring wells would be beneficial.

46) Sampling and Analysis Plan, Table 3-1, Building 10: The extent of the investigation should be expanded to include four-five borings beneath the UST deadmen. All borings should be

advanced until field screening or visual indications of contamination are no longer evident. Samples should be collected from two-three ft depth intervals. The samples should be analyzed for TPH, SVOCs, PCBs and VOCs. At least two of the borings should be converted to monitoring wells.