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RESPONSIVENESS SUMMARY: ST. LOUIS AIRPORT SITE INTERIM ACTION ENGINEERING EVALUATION/ COST ANALYSIS

ST. LOUIS, MISSOURI

SEPTEMBER 1997

prepared by
U.S. Department of Energy, St. Louis Site Office, Formerly Utilized Sites Remedial Action Program

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ACRONYMS AND ABBREVIATIONS

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOE	Department of Energy
EE/CA	Engineering Evaluation/Cost Analysis
ft	foot/feet
FY	Fiscal year
g	gram(s)
l	liter
MDNR	Missouri Department of Natural Resources
OST	Office of Science and Technology
pCi	picocuries
Ra	radium
SLAPS	St. Louis Airport Site
Th	thorium
U	uranium

1. INTRODUCTION

An Engineering Evaluation/Cost Analysis (EE/CA) was prepared to analyze alternatives for managing radioactively contaminated material at the St. Louis Airport Site (SLAPS). The EE/CA was issued for public review and comment on July 28, 1997. The public comment period extended from July 29, 1997 through August 28, 1997. Eight comment letters were received on the proposed action. This Responsiveness Summary addresses the significant comments received from the public during the comment period.

The public and other stakeholders expressed a strong preference for Alternative 3. As the preferred action, Alternative 3 is intended to support the removal of radioactively contaminated fill materials immediately adjacent to Coldwater Creek and along the ditch south of McDonnell Boulevard. This alternative will also include the construction of a new rail loading facility for soil staging, conditioning, and rail car loading. Material will be removed in accordance with DOE Order 5400.5, which specifies that the guideline for radionuclide concentrations for radium and thorium in soil is 5 picocuries per gram (pCi/g) above background in the top 15 cm of soil and 15 pCi/g above background in any subsequent 15 cm layer. A corresponding concentration for U-238 will be 50 pCi/g above background. Based on the EE/CA and the comments received, the recommended alternative is considered appropriate and will be implemented in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (as amended) and the National Environmental Policy Act.

2. SCOPE AND ORGANIZATION OF THE RESPONSIVENESS SUMMARY

Eight letters were received during the comment period; which included two from local officials, one from an environmental group, one from a regulatory agency, one from a local utility, and three from private citizens. Due to the number of comments received, key questions are addressed individually below.

DOE encourages those interested in learning more about the St. Louis Site to review the Administrative Record (which contains reports and other information collected about the site), or call DOE's toll free number (1-800-253-9759) to ask questions or to be added to the mailing list for future mailings about the site. The Administrative Record is available for review at the following location:

St. Louis Site Office
9170 Latty Avenue
Berkeley, Missouri 63134

3. COMMENTS AND RESPONSES

A list of individuals and organizations that submitted comments is provided in Table 1. Each key question is re-stated in Table 2 adjacent to DOE's response. The questions in Table 2 are numbered sequentially and do not reflect any numbering that was used in the comment letters. General

statements are not listed in Table 2 but may be found in Appendix A. Appendix A contains the complete text of the submitted comments, marked to show the location of DOE's response in Table 2.

The submitted comments have been placed in the Administrative Record file for the site. The final EE/CA and this Responsiveness Summary have also been placed in the Administrative Record file.

Table 1. Individuals and Organizations That Submitted Comments on the SLAPS Interim Action EE/CA

Name	Organization Affiliation
Sandy Delcoure	Cold Water Creek Stream Team
Kay Drey	
Councilman Keith Kallstrom	City of Ferguson, Missouri
J. Donovan Larson	St Louis County Water Company
Sally Price	
Carol Ann Prombo	
David A. Shorr	State of Missouri Department of Natural Resources
Honorable Jim Talent	Congress of the United States House of Representatives

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

COMMENT / QUESTION	DOE RESPONSE
Sandy Delcoure	
1. I hope that the microwave vitrification process, done as a field demonstration project, be considered to prevent further contamination of the creek and air when digging begins. Freezing the ground and a tent set up over the work site might also be considered to see that the clean up is done in the safest way to prevent further contamination of the creek and air.	These technologies will be evaluated by the Technology Demonstration project if they are submitted for consideration. Air emissions will be controlled using dust suppression technologies. Air emissions will be carefully monitored to assure compliance with health standards. The use of a tent is not necessary nor is it a viable option due to restrictions imposed by the airport.
Kay Drey	
2. With all the major funds that have been expended by the DOE's Office of Science and Technology (OST) to design, develop, test and implement new environmental restoration and waste management technologies, it seems unconscionable to send a dozer or back-hoe in to attack a highly contaminated creek bank and its associated floodplain landfill without putting in place at least on of those technologies. If this site -- its groundwater, surface water, air, and workers -- is not entitled to such protection and the wisdom engendered by the OST's research, what site is?	DOE is currently evaluating technologies for a possible demonstration at SLAPS under a separate action. Any demonstration of selected technologies will be conducted during 1998. Excavation of the St. Louis soils can be done safely and efficiently using standard construction equipment, including dozers and backhoes. Air and water monitoring will assure protection of workers and the public. Technology reviews for this project have focused on treatment and remedial action alternatives such as containment technologies.
3. The most basic concern I have about the Draft EE/CA is my belief that no interim action should be taken until a comprehensive plan has been designed -- and has undergone interagency and public review -- for the entire 22-acre site. The interim actions proposed in the Draft EE/CA might accelerate the erosion offsite of radioactive solids, liquids and gases into the air, into surface and groundwater, and onto adjacent lands and could further contaminate the Coldwater Creek sediments, banks, floodway, and neighboring properties. Within days or weeks of the first digging, groundwater could be encountered -- in fact, I believe is likely to be encountered. If that happens, DOE staff and contractors have told the Missouri Department of Natural Resources and St. Louis County that they will stop digging. And then what?	Actions to be taken under this EE/CA will provide additional water control over current conditions by providing a clean buffer adjacent to Coldwater Creek. The limit of excavation will be marked with synthetic or geotextile sheets and the holes will be backfilled.
4. Do you agree that the disturbance of the soils during excavation could cause the release and migration of unpredictable, uncontrollable amounts of contaminants, both vertically and horizontally? If so, are you planning before excavation begins to install frozen soil barriers around the sides and underneath the excavation area, or a coffer dam, steel pilings, or other protection for the creek and groundwater?	Controls will be in place to assure that unpredictable / uncontrollable discharges do not occur. To minimize the potential for failure, DOE, working with MDNR and county officials, has assembled a team of contractors and independent experts to ensure that this construction is conducted in a safe and responsible manner.

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

5. Why is the gabion wall not to be removed from the site, along with the rest of the contaminated materials on site?	The gabion wall will remain in place at this time. It provides a good barrier against erosion.
6. When do you intend to remove the contaminated gabion wall?	A decision on the final remediation of the site will determine the fate of the gabion wall.
7. After the entire site has been cleaned up (after you have exhumed the wastes and backfilled with clean dirt), are you planning to install a new clean gabion wall?	A decision on the final remediation of the site has not been made.
8. Is it your intention to install the 70-foot clay barrier to try to stop the groundwater flow temporarily until the entire Airport site cleanup is complete?	The clay barrier will be primarily above the groundwater table. The purpose of this action is explained in Section 1.3 of the EE/CA.
9. Do you intend to dig deep enough during the initial, interim action excavation project to reach soil that meets DOE's permissible unrestricted-use guidelines even if, in fact, contaminated soil lies below the level of the groundwater?	The excavation will continue until the DOE 5400.5 criteria is met or conditions warrant stopping such as large quantities of groundwater, unexpected contaminants, or unexpected quantities of known contaminants are encountered.
10. Would you please comment on the application of frozen soil barriers -- possibly using pipes installed by directional boring equipment -- to resolve this potential threat to groundwater?	This technology will be evaluated by the Technology Demonstration project if is submitted for consideration. It is not considered to be necessary in order to prevent releases as a result of this action.
11. Would you please explain why it would not be more prudent to defer the initiation of excavation at SLAPS until the current Geology Panel has completed its analysis of (1) the volume, velocity and directions of the upper aquifer water flow; (2) the potential impact of that water's movement on the deeper aquifer and on the creek; and (3) the projected transport of the radioactive contaminants in the water?	The currently proposed action will not impact a final decision for the site and will allow continued progress while the final remedy is established with the stakeholders.
12. After you install the 70-foot area of clay, at which location at SLAPS are you planning to undertake the next excavation -- that is, how far up-gradient? How soon after the completion of the proposed 70-foot buffer do you expect to begin excavating the remainder of the site?	The scope of the next activity has not been determined and will be discussed with stakeholders this fall, with the construction planned for Summer 1998. It is DOE's expectation that we will agree on additional work in order to maintain a continuous clean up effort beginning with this action.
13. If it is correct that you are not intending to extend the buffer area all the way to the southeast border of SLAPS during this first phase, would you please explain how you decided to leave that highly contaminated soil in place?	Sampling data indicate the presence of contaminated materials significantly below the water table. Therefore it is likely that some contaminated material will remain in the southeast corner. The exact limits of excavation will depend on the field conditions at the time of construction.

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

14. To what depths and widths would the proposed ditch excavation have to extend in order to bring the ditch(es) into compliance with DOE's cleanup guidelines?	Limits of excavation vary across the length and breadth of the ditch based on current sampling results. Actual limits will be determined by field measurement during excavation and confirmed by laboratory analysis.
15. Which should come first: exhumation of the ditch which lies at a lower elevation than the Site -- or exhumation of the Site itself? Would the new ditch area not become recontaminated?	The purpose of the ditch excavation is to provide a clean buffer between the site and Coldwater Creek. The site is currently stabilized, erosion of contaminated materials is reduced from historical events that are thought to have contaminated the ditches and Coldwater Creek.
16. Would you please explain the following sentence, from page C-3 of the EE/CA: "The data for the ditches on the north side of SLAPS (south of McDonnell Boulevard) were not screened because the purpose of the excavation is to control surface water flow at SLAPS, so the exposure concentration to the worker would not be affected by any cleanup criteria."?	This text has been revised to clearly state that the limit of the excavation for the ditch on the south side of McDonnell Boulevard was based on site drainage patterns (i.e., establishing a ditch that will drain SLAPS) and not on contamination cleanup criteria.
17. May I please have a copy of the Excavation Design mentioned in the EE/CA for the area immediately adjacent to the creek," that is the bank contiguous to the gabion wall and the creek (p4-1) ?	The proposed excavation design for the area beginning 5 feet from the gabion wall and extending 70 feet back will be made available at the St. Louis Site Office when it is completed.
18. I would also be interested in seeing a copy of the management plan for the water that may be encountered during the excavation of the proposed 70-foot "buffer area" east of the gabion wall -- and conceivably water that collects during the excavation of the ditch(es) to the north of SLAPS -- including the groundwater, potential floodwaters, and precipitation (rain and snow) that could pick up particulate, colloidal, dissolved and entrained contaminants.	The water management plan will be made available at the St. Louis Site Office when it is completed.
19. If the DOE has already determined that a water treatment plant will be required for the Airport Site, can you please explain why it should not be built before excavation begins, so that it will be available as soon as contaminated water is reached?	The scope of this action has been carefully defined and limited so that a water treatment plant is not required for it's success.

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

20. Although the proposed exhumation of highly radioactive soils could cause the release of radioactive dust and gases into the air, and thus significantly affect the human environment – the workers, the public, and our regional airshed -- the discussion of the air pathway in the EE/CA is minimal, at best. Was exposure to radon gas and its solid daughter products included in the calculation of the inhalation dose pathway (p.C-8)? Did the inhalation dose pathway include resuspended dust particles -- and if so, with what ratio of alpha- to beta-emitters?	Experience at other similar sites has shown that this pathway is easily controlled and monitored for safety. Rn-222 and decay product concentrations are regulated by DOE and EPA to 4 pCi/l (0.02 working level) indoors including background. DOE also regulates outdoor radon concentrations around operating DOE facilities to 3.0 pCi/l (DOE Order 5400.5). Typically outdoor concentrations are lower than indoor concentrations because radon, a noble gas, can freely disperse throughout the atmosphere and decay products do not have time or a mechanism to accumulate (as with a closed area like a basement). At SLAPS, the 1996 outdoor radon concentrations ranged from an average of 0.4 to 1 pCi/l compared to an outdoor background concentration of approximately 0.3 pCi/l. Although the SLAPS results are above average background for the area, they are well below regulatory limits for radon concentrations. The inhalation dose pathway included resuspended dust particles. The calculation considered the actinide, U-238, and Th-232 series but did not evaluate the ratio of alpha- to beta-emitters. For U-238 and progeny, the ratio of alpha to beta emitters is 7:4; for Th-232 it is 6:4; and, for U-235 it is 7:4.
21. Because of the high levels of radioactivity at SLAPS, it would seem that occasional spraying of water may not be sufficient to adequately reduce the risk to workers and the public of radioactive emissions to the air. (1) Has any consideration been given to the installation of a tent over the excavation area to reduce exposure to radon gases and resuspended radioactive dusts? (2) Is protective gear to be provided to the workers?	The use of a tent is not necessary nor is it a viable option due to restrictions imposed by the airport. Personnel protective equipment will be provided for the workers at the level required to provide a balance between dose received and the hazards associated with the use of respirators.
22. Because of its proximity to people and water, the Airport Site's location should mandate the use of the most advanced remediation technologies - for monitoring, exhumation, and treatment. To what extent has the DOE's St. Louis Site office explored the use of new technologies (such as those to be displayed by vendors at the technology fair to be held here in St. Louis, County, on September 11)?	DOE has evaluated a wide range of technologies for implementation at the site as a part of the feasibility study process. DOE continues to evaluate technologies; DOE will be evaluating the most up-to-date technologies during the Technology Fair that you described.
23. Could the risk of creek-bank collapse during a downpour of flood, or the likelihood of the release of a massive plume of contaminated soils be ameliorated by employing frozen soil barriers (to stabilize the vertical and base boundaries around the area to be excavated)?	This technology will be evaluated by the Technology Demonstration project if it is submitted for consideration. See previous responses.

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

24. Could you please explain why the DOE's request for proposals for new waste remediation technologies for the St. Louis Airport Site specifically excluded the consideration of water management (which I assume would include both existing and consequent waters)?	Water treatment for Ra, Th, and U is an existing technology that is proven safe and cost-effective. Soils account for the majority of costs associated with the remediation of the St. Louis site.
25. Could any of the new, more sensitive monitoring systems -- for soil, water, and air -- be employed immediately at SLAPS, particularly for the detection of alpha contamination, known to be particularly elusive? If not here, why?	While new technologies are being developed, they have not proven to be reliable. DOE is using new sampling results to establish correlation curves for radionuclides that cannot easily be detected in the field.
26. How can the best location be determined for the rail staging facility prior to the completion of the Geology Panel's collection and analysis of the groundwater well data? What area(s) of the Site will be most problematic and generate the most waste and contaminated water?	The preliminary location of the proposed rail loading facility was based on the position on the existing rail line that the railroad will allow placement of the spur connection. The exact location will be determined in consultation wit the Airport Authority.
Missouri Department of Natural Resources	
27. In June 1997, the DOE collected and analyzed soil samples on 25 foot grids from the waste area of the proposed excavation. MDNR wishes to review the radiological and chemical data, as well as the geologic logs available from this sampling event as soon as possible	This information has been provided.
28. The establishment of background levels of all contaminants of concern in the soils representative of those naturally occurring at SLAPS is critical for the total remediation project. MDNR prefers to see these background levels established soon and are certainly willing to assist in locating and collecting proper samples.	This data will be collected as part of the on-going sampling activities this fall.
29. Radon is not discussed in the Interim Action EE/CA. DOE must propose a method of monitoring for this gas and describe how workers will be protected if it is encountered.	Air sampling will be implemented in accordance with Bechtel's Health and Safety Plan. Dependent on results, additional measures (such as personnel protective equipment or engineering controls) will be taken, if necessary.
30. The actions proposed in the Interim Action EE/CA will be a source of particulate matter which could cause problems with fugitive emissions or opacity. These types of issues will need to be coordinated with the St. Louis County Air and Waste Program. A copy of the EE/CA should be sent to Chris Byrne, Director of the St. Louis County Air and Waste Program.	A copy of the Draft EE/CA has been sent to Mr. Byrne.

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31.	Water management at SLAPS during the proposed EE/CA activities is paramount to the success of the project. MDNR appreciates the discussions held with DOE and their contractors at the August 26, 1997 meeting. More details of those plans, contingencies and protective measures, as discussed in the meeting, should be included in the EE/CA. MDNR understands that they will be able to review the site specific work plan and scope of work responsibilities for both the contractors and DOE to be sure all concerns are addressed. However, a commitment to responsible water management must also be referenced in the EE/CA document and the narrative should include assurance to maintain slope stability in excavations.	DOE agrees that these issues are essential to the success of this project. The EE/CA includes a commitment that no water from the excavation will be discharged to Coldwater Creek. Specific construction practices including water management will be included in the construction drawings and work plan. This information will be made available as it is completed.
32.	Very little detail has been provided in the document to show how removal of waste material will occur, how the clean fill will not become recontaminated, or how placement of clean fill will occur. This was also discussed in detail at the August 26 meeting and DOE committed to responsible procedures. Some reference to proper management of the waste material and some details of such actions should be included in the EE/CA.	Specific construction practices, including the handling of contaminated and clean soils, will be included in the construction drawings and work plan. This information will be made available as it is completed. A commitment to proper soils management practices has been added to Section 4 of the EE/CA.
33.	This EE/CA does not discuss the fact that groundwater monitoring wells exist in the area currently proposed for excavation. They must be properly abandoned according to Missouri law. Details should identify the wells affected, method of abandonment, proposal for replacement wells and plans to gather as much data as possible from the existing wells prior to abandonment.	The reference to well abandonment in accordance with Missouri law has been added to the document. The specific data to be gathered and the specifics of how the wells will be abandoned will be covered in other construction related documents. The need for additional wells will be made will be evaluated at a later date.
34.	DOE has repeatedly spoken to the commitment to revisit the excavated area if clean up criteria defined at a later date indicates that remediation is not complete or if field conditions do not allow for removal of all material contaminated above the levels of concern. The EE/CA should explain how such areas will be identified so they may be easily accessed in the future.	A reference to the use of synthetic or geotextile sheet markers have been added to the document.
35.	It was reported that the gabion wall has counterforts, approximately 6 feet in length, extending back into the waste material. The EE/CA should acknowledge their existence and explain the plan to adequately protect their integrity during the excavation process.	Specific construction practices will be included in the construction drawings and work plan. This information will be made available as it is completed.

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

36.	The final grade of the entire SLAPS site has not been discussed to date. The EE/CA proposes reestablishing the existing grade in the interim area to be excavated. It should be understood that this may be reconsidered at a later time.	Acknowledged.
37.	The EE/CA doesn't provide a time frame for the project along with a possible schedule of activities for each alternative. Is the loadout area going to be constructed first or excavation first?	The excavation of the west end will occur this fall, weather permitting. The work in the ditch south of McDonnell Boulevard and the loadout facility will begin during the Spring of 1998.
38.	Why does the task force reference indicate the following for unrestricted use clean up standard; thorium/radium concentrations not to exceed 5 picocuries per gram averaged over the first 15 cm of soil and 15 picocuries per gram averaged over 15 cm thick layers of soil more than 15 cm below the surface and the EE/CA indicates a standard of 5 picocuries per gram above background for the first 15 cm of soil? Which is correct?	Material will be removed in accordance with DOE Order 5400.5, which specifies that the guideline for radionuclide concentrations for radium and thorium in soil is 5 pCi/g above background in the top 15 cm of soil and 15 pCi/g above background in any subsequent 15 cm layer. This is consistent with the Task Force reference. A corresponding concentration for U-238 is 50 pCi/g above background. The sum of ratios (SOR) calculation for a mixture of radionuclides will be applied. Additional information on SOR is located in Section 4.1 of the EE/CA.
39.	How much money is available for SLAPS cleanup in FY97 and FY98?	The FY 97 budget includes $5 million, details of the FY 98 budget are not yet available from Congress.
40.p.2	Alternative #1 describes current monitoring at SLAPS. It is our understanding that no regular monitoring has been done at the site from 1992 until the summer of 1997. The previous monitoring program (pre-1992) was not consistent nor comprehensive for all potential contaminants that may exist. We recommend that this description of current conditions accurately reflect the incomplete surface and groundwater monitoring that has been conducted to this point in time.	The formal environmental surveillance program was discontinued at the end of the second quarter of calendar year 1992, was reinstated at the beginning of the third quarter in 1994, and continues. Routine environmental surveillance has consisted of periodic measurement of the following: • perimeter radon concentrations in the air • potential external gamma radiation exposure at the fenceline • upstream and downstream concentrations of radionuclides in surface water and sediment (through 1992) • Upgradient and downgradient concentrations of radionuclides in groundwater • measurement of radionuclide constituents in stormwater discharge from the site (since 1994) Upstream and downstream samples from Coldwater Creek continue to be collected under the formal HISS environmental surveillance program. This will be added to Section 2.4 of the EE/CA.

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

41.p.2 DOE should further describe the "temporary stockpile" of materials proposed in Alternative #2. The limitations on the size of this pile should be described (height and acreage). Will the pile be covered or placed on a pad? How will public exposure be minimized? How long will the moderately contaminated material be stored at SLAPS?	Alternative 3 has been identified as the preferred alternative. If Alternative 2 is re-considered at a future date, these issues will be addressed at that time.
42.p.3 The descriptions of Alternatives #2 and #3 do not adequately describe the engineered drainage way that was discussed to handle all drainage from SLAPS subsequent to remediating the ditches. Settlement ponds have been discussed that will allow water velocities to diminish and keep contaminated sediment on-site. It was our understanding that once the engineering design for such impoundments was complete, it would be included in this document. Under Alternative 2, how will DOE prevent recontaminating the ditch and Coldwater Creek?	The proposed channel will transport the runoff without erosive velocities through a flat invert slope and the use of rip-rap or grass lined inverts. Alternative 2 is not the selected alternative.
43.p.3 Costs listed here are different from other parts of the EE/CA. Which costs are correct?.	The estimated cost for Alternative 2 is $7.7 million and Alternative 3 is $7.9 million .
44.p.4 Neither descriptions of Alternative #2 or #3 discusses the need to properly abandon several monitoring wells that are located in the area to excavate and remove. It is understood that approximately seven existing groundwater monitoring wells will be abandoned according to MDNR regulations. The wells will be replaced with several new wells at locations and depths agreeable to both the DOE and MDNR.	The reference to well abandonment in accordance with Missouri law has been added to the document. The specific data to be gathered and the specifics of how the wells will be abandoned will be covered in other construction related documents.
45.p.4 It is vitally important that as much information/data as possible be collected from the existing groundwater monitoring wells as possible prior to abandonment. A minimum of one sampling event and water analysis of these wells must occur and more, if possible, before abandonment. Construction of weirs on the ditches leaving the site and collection of runoff data (both quantity and quality) is also highly recommended prior to the EE/CA activities altering the discharge from the site. Runoff from the site should also be monitored during the EE/CA clean-up. Such weirs can serve as locations for measuring quantity and quality of runoff during this removal. Data should document the improved control of storm water runoff.	All wells that are scheduled to be abandoned have been sampled. A full-suite analysis will be conducted on each sample. The weir at the intersection of Coldwater Creek and McDonnell Boulevard will be installed by September 22, 1997. Three additional weirs will be installed during the fall time frame in consultation with MDNR.

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

46.p.1-1	When the contaminated materials have been excavated, it is understood that clean clay fill will replace the contaminated material. Please describe how the clean material will be placed, compaction anticipated, and the reasoning described if there will be a need for a drain and/or barrier to be placed east of the clean material so it will not become recontaminated.	Specific construction practices will be included in the construction drawings and work plan. This information will be made available as it is completed.
47.p.1-2	Is it true that Barium Sulfate went to West Lake, and were all thorium wastes sent to the Quarry?	The barium sulfate stored at SLAPS was taken to West Lake. Based on the Feasibility Study, other materials removed from SLAPS were sent to Canon City, Colorado. The text has been revised.
48.p.2-1	The water main described in the first paragraph actually runs on the north side of SLAPS, but south of McDonnell Boulevard.	Revised.
49.p.2-5	The three units of non-lithified material beneath the site are 1) loess, 2) lacustrine, and 3) residual. The lacustrine deposits are resultant of glacial activities. The uppermost unit beneath the fill is loess (sub-unit 2) not sub-unit 3T which is lacustrine in origin. Where sub-unit 3M pinches out is unknown at this time and whether sub-unit 3B is continuous beneath the entire site or not is unproven. Most of the exploration holes were not deep enough to determine the continuity of 3B.	Comment noted.
50.p.2-16	Paragraph on radiological analysis should refer to "ditches north and south of McDonnell Boulevard". The same should occur on table titles on p. 2-18.	Revised
51.Table 2-2	Please define the type of soils analyzed by ANL 1993 to derive background concentrations. if they were not glacial soils, or were an average of soil types, this table may be a poor comparison.	The specific soil types analyzed in the ANL 1993 background concentrations is not known at this time; however, a plan for taking additional samples to re-establish background concentrations is being developed. This is the best available data at this time.
52.p.2-20	The rate of movement of the radionuclides is dependent upon aquifer conditions and the chemical state of the radionuclides. This data is not available currently; therefore, one should not state their rate of migration is very slow. New analytical data should help to define the extent of movement to this date.	Text modified.

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53.p.2-22	Paragraph 1, Sentence 3 ... What does "Anticipated long-term remedy for this site" mean?	The "anticipated long-term remedy for the site" is not known at this time because the CERCLA process has only recently re-started after being placed on hold for the Task Force. As the CERCLA process nears a ROD, DOE and the stakeholders will develop a long-term remedy for the site. This action is a cleanup to residential standards that does not limit the range of alternative that can be considered for the balance of the site.
54.Table 2-4	The chemical carcinogenic risk must be recalculated after new chemical sampling data is available.	Acknowledged.
55.p.3-2	End date for any interim storage must be defined.	Alternative 3 has been identified as the preferred alternative. If Alternative 2 is re-considered at a future date this comment will be addressed.
56.p.4-1...	Sum of Ratios doesn't address other isotopes.	The derivation of the SOR guideline includes the short-lived isotopes in the U-238 and Th-232 decay series.
57.p.4-1	Please fully define the field conditions that will warrant continuing or stopping the excavation. Contingency plans for flooding, large rain events, and other emergencies should be provided.	Contingency plans for the situations that would warrant stopping the excavation are being prepared as a part of work plan preparation. This information will be made available as soon as it is completed.
58.p.4-4	What does the second paragraph on this page mean or accomplish?	This is detailed information about the characterization activities that will be conducted during construction.
59.p.4-4	Only 10% of the field screening samples will be confirmed with lab analysis each day. The department would like to review further documentation that field and lab analysis historically have compared well.	This information will be made available to you.
60.p.4-6	Alternative 3 ... "Results in more highly-contaminated soils remaining on-site." Does the area proposed in Alternative 2 to be excavated from the ditch north of McDonnell Blvd. contain the highest readings of the entire north ditch?	Yes. Please see Figure 2-7 in the EE/CA.
61.p.4-9	4th paragraph... Please explain: "Impact on traffic safety would also be minimal"?	Under Alternative 3, all excavation activities will occur on SLAPS and the materials will be loaded into gondolas either at the Eva Avenue loading facility or at the onsite facility therefore limiting the impact to major roads in the area.
62.p.4-9	Will radon monitoring occur around stockpiles or in the excavation?	Radon monitoring will occur around stockpiled materials and in the worker breathing zone.

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63.p.4-10	What is "good construction" practices with respect to groundwater, surface water and flooding control?	There are several industry-wide standard practices for controlling these commonly encountered problems. Those determined best for the SLAPS site will be selected during remedial design based on site-specific features and material availability.
64.p.4-12	Costs on this page don't agree with costs on page 3. Also page 3 shows Alternative 3 as cheaper than Alternative 2.	The costs have been made consistent.
County Water - J. Donovan Larson		
65.	We are also concerned about the installation of the improvements listed in Alternative Two and Three with regard to the clean up of the ditch lines, which will be done to prevent migration of the soil offsite. Although we desire to see the ditch lines improved, we are concerned about the depths to which the contaminated soil remediation will occur, and the geotextile material to be placed in the remediated ditch line.	The purpose of the geotextile is to minimize the movement of fine particles from the subsurface into the ditch. A water permeable material will be used to minimize the masking of a water line break. Excavation around utility lines will be closely coordinated with the utility owner.
Sally P. Price		
66.	I would appreciate it if you would send me a copy of the current workplan for the project. The revisions I am referring to involve the following: The method of excavation, i.e., the sidewalls of the 70 foot wide excavation area will be maintained at a slope of 1V:1.5H. The depth of excavation p4-1 of the EECA report states,"It is anticipated that the excavation will proceed to one foot beneath the original grade unless field conditions warrant either continuing or stopping." The meeting presentation and overheads used showed average excavation depths of 4-6 ft., as I recall.	The engineering documents that are complete will be made available. As additional plans are completed they will also be made available.

Table 2. DOE's Response to Comments Received on the SLAPS Interim Action EE/CA

67. One statement in the report says "it is anticipated that the majority of the area to be cleaned up by this action will not require additional efforts" (ES-2). This implies that there are some areas where additional remediation work will need to occur, which areas are these?	Within the proposed work areas, any contamination that is located in groundwater is subject to remaining in place until arrangements are made to handle large volumes of groundwater. In particular, it is unlikely that the deepest material at the scuth end of the site will be excavated this fall.
68. Regarding the depth of excavation proposed in the above mentioned quote from p.4-1, and recognizing the fact that the contamination exceeding the 5/15/50 DOE 5400.5 guideline exists at average depths of 3-4 feet in the ditches, and from 8-18 feet on the western edge of SLAPS, which are the areas to be excavated, how are you preparing to manage these contaminated materials?	The excavation necessary to construct the ditch is expected to remove the contamination in that area. DOE does not anticipate depth related excavation difficulties in the ditches. As discussed above, it is unlikely that contaminated material located below the water table will be excavated this fall. The exact depth of excavation that may be accomplished this fall will depend on the location of the water table at the time.
69. Concerning the newly engineered ditch: Where will the newly engineered ditch be located? Where will the runoff be diverted to?	The newly engineered ditch will be located along the northern edge of SLAPS, parallel to McDonnell Boulevard. The runoff from SLAPS will be directed to the newly engineered ditch and will enter Coldwater creek at the northern corner of SLAPS immediately south of McDonnell Boulevard. There is currently a ditch at this location.
70. When will the SLAPS Hydrogeologic Panel Report be completed and available for review?	The field characterization is expected to be complete by the publication date of this document. The results of laboratory analysis will be available in mid-November and the characterization report in mid-December.
71. I would encourage you to study the surface water patterns more completely with regard to closing off the culverts under McDonnell Boulevard. I am concerned that the effect of diverting runoff water from 2 or 3 channels into one would increase the chances of erosion of contaminated materials offsite and into Coldwater Creek, as well as across the road northward, onto the ballfields.	The proposed changes will maintain the existing two channel system that currently serves the SLAPS and ballfields. The diversion that is discussed in the EE/CA will keep SLAPS runoff on the SLAPS side of McDonnell Boulevard and ballfields water on the north side. It is DOE's view that this is preferred over the existing situation because the clean up of these sites will not occur at the same time. Therefore, separating the water will minimize the potential for recontamination.

APPENDIX A

I'm Sandy Delcoure and a member of the Cold Water Creek Stream Team. I have talked to many people in the watershed of Cold Water Creek and know they all care about this stream that once was camped near at Fort BelleFontaine by the famous explorers Lewis and Clark. They witnessed a wedding at St. Ferdinand's Church which is documented at that Shrine which is on Cold Water Creek in the Florissant Valley formed by the historic stream. Efforts by residents and government officials pursuing a clean up of the radioactive waste of the creek covers many years of valuable time and hard work in efforts to give us a healthy environment in our community. When Undersecretary of the Dept. of Energy, Thomas Grumbly, came to St. Louis last December to meet with the Task Force set up to help clean up our radioactive waste at the Airport and Latty Ave., he said it was the best example he'd seen of people working together anywhere to resolve a problem like this. I hope we can continue with this special spirit of commitment to our community and our environment here. I hope that the microwave vitrification process, done as a field demonstration project, be considered to prevent further contamination of the creek and air when digging begins. Freezing the ground and a tent set up over the worksite might also be considered to see that the clean up is done in the safest way to prevent further contamination of the creek and air. Thank you for all the time and work you have put in to help us resolve this important issue. 1

Sandy Delcoure
3029 Willow Creek (on Cold Water Creek)
Florissant, MO 63031

August 28, 1997

To: Steve McCracken, St. Louis Site Manager
U.S. Department of Energy -- Public Information Center
9170 Latty Ave.
Berkeley, MO 63134

from: Kay Drey -- 515 West Point Ave., University City, MO 63130 Kay Drey

re: St. Louis Airport Site (SLAPS) Interim Action
Engineering Evaluation/Cost Analysis (EE/CA) -- Draft.
U.S. Department of Energy -- July 1997.

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First, I would like, for the record, to express my appreciation to the Department of Energy for at last beginning the cleanup of the St. Louis Airport Site -- the location of radioactive wastes generated during the earliest hours and years of the Atomic Age. These nuclear weapons wastes began accumulating here in St. Louis on April 24, 1942, were dumped at SLAPS from 1946 through 1957, and have been dispersed intentionally and not intentionally ever since. Located in the floodplain of an urban creek that discharges into St. Louis' drinking water, the St. Louis Airport Site needs and warrants your studied and most enlightened attention.

With all the major funds that have been expended by the DOE's Office of Science and Technology (OST) to design, develop, test and implement new environmental restoration and waste management technologies, it seems unconscionable to send a dozer or back-hoe in to attack a highly contaminated creek bank and its associated floodplain landfill without putting in place at least one of those technologies. If this site -- its groundwater, surface water, air, and workers -- is not entitled to such protections and the wisdom engendered by the OST's research, what site <u>is</u>?

The most basic concern I have about the Draft EE/CA is my belief that no interim action should be taken until a comprehensive plan has been designed -- and has undergone interagency and public review -- for the <u>entire</u> 22-acre site. The interim actions proposed in the Draft EE/CA might accelerate the erosion offsite of radioactive solids, liquids and gases into the air, into surface and ground waters, and onto adjacent lands (including McDonnell Douglas, the Airport, Banshee Rd., the Norfolk Southern Railway tracks, and McDonnell Blvd.) and could further contaminate the Coldwater Creek sediments, banks, floodway, and neighboring properties. Within days or weeks of the first digging, groundwater could be encountered -- in fact, I believe is <u>likely</u> to be encountered. If that happens, DOE staff and contractors have told the Missouri Department of Natural Resources and St. Louis County that they will stop digging. And <u>then</u> what?

After participating in about two years of meetings and research, the members of the St. Louis Site Remediation Task Force voted to request the DOE to clean up the Airport Site first. Quoting from a resolution approved unanimously on July 23, 1996:

The St. Louis Site Remediation Task Force hereby

> notifies the U.S. Department of Energy that the St. Louis Airport Site (SLAPS) ranks as our highest priority for remediation. We request that the DOE start the cleanup of the site in Fiscal Year 1997 for its eventual release for "unrestricted use" . . . . (emphasis added)

Everyone recognizes today, with hindsight, that the Department of the Army's decision in 1946 to use a 22-acre tract of floodplain land for the storage and disposal of highly radioactive residues was a mistake. It had announced to the public at the time that the residues "are not radio-active or otherwise dangerous" and are the "type of refuse that any ordinary commercial firm of this type would store there." (from two St. Louis newspapers, September 1946) The Army's choice of a creek whose watershed is filled with people makes cleanup extremely complex and technologically challenging if the cleanup is indeed to be safe and final.

1. As proposed in the Draft EE/CA, the radioactively contaminated eastern bank of Coldwater Creek (the western boundary of SLAPS) would be exhumed starting to the east of the gabion wall -- and extending eastward for 70 feet, with clay to be used, then, as fill. The excavation would extend as deep as necessary throughout that area until soil is reached that meets the DOE's guidelines -- less than 5 picocuries per gram of thorium, less than 5 pCi/g of radium, and less than 50 pCi/g of uranium.

The SLAPS groundwater flows into Coldwater Creek; the creek flows and overflows through residential, industrial, institutional, and agricultural land, and empties into the Missouri River just a few miles upstream from where the City of St. Louis gets its drinking water. (Although on the Mississippi River, the City's Chain of Rocks water plant is located just below the Mississippi's confluence with the Missouri River. Because the Missouri River's waters hug the west bank of the Mississippi for many miles downstream of the confluence, St. Louisans predominantly drink Missouri River water.)

The Coldwater Creek banks at the Airport Site contain extremely high levels of radioactivity. For example, shortly before the gabion wall was installed along the eastern bank, in 1985, one soil sample collected from that bank contained 14,000 picocuries of thorium-230 per gram; another contained 8300. Please remember that Missouri soils naturally contain only 0.2 pCi/g of Th-230. (The creek-bank data were included in an August 14, 1985, letter [Enclosure 2], from John Baublitz, Deputy Director of the DOE's Office of Remedial Action and Waste Technology, to Dr. Frederick Brunner, Director of the Missouri Department of Natural Resources.)

According to the latest proposal I have heard about, the DOE would leave a "wall" of the contaminated creek bank standing between the gabion wall and the excavation area (with five feet at the top and sloping toward a wider width at the bottom, as the excavation extends deeper). My questions about the timing of the excavation include the following:

a. Do you agree that the disturbance of the soils during excavation could cause the release and migration of unpredictable,

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uncontrollable amounts of contaminants, both vertically and horizontally? If so, are you planning before excavation begins to install frozen soil barriers around the sides and underneath the excavation area, or a coffer dam, steel pilings, or other protection for the creek and groundwater?

b. The gabion wall (chicken-wire baskets filled with rocks) was installed in 1985 as an interim action, to try to reduce the rate of erosion of the contaminated bank into the creek and quite possibly to make things look better. (The creek flows next to a McDonnell Douglas property line.) As a few of us tried to point out at the time, it was obvious that the gabion wall would itself become contaminated, thus adding to the volume of wastes that would one day need to be removed from the site.

It has been explained to me that gabion baskets serve as a porous retaining wall, enabling the ground water on the embankment side of the wall to flow through, thereby keeping the water from building up pressure on the embankment side of the baskets, preventing the overturning of the wall. I doubt that the Swedish engineers who designed the gabion wall concept some decades ago envisioned its use as a barrier along the shore of a radioactive-waste landfill located in a floodplain. It has also been explained that a clay barrier would never have been installed on the embankment side of a gabion wall, because such a barrier would have negated the purpose of the wall -- namely, to provide a porous route for excess groundwater.

(1) Why is the gabion wall not to be removed from the site, along with the rest of the contaminated materials on site?

(2) When do you intend to remove the contaminated gabion wall?

(3) After the entire site has been cleaned up (after you have exhumed the wastes and backfilled with clean dirt), are you planning to install a new, clean gabion wall?

c. The gabion wall provides no protection against the discharge of contaminated ground- and surface-waters from the landfill. (1) Is it your intention to install the 70-foot clay barrier to try to stop the groundwater flow temporarily until the entire Airport Site cleanup is complete? (2) Do you intend to dig deep enough during the initial, interim-action excavation project to reach soil that meets the DOE's permissible unrestricted-use guidelines even if, in fact, contaminated soil lies below the level of the groundwater? (3) Would you please comment on the application of frozen soil barriers -- possibly using pipes installed by directional boring equipment -- to resolve this potential threat to the groundwater?

d. Would you please explain why it would not be more prudent to defer the initiation of excavation at SLAPS until the current Geology Panel has completed its analysis of (1) the volume, velocity and directions of the upper aquifer water flow; (2) the potential impact of that water's movement on the deeper aquifer and on the creek; and (3) the projected transport of the radioactive contaminants in the water?

e. After you install the 70-foot area of clay, at which location

at SLAPS are you planning to undertake the next excavation -- that is, how far up-gradient? How soon after the completion of the proposed 70-foot buffer do you expect to begin excavating the remainder of the site?

f. If it is correct that you are not intending to extend the buffer area all the way to the southwest border of SLAPS during this first phase, would you please explain how you decided to leave that highly contaminated soil in place? 13

2. Both Alternatives 2 and 3 of the EE/CA call for the excavation of the ditch that lies between the Airport Site's northern fence and McDonnell Blvd. and that extends east-west for approximately 3000 feet. The two (or is it three?) culverts that direct contaminated water northerly from the ditch, under McDonnell Blvd., would be closed up, and a new ditch would be built that is capable of carrying a greater volume of water at a greater velocity. As happens now, the contaminated ditch water would flow into Coldwater Creek.

a. To what depths and widths would the proposed ditch excavation have to extend in order to bring the ditch(es) into compliance with the DOE's cleanup guidelines? Some observations: 14

(1) To place the ditch data in perspective, according to the "Radiological and Limited Chemical Characterization Report for the St. Louis Airport Site," Bechtel National, Inc. (BNI), August 1987: "11,000 cpm corresponds to the DOE guidelines for surface contamination of 5 pCi/g for radium-226 and thorium-232" (p.11); and "a count rate of approximately 40,000 cpm corresponds to the 15-pCi/g subsurface contamination guideline." (p.13) [The background radiation data mentioned herein are from the same 1987 BNI publication, at pp.19 and 25.]

(2) Citing sample data from BNI's "Radiological Survey of the Ditches at the St. Louis Airport Storage Site (SLAPSS)," August 1983: Along the fence to the north, radium-226 that was found in a borehole sample collected 4.7 feet below the surface measured 35 picocuries per gram, compared with natural background readings of 0.5. (page 70: taken at grid location 1670X/R and 490 Y/S). At the same location, 4.0 feet below, a scan registered 106,402 gamma ray counts per minute. (Background radiation is 2200 cpm.)

(3) A few of many other incredible ditch measurements: 1,140,978 counts per minute were measured above ground (page 33: 660R/440S); and 9.01 millirads per hour [that is, thousandths-of-a-rad], compared with background radiation of 8 microrads [millionths] per hour (page 38: 920R/520S). Interestingly enough, the 1983 Bechtel ditch radiological survey failed to include thorium-230, now known to be, by far, the Airport Site's predominant contaminant of concern. (Perhaps Bechtel had decided not to test for thorium-230 because of the lengthy turnaround time laboratories require for its analysis.)

A later Bechtel report indicated that one surface soil sample, collected from the ditch to the south of McDonnell Blvd., contained 15,000 picocuries per gram of thorium-230. [from BNI's "Radiological Characterization Report for FUSRAP Properties in the St. Louis, MO Area,"

August 1990, Vol.III, Revision 1, p.471; and Vol.I, Rev.1, pp.7-2 and 7-14].)

b. Which should come first: exhumation of the ditch which lies at a lower elevation than the Site -- or exhumation of the Site itself? Would the new ditch area not become recontaminated? To quote from two Airport Site studies:

> The most likely source of contamination of the ditches along McDonnell Boulevard appears to be rainfall runoff from residues. Another contributor could have been spills from trucks hauling residues on and off the site, particularly at the east end of the site. (from the 1983 BNI Airport ditches survey cited above; p.8; emphasis added.)
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> Stormwater runoff from the site drains to Coldwater Creek either by direct overland flow or through drainage ditches along Brown Road [McDonnell Blvd.] and the Norfolk and Western Railroad [Norfolk Southern] right-of-way. (Roy F. Weston, Inc.: "Environmental Impact Assessment of the Former Airport Storage Site of the Atomic Energy Commission - St. Louis County." July 1979; p. 3-11.
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> - - - -

c. Would you please explain the following sentence, from page C-3 of the EE/CA: "The data for the ditches on the north side of SLAPS (south of McDonnell Boulevard) were not screened because the purpose of the excavation is to control surface water flow at SLAPS, so the exposure concentrations to the worker would not be affected by any cleanup criteria."? 16

3. The following questions concern water management:

a. May I please have a copy of the Excavation Design mentioned in the EE/CA for the area "immediately adjacent to the creek," that is, the bank contiguous to the gabion wall and the creek (p.4-1)? 17

b. I would also be interested in seeing a copy of the management plan for the water that may be encountered during the excavation of the proposed 70-foot "buffer area" east of the gabion wall -- and conceivably water that collects during the excavation of the ditch(es) to the north of SLAPS -- including the groundwater, potential floodwaters, and precipitation (rain and snow) that could pick up particulate, colloidal, dissolved and entrained contaminants. 1

c. If the DOE has already determined that a water treatment plant will be required for the Airport Site, can you please explain why it should not be built before excavation begins, so that it will be available as soon as 1

contaminated water is reached? That moment could occur early in the project! To quote from a 1982 DOE report on SLAPS prepared for BNI by a subcontractor:

> Figure 3-2 shows that the groundwater table rose approximately 6 feet during the interval from 17 December 1980 to 5 June 1981. A change of this magnitude appears inconsistent with the laboratory-measured permeability of soil samples, and would tend to indicate an increased bulk permeability in the upper soil layers possibly due to flaws and/or anomalies. Since the buried waste is in the zone of fluctuating water table, it must be assumed that the radioisotopes may be considerably more mobile than is indicated by the permeability data, and in fact may by 'pumped' to the stream by relatively rapid rises and falls in the water level. (Roy F. Weston, Inc.: "Formerly Utilized Sites Remedial Action Program - St. Louis Airport Storage Site (SLAPSS) - Technical Series." Vol. 2 - No. 1; p. 3-8; emphases added.)

4. Although the proposed exhumation of highly radioactive soils could cause the release of radioactive dust and gases into the air, and thus significantly affect the human environment -- the workers, the public, and our regional airshed -- the discussion of the air pathway in the EE/CA is minimal, at best. 20

For example, I believe the only mentions of radon gas in the entire EE/CA appear in Appendix A, "Applicable or Relevant and Appropriate Requirements," with only one mandated radon standard included (an EPA Clean Air Act emission rate). The omission of radon from the EE/CA is surprising.

> The nature of the waste formerly and currently in place at the St. Louis Airport site dictates concern for emission of radon from the site. Consequently, permanent protection of humans from elevated radon and radon daughter levels must depend on site barriers that can provide protection at present, and remain effective for long periods of time. (Weston, Inc.: "Formerly Utilized Sites Remedial Action Program - St. Louis Airport Storage Site - Technical Series," Vol. 2, No. 1, p.3-9. January 1982; emphasis added.)
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> Based on our review [of 22 FUSRAP radiological survey reports], eight representative sites were selected for further study including the St. Louis Storage site which appears to have the greatest emissions of radionuclides to air. (U.S. Environmental Protection Agency: Background Information Document, Final Rules for Radionuclides, Vol. II; 1984. EPA 520/1-84-022-2;

page B-14; emphasis added.)

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a. Was exposure to radon gas and its solid daughter products included in the calculation of the inhalation dose pathway (p.C-8)?

b. Did the inhalation dose pathway include resuspended dust particles -- and if so, with what ratio of alpha- to beta-emitters?

The "enriched" levels of uranium-235 present in our St. Louis/Belgian Congo pitchblende residues are high enough to generate detectable levels of radon-219 (known as "actinon," a rare isotope not normally seen at uranium mill tailings sites in this country).

A paper published in Health Physics specifically explains that radon-219 and its progenitors (actinium-227 and protactinium-231) are detected at sites in the United States where pitchblende ore from the Belgian Congo had been processed using diethyl ether for the removal of uranium. [That includes St. Louis!] "Deposition of this product onto the ground surface, either through spills or intentional dumping, provides a long-lived source of actinon." The paper discusses the need to consider radon-219 and its daughters, along with the much more common radon-222, in estimating a worker's critical lung dose. Radon-219 has a half-life of only 3.96 seconds. Because workers at the Airport Site will be in the immediate vicinity when layers of uranium- and thorium-contaminated soils will be penetrated, the potential will exist for the inhalation of the short-lived radon-219, -220 and -222 aerosols and their solid daughters. (D.J. Crawford: "Radiological Characteristics of Radon-219." Health Physics Vol. 39 [Sept.] pp. 449-461.)

c. Because of the high levels of radioactivity at SLAPS, it would seem that occasional spraying of water may not be sufficient to adequately reduce the risk to workers and the public of radioactive emissions to the air. (1) Has any consideration been given to the installation of a tent over the excavation area to reduce exposure to radon gases and resuspended radioactive dusts? (Such a tent is being proposed by one vendor-applicant, as a part of the microwave vitrification technology.) (2) Is protective gear to be provided for the workers?

5. Because of its proximity to people and water, the Airport Site's location should mandate the use of the most advanced remediation technologies -- for monitoring, exhumation, and treatment. To what extent has the DOE's St. Louis Site office explored the use of new technologies (such as those to be displayed by vendors at the technology fair to be held here in St. Louis County, on September 11)? Or is the potential use of innovative technologies to be deferred until after a year or more of contract negotiation, field experimentation, and assessment? In the meantime:

a. Could the risk of creek-bank collapse during a downpour or flood, or the likelihood of the release of a massive plume of contaminated soils be ameliorated by employing frozen soil barriers (to stabilize the

vertical and base boundaries around the area to be excavated)? (Brief descriptions appear in the DOE-OST's focus-area technology summaries, for example in "Subsurface Contaminants," August 1996, pp.269-275; and "Contaminant Plumes Containment and Remediation," June 1995, pp.105-107.)

b. Could you please explain why the DOE's request for proposals for new waste remediation technologies for the St. Louis Airport Site specifically excluded the consideration of water management (which I assume would include both existing and consequent waters)? 24

c. Could any of the new, more sensitive monitoring systems -- for soil, water, and air -- be employed immediately at SLAPS, particularly for the detection of alpha contamination, known to be particularly elusive? 25

d. If not here, where?

6. How can the best location be determined for the rail staging facility prior to the completion of the Geology Panel's collection and analysis of the groundwater well data? What area(s) of the Site will be most problematic and generate the most waste and contaminated water? 26

Some final comments: Please remember that many of the SLAPS radioactive wastes emit alpha radiation, recognized by even the U.S. Nuclear Regulatory Commission to be at least twenty times more dangerous than gamma and beta emitters, if swallowed or inhaled. (Code of Federal Regulations, Title 10, Sec. 20.1004)

It is also important to remember that the Mallinckrodt Chemical Works weapons wastes found at the St. Louis Airport Site and related locations have extremely long half-lives. They will continue releasing radiation particles and rays for a period lasting at least ten half-lives. Some sample half-lives of SLAPS isotopes include: uranium-238 = 4.5 billion years; uranium-235 = 704 million years; thorium-232 = 14 billion years; thorium-230 = 75,000 years; radium-226 = 1600 years; and protactinium-231 = 32,760 years.

Some of the other SLAPS materials with shorter half-lives also pose major health risks. For example: three isotopes of radon gas; actinium-227 (21.8 years); radium-228 (5.75 years); six isotopes of polonium; and radioactive lead, bismuth and thallium. Plus a bunch of known and unknown hazardous wastes that are also mixed in with our famous Belgian Congo pitchblende brew!

If, by chance, the DOE were to proceed with its proposal to place a 70-ft. clay buffer zone along the creek at this time, and an engineered drainage ditch along McDonnell Blvd., and then were to decide to defer the rest of the Airport Site's cleanup until after the nation's other weapons wastes are exhumed, collected and contained somewhere, somehow, St. Louisans and our Mississippi River neighbors downstream could continue to be exposed chronically to these eroding materials for virtually an infinite number of generations into the future. Now is the best time to design and complete a final, safe solution for the oldest radioactive wastes of the Atomic Age.

STATE OF MISSOURI Mel Carnahan, Governor • David A. Shorr, Director
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF THE DIRECTOR
P.O. Box 176 Jefferson City, MO 65102-0176

August 28, 1997

Mr. Steve McCracken
Project Manager, DOE
FUSRAP Office
8170 Latty Avenue
Berkley, Missouri 63134

Dear Mr. McCracken:

RE: St. Louis Airport Site (SLAPS) Interim Action Engineering Evaluation/Cost Analysis (EE/CA)

The Missouri Department of Natural Resources (MDNR) appreciates the opportunity to review and comment on the Interim Action Engineering Evaluation/Cost Analysis (EE/CA) for the St. Louis Airport Site (SLAPS) prepared and available for public review in August, 1997. MDNR acknowledges the DOE commitment to remedy the environmental legacy left in the St. Louis area since the 1940's by MED-AEC activities. The proposed action defined in the Interim EE/CA is an appropriate beginning of the long awaited remedial action at the SLAPS.

It is the department's understanding that the Interim Action EE/CA for SLAPS was developed to meet the following objectives: to provide a clean buffer zone between the main body of waste at SLAPS and Coldwater Creek; to protect Coldwater Creek from further uncontrolled runoff from SLAPS during storm events; and to demonstrate tangible progress at the site. The department, however, is concerned that the interim actions proposed properly fit into a long term plan for the total remediation of the site. Therefore, more information and details on the plans addressing the protection of the workers as well as the public and the environment are needed in the document, as well as a perspective of how the activities will relate to the final site remedy. Water management is also a critical issue for the department and the success of projects such as those proposed. MDNR would like more detail in the EE/CA regarding the management of groundwater, surface water and potential flood conditions along Coldwater Creek.

MDNR supports Alternative 3 in the SLAPS Interim Action EE/CA. This option proposes shipping all of the excavated material to a licensed out-of-state disposal facility. The high capacity loading facility and rail spur also proposed in Alternative 3 provide evidence of DOE's commitment to future long term, cost effective removal actions at the airport site and vicinity properties. MDNR's review and oversight of all the remedial activities along with DOE's firm commitment to clean up the SLAPS for future generations will make the project a success.

The following attachments will more fully explain the specific concerns of MDNR. Please feel free to call me or my staff if you have questions.

Very truly yours,

DEPARTMENT OF NATURAL RESOURCES

David A. Shorr
Director

AS:jm

Attachment

Missouri Department of Natural Resources
Comments on SLAPS Interim Action EE/CA
August 28, 1997

General Comments

1. In June 1997, the DOE collected and analyzed soil samples on 25 foot grids from the waste area of the proposed excavation. MDNR wishes to review the radiological and chemical data, as well as the geologic logs available from this sampling event as soon as possible.

2. The establishment of background levels of all contaminants of concern in the soils representative of those naturally occurring at SLAPS is critical for the total remediation project. MDNR prefers to see these background levels established soon and are certainly willing to assist in locating and collecting proper samples.

3. Radon is not discussed in the Interim Action EE/CA. DOE must propose a method of monitoring for this gas and describe how workers will be protected if it is encountered.

4. The actions proposed in the Interim Action EE/CA will be a source of particulate matter which could cause problems with fugitive emissions or opacity. These types of issues will need to be coordinated with the St. Louis County Air and Waste Program. A copy of the EE/CA should be sent to Chris Byrne, Director of the St. Louis County Air and Waste Program.

5. Water management at SLAPS during the proposed EE/CA activities is paramount to the success of the project. MDNR appreciates the discussions held with DOE and their contractors at the August 26, 1997 meeting. More details of those plans, contingencies and protective measures, as discussed in the meeting, should be included in the EE/CA. MDNR understands that they will be able to review the site specific workplan and scope of work responsibilities for both the contractors and DOE to be sure all concerns are addressed. However, a commitment to responsible water management must also be referenced in the EE/CA document and the narrative should include assurance to maintain slope stability in excavations.

6. Very little detail has been provided in the document to show how removal of waste material will occur, how the clean fill will not become recontaminated, or how placement of clean fill will occur. This was also discussed in detail at the August 26 meeting and DOE committed to responsible procedures. Some reference to proper management of the waste material and some details of such actions should be included in the EE/CA.

7. This EE/CA does not discuss the fact that groundwater monitoring wells exist in the area currently proposed for excavation. They must be properly abandoned according to Missouri law. Details should identify the wells affected, method of abandonment, proposal for replacement wells and plans to gather as much data as possible from the existing wells prior to abandonment.

8. DOE has repeatedly spoken to the commitment to revisit the excavated area if clean up criteria defined at a later date indicates that remediation is not complete or if field conditions do not allow for removal of all material contaminated above the levels of concern. The EE/CA should explain how such areas will be identified so they may be easily accessed in the future.

9. It was reported that the gabian wall has counterforts, approximately 6 feet in length, extending back into the waste material. The EE/CA should acknowledge their existence and explain the plan to adequately protect their integrity during the excavation process.

10. The final grade of the entire SLAPS site has not been discussed to date. The EE/CA proposes reestablishing the existing grade in the interim area to be excavated. It should be understood that this may be reconsidered at a later time.

11. The EE/CA doesn't provide a time frame for the project along with a possible schedule of activities for each alternative. Is the loadout area going to be constructed first or excavation first?

12. Why does the task force reference indicate the following for unrestricted use clean up standard; thorium/radium concentrations not to exceed 5 picocuries per gram averaged over the first 15 cm of soil and 15 picocuries per gram averaged over 15 cm thick layers of soil more than 15 cm below the surface and the EE/CA indicates a standard of 5 picocuries per gram above background for the first 15 cm of soil? Which is correct?

13. How much money is available for SLAPS cleanup in FY97 and FY98?

Specific Comments

Executive Summary

1.p.2 Alternative #1 describes current monitoring at SLAPS. It is our understanding that no regular monitoring has been done at the site from 1992 until the summer of 1997. The previous monitoring program (pre-1992) was not consistent nor comprehensive for all potential contaminants that may exist. We recommend that this description of current conditions accurately reflect the incomplete surface and groundwater monitoring that has been conducted to this point in time.

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2.p.2 DOE should further describe the "temporary stockpile" of materials proposed in Alternative #2. The limitations on the size of this pile should be described (height and acreage). Will the pile be covered or placed on a pad? How will public exposure be minimized? How long will the moderately contaminated material be stored at SLAPS?

3.p.3 The descriptions of Alternatives #2 and #3 do not adequately describe the engineered drainageway that was discussed to handle all drainage from SLAPS subsequent to remediating the ditches. Settlement ponds have been discussed that will allow water velocities to diminish and keep contaminated sediment on-site. It was our understanding that once the engineering design for such impoundments was complete, it would be included in this document. Under Alternative 2, how will DOE prevent recontaminating the ditch and Coldwater Creek? 42

5.p.3 Costs listed here are different from other parts of the EE/CA. Which costs are correct?

6.p.4 Neither descriptions of Alternative #2 or #3 discusses the need to properly abandon several monitoring wells that are located in the area to excavate and remove. It is understood that approximately seven existing groundwater monitoring wells will be abandoned according to MDNR regulations. The wells will be replaced with several new wells at locations and depths agreeable to both the DOE and MDNR. 44

7.p.4 It is vitally important that as much information/data as possible be collected from the existing groundwater monitoring wells as possible prior to abandonment. A minimum of one sampling event and water analysis of these wells must occur and more, if possible, before abandonment. Construction of weirs on the ditches leaving the site and collection of runoff data (both quantity and quality) is also highly recommended prior the EE/CA activities altering the discharge from the site. Runoff from the site should also be monitored during the EE/CA clean-up. Such weirs can serve as locations for measuring quantity and quality of runoff during this removal. Data should document the improved control of stormwater runoff. 45

Introduction

8.p.1-1 When the contaminated materials have been excavated, it is understood that clean clay fill will replace the contaminated material. Please describe how the clean material will be placed, compaction anticipated, and the reasoning described if there will be a need for a drain and/or barrier to be placed east of the clean material so it will not become recontaminated.

9.p.1-2 Is it true that Barium Sulfate went to West Lake, and were all thorium wastes sent to the Quarry? 47

Site Characterization

10.p.2-1 The water main described in the first paragraph actually runs on the north side of SLAPS, but south of McDonnell Boulevard. 48

11.p.2-5 The three units of non-lithified material beneath the site are 1) loess, 2) lacustrine, and 3) residual. The lacustrine deposits are resultant of glacial activities. The uppermost unit beneath the fill is loess (sub-unit 2) not sub-unit 3T which is lacustrine in origin. Where sub-unit 3M pinches out is unknown at this time and whether sub-unit 3B is continuous beneath the entire site or not is unproven. Most of the exploration holes were not deep enough to determine the continuity of 3B. 49

12.p.2-16 Paragraph on radiological analysis should refer to "ditches north and south of McDonnell Boulevard". The same should occur on table titles on p. 2-18. 50

13.Table 2-2 Please define the type of soils analyzed by ANL 1993 to derive background concentrations. if they were not glacial soils, or were an average of soil types, this table may be a poor comparison. 51

14.p.2-20 The rate of movement of the radionuclides is dependent upon aquifer conditions and the chemical state of the radionuclides. This data is not available currently; therefore, one should not state their rate of migration is very slow. New analytical data should help to define the extent of movement to this date. 52

15.p.2-22 Paragraph 1, Sentence 3 ... What does "Anticipated long-term remedy for this site" mean? 53

16.Table 2-4 The chemical carcinogenic risk must be recalculated after new chemical sampling data is available. 54

Identification and Analysis of Alternatives

17.p.3-2 ...End date for any interim storage must be defined. 55

Analysis of Alternatives

18.p.4-1 ...Sum of Ratios doesn't address other isotopes. 56

Please recall that this company had argued last year against the installation of a similar geotextile fabric. At that time, we warned that the material installed beneath a crushed rock layer in the ditch lines would be destroyed when maintenance excavations were made. We trust you will resolve these concerns prior to implementation of your design.

On an associated matter, we also look forward to the completion of the discussions regarding radiological safety and DOE's support of the local utility companies' field repair efforts.

If you would like to discuss any of these topics in more detail, please contact our offices.

Sincerely,

J. Donovan Larson
Manager
System Engineering

JDL/mab

Cc: John Ackerman
Brad Brown
Laclede Gas
Union Electric
Bob Marchant - MSD

August 16, 1997

AUG 2 0 1997

Mr. Stephen H. McCracken
St. Louis Site Manager
U. S. Department of Energy - Public Information Center
9170 Latty Avenue
Berkeley, MO 63134

Dear Mr. McCracken,

I appreciated the opportunity to meet with you and the members of your team last Wednesday evening. The meeting was informative and encouraging for those of us who have worked for the remediation of the FUSRAP-St. Louis Site. However, after hearing your presentation, it seems that there have been a few revisions to the EECA report. Therefore, I would appreciate it if you would send me a copy of the current workplan for the project. The revisions I am referring to involve the following:

A. The method of excavation, ie. the sidewalls of the 70 ft wide excavation area will be maintained at a slope of 1V:1.5H.

B. The depth of the excavation. P.4-1 of the EECA report states, " It is anticipated that the excavation will proceed to one foot beneath the original grade unless field conditions warrant either continuing or stopping." The meeting presentation and overheads used showed average excavation depths of 4-6 ft., as I recall.

In addition, I would like a written response to the questions I posed to you during the meeting. These include:

1. One statement in the report says "it is anticipated that the majority of the area cleaned up by this action will not require additional efforts" (ES-2). This implies that there are some areas where additional remediation work will need to occur, which areas are these?

2. Regarding the depth of the excavation proposed in the above mentioned quote from p. 4-1, and recognizing the fact that contamination exceeding the 5/15/50 DOE 5400.5 guideline exists at average depths of 3-4 feet in the ditches, and from 8-18 feet on the western edge of SLAPS, which are the areas to be excavated, how are you preparing to manage these contaminated materials?

3. Concerning the newly engineered ditch:
   a. Where will the newly engineered ditch be located?
   b. Where will the runoff water be diverted to?

4. When will the SLAPS Hydrogeologic Panel report be completed and available for review?

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I was pleased to hear you state your recognition that water management is to be your "chief concern" during the implementation of this plan. I am reassured to know that you will have the onsite presence of a hydrologist/geologist during the course of this project. Based on my understanding of the project at this time, I would encourage you to study the surface water patterns more completely with regard to closing off the culverts under McDonnell Blvd. I am concerned that the effect of diverting runoff water from 2 or 3 channels into one would increase the chances of erosion of contaminated materials offsite and into Coldwater Creek, as well as across the road northward, onto the ballfields.

I look forward to your correspondence on these matters, as I would like the opportunity to review it prior to the August 28th public review deadline. I appreciate your attention to my concerns.

Sincerely,

Sally P. Price

Sally P. Price

JAMES M. TALENT
2ND DISTRICT, MISSOURI

LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-2502
(202) 225-2561

N. NEW BALLAS ROAD
SUITE 315
ST. LOUIS, MO 63141
(314) 872-9561

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SUITE 208
ST. CHARLES, MO 63301
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INTERNET ADDRESS:
rep.talent@mail.house.gov

Congress of the United States
House of Representatives
Washington, DC 20515-2502

August 25, 1997

COMMITTEES:
SMALL BUSINESS
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EMPLOYER-EMPLOYEE RELATIONS
WEBSITE:
http://www.house.gov/talent/

Mr. Steve McCracken
Site Manager
U.S. Department Of Energy-Public Information Center
9170 Latty Avenue
Berkeley, Missouri 63134

Dear Mr. McCracken:

I am writing to you with regard to the Engineering Evaluation/Cost Analysis(EE/CA) for the removal of radioactive material from the St. Louis Airport Site(SLAPS) under the Formerly Utilized Sites Remedial Action Program(FUSRAP).

The proposed action described in this (EE/CA) document was developed to achieve 3 principal goals:

1) to provide a clean buffer zone adjacent to Coldwater Creek
2) to protect Coldwater Creek by further controlling surface water migration of contaminants to Coldwater Creek, and
3) to demonstrate tangible progress at the site.

I am hereby submitting public comments in support of Alternative 3 in the EE/CA which deals with the removal of radioactively contaminated soil from SLAPS with off-site disposal. Under Alternative 3, all contaminated materials exceeding the 5/15/50 guidelines would be shipped out of state to a licensed disposal facility. Excavation of more highly contaminated material north of McDonnell Boulevard would be postponed to a future date. Alternative 3 would also include constructing a new, larger rail loading facility at SLAPS. According to the EE/CA, this action will contribute to reducing health risks under any future use scenario.

Sincerely,

Jim Talent
Member of Congress

#97-54

CITY OF FERGUSON

MISSOURI 63135

Resolution

Introduced by Councilman Keith Kallstrom

WHEREAS, the radioactive wastes contaminating the air, soil and water at the Latty Avenue waste site in Hazelwood and the Lambert-St. Louis International Airport waste site were deposited as a result of the federal government's atom bomb research and development program; and

WHEREAS, the United States Department of Energy (DOE) has disclosed that the volume of toxic wastes at the Airport and Hazelwood sites and nearby contaminated tracts will require additional acreage to build a permanent disposal facility, and the DOE is not sure of the total volume of waste that will ultimately be found at these various sites; and

WHEREAS, various alternatives for disposal have been proposed: Alternative 1 to do nothing; Alternative 2 to excavate the contaminated soil and stockpile it on site until criteria for final disposal are agreed upon; and Alternative 3 to excavate the contaminated soil and immediately ship it to a licensed off-site disposal facility; and

WHEREAS, with Alternative 3, all excavated material that exceeds the Department of Energy guidelines would be immediately shipped off-site; and

WHEREAS, to protect the environment of North St. Louis County and the people who live and work there, it is desirable to completely remove all radioactive contaminated materials from this densely populated area to a site of higher environmental integrity outside the urban area to which ALL of these wastes could be relocated.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FERGUSON, MISSOURI, as follows:

The Council of the City of Ferguson, Missouri, opposes a stockpile of contaminated soil on-site at Lambert-St. Louis International Airport and strongly urges the Department of Energy and the Environmental Protection Agency to cooperate fully with the State of Missouri, St. Louis County, the City of St. Louis, and the many affected municipalities in removing the radioactive wastes from the various locales in metropolitan St. Louis to a non-urban location with the highest geologic integrity.

This Resolution passed and approved by the Council of the City of Ferguson, Missouri, this NINTH day of September, 1997.

FUS183P/090997

Mayor DRAFT COPY

Attest: 8-27-97

City Clerk

CITY HALL
110 Church St.
(314) 521-7721
FAX = 524-5173
TDD Phone 521-4828

CLERK of COURT
222 S. Florissant Rd.
(314) 524-5264
FAX = 524-5290

POLICE DEPARTMENT
222 S. Florissant Rd.
(314) 522-3100
FAX = 524-5290

FIRE DEPARTMENT
110 Church St.
(314) 522-1122

RECREATION DEPARTMENT
501 N. Florissant Rd.
(314) 521-4661

MUNICIPAL GARAGE
901 Ferguson Av
(314) 521-837

Date: 8/29/97 9:49:54 AM
From: Carol Ann Prombo
Subject: public comment slaps interim 7/97
To: mtcrate
cc: caprombo

Dear Mr. McCracken,

My public comment represents my personal views as a citizen and taxpayer on clean up of the St. Louis sites. My views are those of a citizen who is well informed on general scientific and environmental issues as I am a geochemist with a PhD who teaches Earth and Environmental Science at a private university in St. Louis; in addition, I serve on a NASA advisory panel CAPTEM [Curation and Analysis Planning Team for Extraterrestrial Material]. My views are also those of a pacifist [member Religious Society of Friends i.e. Quaker] who is adamantly opposed to the use of nuclear weapons.

I strongly feel that the choice of final clean up plan for these sites should be based on reduction of hazard, cost and fairness. I do not feel sufficiently aware of all of the facts regarding the choice of "local" versus out of state disposal to voice an opinion regarding the two. However, I feel that the choice should result from a careful cost benefit analysis. In addition, back in the 1940's some of the people of St. Louis benefitted economically from the processing of the uranium. I don't feel that it is fair to dump St. Louis waste on a state with less political clout.

There are many ways that government money can be used to reduce hazard from hazardous waste sites in Missouri e.g. tailings from lead mining. The citizens of Missouri can obtain more benefit for the cost of cleanup of sites that are more hazardous than they can for a 99.9999% cleanup of these nuclear waste sites.

do support containment of contaminated material and soil e.g. soil releasing contamination into Coldwater Creek. I would support this being done in a cost effective manner.

I abhor the use of nuclear weapons. I strongly support safe, reasonable disposal of nuclear waste. Opposing the safe disposal of nuclear waste is not an efficient path to nuclear disarmament.

Sandra Delcoure
3029 Willow Creek
Florissant, MO 63031

AUG 2 2 1997

August 21, 1997

Dear Steve,

The meeting was very interesting last week and it is good to know that you are interested in others opinions in the clean up of SLAPS and HISS.

It seems as though you are trying to do the clean up as safely as possible. But it also seems that when digging begins a lot of the contaminated dirt will fall into the creek because it is right next to it even though there is a gabion wall. Using the freezing of the soil technology would be an extra precaution in addition to the other methods you described to remove the contamination safely.

Maybe there are other things you could do to safeguard the creek and air from contamination during clean up. They once made the mistake that the waste was harmless when they dumped it there. We should be careful not to make that mistake again and be extra cautious during the clean up.

People are always so concerned about spending the money to clean up the site with expensive new technologies. Using them could pay off in the long run if the site is cleaned up safely and rightly from the start. I don't think a person suffering from leukemia or bone cancer that may have been caused from exposure to the radioactive waste would think in terms of money for the clean up.

We just don't know how many things affect us and why in relation to who gets sick from what hazardous material and exposure. We do know that exposure to radioactivity can kill or make people chronically ill. That is why we should strive to do the best clean up at SLAPS and HISS that we can. It seems this group of people that meet and work on this issue have a good working relationship even though they have their own ideas and differences which will only help toward making this clean up one of the best in the country.

Sincerely,

Sandy Delcoure

The U.S. Department of Energy is seeking public comment on an Engineering Evaluation/Cost Analysis (EE/CA) for the Removal of contamination at the St. Louis Airport Site (SLAPS)

A draft EE/CA has been prepared in support of the removal of residual radioactive material at the St. Louis Airport Site (SLAPS) in St. Louis, Missouri. This action grew out of interactions DOE has had with stakeholders over the past several months to develop consensus about cleanup solutions and future actions for accelerating cleanup at the St. Louis Site. The proposed interim action described in this document is designed to achieve two principle goals:

- *to provide a clean buffer zone adjacent to Coldwater Creek; and*

- *to protect Coldwater Creek by further controlling surface water migration of contaminants to the creek.*

The action currently under consideration proposes to excavate contaminated material from the western end of SLAPS, nearest to Coldwater Creek, and along McDonnell Blvd. It also proposes the construction of a "load-out facility." This facility will enhance our ability to transport materials off-site and achieve the capacity needed to load and ship materials for future full-scale excavation of the site.

The EE/CA is available for public review at the following locations:

St. Louis Public Library - Government Information Section
1301 Olive Street
St. Louis, MO

St. Louis County Library-Headquarters
1640 S. Lindbergh Blvd.
Clayton, MO

Prairie Commons Branch
915 Utz Lane
Hazelwood, MO

DOE Public Information Center
9170 Latty Avenue
Berkeley, MO

During the next 30 days, DOE welcomes public comment.
Written comments may be submitted through August 28, 1997 to:

Steve McCracken, Site Manager
U. S. Department of Energy - Public Information Center
9170 Latty Avenue
Berkeley, MO 63134

Copies of the EE/CA also may be requested by contacting the DOE Public Information Center at (314) 524-4083 or by calling the DOE toll-free, 1-800-253-9759.

4.125 1130.1

The U.S. Department of Energy invites interested citizens to a public meeting for the Engineering Evaluation/Cost Analysis (EE/CA) for the removal of contamination at the St. Louis Airport Site (SLAPS)

The U.S. Department of Energy (DOE) will hold a public meeting on Wednesday, August 13, 1997 to receive public comment on an Engineering Evaluation/Cost Analysis (EE/CA) for the removal of radioactive material at the St. Louis Airport Site (SLAPS) in St. Louis, Missouri. This action grew out of interactions DOE has had with stakeholders over the past several months to develop consensus about cleanup solutions and future actions for accelerating cleanup at the St. Louis Site. The proposed interim action is designed to achieve three principle goals:

- to accelerate work at the St. Louis Airport Site;
- to provide a clean buffer zone adjacent to Coldwater Creek;and
- to protect Coldwater Creek by further controlling surface water migration of contamination to the creek.

The public meeting is an opportunity for residents living in the community, as well as other interested parties, to participate and comment on proposed and ongoing activities. A poster board session pertaining to all site activities will be held from 7:00 p.m. - 8:00 p.m. The formal presentation will begin promptly at 8:00 p.m. followed by an opportunity to make statements or ask questions.
The meeting will be held at:

Hazelwood Civic Center - East
8969 Dunn Road
Hazelwood, MO 63042
7:00 p.m. - 9:30 p.m.

Anyone wishing to have a written response must submit their question(s) in writing during the meeting or during the 30 day comment period, now through August 28, 1997.

For more information, contact the DOE St. Louis Site Office at (314) 524 -4083.

Department of Energy

St. Louis Site Office
9170 Latty Avenue
Berkeley, MO 63134
(314) 524-4083

July 29, 1997

(Name)
(Address)
(City/State/Zip)

Dear (Name):

In May of this year, senior staff from the EPA, the State of Missouri, St. Louis City and County, and the Department of Energy met to workout agreements that will accelerate the cleanup of the radioactive waste sites in the St. Louis area. Based upon recommendations made by the St. Louis Remediation Task Force, a commitment was made to demonstrate a high priority for the St. Louis Airport Site (SLAPS) by beginning work this year. Of course, any decision to move forward with cleanup at the airport site must include input from the public.

Attached for your review and comment is a draft copy of an Engineering Evaluation/Cost Analysis (EE/CA) which proposes to excavate contaminated material from the western end of SLAPS, nearest Coldwater Creek, and along McDonnell Blvd. This document also proposes the construction of a "load-out facility" that will enhance our ability to transport excavated materials out of state and achieve the capacity needed to load and ship materials for future full-scale excavations of the site.

In addition to the "no action" alternative, the EE/CA includes two action alternatives to the basic proposal described above. One alternative would remove all material from the western end of SLAPS and from ditches south of McDonnell Boulevard to an unrestricted use standard and haul it out of state for disposal. The other would remove the same material to an unrestricted use standard, stockpile lesser contaminated material, expand excavation activities to include ditches north of McDonnell Boulevard and transport and dispose of more highly contaminated materials out of state.

It is my belief that either of the above two alternatives will result in a significant step forward in the cleanup of the SLAPS. The public comment period is July 30, 1997 through August 28, 1997. A public meeting will be held on August 13, 1997 from 7:00 p.m. to 9:00 p.m. at the Hazelwood Civic Center, 8969 Dunn Road, Hazelwood, MO 63042. We look forward to your participation and input.

Sincerely,

Stephen H. McCracken
St. Louis Site Manager

Enclosures
jln

EE/CA Distribution List

Al Johnson
Robert F. Boland
James K. Grant
Sandy Delcoure
Sally Price
Ed Carlstrom
David Farquharson
Colleen Klos
Conrad W. Bowers
Patrick J. Hickey
Judith O'Connor
Clarence Harmon
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Jack Frauenhoffer
Bob Marchant
David Bedan
Joe Donahue
Bob Nicolotti

Department of Energy

97-239

St. Louis Site Office
9170 Latty Avenue
Berkeley, MO 63134
(314) 524-4083

July 28, 1997

Dear St. Louis Stakeholder:

In May of this year, senior staff from the EPA, the State of Missouri, St. Louis City and County, and the Department of Energy met to workout agreements that will accelerate the cleanup of the radioactive waste sites in the St. Louis area. Based upon recommendations made by the St. Louis Remediation Task Force, a commitment was made to demonstrate a high priority for the St. Louis Airport Site (SLAPS) by beginning work this year. Of course, any decision to move forward with cleanup at the airport site must include input from the public.

To facilitate public input, an Engineering Evaluation/Cost Analysis (EE/CA) which discusses the proposed action has been prepared. This document is available for review at the four locations indicated on the enclosure. A copy will be sent to you if requested. The basic proposal is to excavate contaminated material from the western end of SLAPS, nearest Coldwater Creek, and along McDonnell Boulevard. This document also proposes the construction of a "load-out facility" that will enhance our ability to transport excavated materials out-of-state and achieve the capacity needed to load and ship materials for future full-scale excavation of the site.

The EE/CA includes two alternatives to the basic proposal described above. One alternative would remove all material from the western end of SLAPS and from ditches south of McDonnell Boulevard to an unrestricted use standard and haul it out-of-state for disposal. The other would remove the same material to an unrestricted use standard, stockpile lesser contaminated material, expand the excavation activities to include the ditches north of McDonnell Boulevard and transport and disposal of more highly contaminated materials out of state.

It is my belief that either of the above two alternatives will result in a significant step forward in the cleanup of the SLAPS site. The public comment period is July 30, 1997 through August 28, 1997. A public meeting will be held on August 13, 1997 from 7:00 p.m. to 9:00 p.m. at the Hazelwood Civic Center, 8969 Dunn Road, Hazelwood, MO 63042. We look forward to your participation and input.

Sincerely,

Stephen H. McCracken
St. Louis Site Manager

Enclosure
jln