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Department of Energy

Oak Ridge Operations
P.O. Box 2001
Oak Ridge, Tennessee 37831—8723

April 30, 1996

Mr. Daniel Wall
Site Assessment and Federal
Facility Section - Superfund Branch
U.S. Environmental Protection Agency
Region VII
726 Minnesota Avenue
Kansas City, Kansas 66101

Dear Mr. Wall:

QUARTERLY PROGRESS REPORT FOR THE PERIOD JANUARY - MARCH 1996 FOR THE FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP) ST. LOUIS SITE

The following items represent the significant activities and achievements related to the FUSRAP St. Louis Site for the period January through March 1996:

- There were no Federal Facility Agreement (FFA) milestones scheduled during this period; however, all other FFA required activities were completed as necessary. In addition, the EPA, DOE, and Missouri Department of Natural Resources (MDNR) project managers had routine discussions to address technical, cost, and schedule issues related to the St. Louis Site.
- Preparations were made to ship and dispose of the remaining contaminated soils from remediation activities at St. Louis Downtown Site (SLDS) Plant 10. These soils were stored and covered during the winter at SLDS Plant 7S. The soils were loaded into gondola cars and shipped to an offsite disposal facility during the month of April.
- DOE and Mallinckrodt reached agreement on the selection of the next phase of remediation work at SLDS: demolition of the 50-Series Buildings was selected as the project for fiscal year 1996. The current plans are to begin demolition activities in mid-August to accommodate Mallinckrodt's production demands for Building 50. All of the excess equipment will be removed from the five buildings that make up the 50-Series by Mallinckrodt prior to DOE's demolition of the buildings. It is expected that concrete, brick, and similar rubble from the demolition will be staged prior to being crushed and will eventually be used as backfill during remediation of subgrade soils in fiscal year 1997.
- Preparations were made to cleanup low-level radioactive contamination located along the road edges of St. Louis Airport Site vicinity properties on Frost Avenue. Seven

commercial properties on Frost Avenue are scheduled for remediation. Cleanup activities will include excavating approximately 3,100 cubic yards of contaminated soils from these properties and hauling it by truck to a nearby staging area. From the staging area, the soils will be loaded onto gondola rail cars and shipped for disposal. Remediation activities were started on April 8 and will continue for approximately two months.

- Pursuant to its railroad tender (lease agreement) with the Norfolk Southern Railroad, DOE made preparations to stage and load contaminated material into gondola cars at the railroad's property on the corner of Eva Road and McDonnell Boulevard. This property is one of the SLAPS vicinity properties that has existing radiological contamination on it. It will be used to support remediation activities at the St. Louis vicinity properties. Improvements have been made to this property that include the extension of a rail spur to accommodate six gondola cars, fencing of the area, and miscellaneous grading activities to allow room for staging of excavated soils prior to shipment. The site modifications were completed at the end of March to support the Frost Avenue haul route remediation that started in early April.
- The St. Louis Site Remediation Task Force held its regular monthly meetings in January, February, and March. The significant conclusions drawn by the Task Force to date are listed in Enclosure 1 to this report.

Several task force working groups continued to meet as well -- most notably the Alternative Sites Working Group, which heard presentations from representatives of Dawn Mining Co. in Ford, Washington, and Envirocare of Utah. The working group will evaluate the technical merits and costs of commercial disposal and make recommendations to the Task Force in the coming months.

- The "Blue Ribbon" panel of experts in geology/hydrogeology, which was assembled at the request of the Task Force to address potential impacts of SLAPS on Coldwater Creek and the deep groundwater beneath the site, presented its conclusions and findings at the January 20, 1996 Task Force meeting. Based on a review of pertinent data and groundwater modeling information, the panel concluded that Coldwater Creek surface water and shallow groundwater quality are minimally affected by stormwater runoff from the St. Louis Airport Site (SLAPS). They also concluded that no significant impacts to Coldwater Creek via the deep groundwater pathway would be expected to occur in the 100-year timeframe.

The panel recommended: 1) designing and implementing drainage-control at SLAPS to control surface water runoff; and 2) developing a program for long-range data collection, analysis, modeling, and risk assessment. The panel did not recommend removing the waste material from SLAPS as a remedial action. The draft written report was transmitted to the Task Force in February. Panel members also met with the Task Force at its March 19, 1996 meeting to discuss comments they had received on the draft report.

- As a mechanism to facilitate preparation of a draft Task Force recommendations report, the Task Force decided to assess remediation alternatives using a matrix format. Meeting in special working sessions, a Task Force committee developed matrices describing four remediation options ranging from "no action" to "complete excavation and disposal" for 10 components of the St. Louis Site. The matrices, which address such issues as cleanup objectives, cleanup standards, interim measures, and long-term management techniques, will be used by the Task Force to help refine recommendations for overall cleanup for the St. Louis Site. As a result of this path forward, the Task Force extended its schedule for completion of its final recommendations. The Task Force now expects to deliver its final report at the end of September.

The Task Force also welcomed a representative of the City of Florissant, which accepted the Task Force's invitation to participate as a voting member.

During the second quarter of 1996, the Task Force is scheduled to meet on April 16, May 21 and June 18.

- As a result of the Task Force extending its schedule for completion of its recommendations, DOE and EPA have discussed revising the schedule for submittal of a revised Feasibility Study and Proposed Plan for the St. Louis Site. On March 19, DOE met with the EPA and MDNR to propose a new schedule for submittal of these documents -- specifically that the submittal of these documents be delayed by approximately one year to accommodate the review and assessment of Task Force recommendations.
- Discussions have been continuing between DOE and MDNR officials in an effort to resolve the notices of violation (NOV) issued by the state regarding stormwater discharge monitoring at SLAPS. Both DOE and the City of St. Louis continue to maintain that they are not legally obligated to obtain a stormwater permit. The parties have continued to exchange correspondence on this matter for the past several months.
- The Stone Container Corporation, tenant on property 2L adjacent to HISS, continues to make plans to expand the building and parking lot at their facility. This will involve relocating approximately 12"-24" of soil from the southwest quadrant of the property to allow sufficient regrading for construction. Much of this soil is contaminated above the accepted cleanup guidelines; and Stone Container expects to place these soils, projected to range in volume from 1000-2000 cubic yards, into a covered, engineered pile at the rear of the property. Work on the expansion is expected to begin within the next few months.
- During the month of January, residual crushed brick, found in the rock crusher when it arrived on site for the Plant 10 removal action, was shipped for disposal as a Low Level Radioactive Waste. The residual crushed brick had contained leachable barium at concentrations that caused the brick to fail the Resource Conservation and Recovery Act (RCRA) toxicity characteristic based on the Toxicity Characteristic Leachate Procedure

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(TCLP). This mixed waste was successfully treated and rendered nonhazardous prior to shipment for disposal by mixing the crushed brick and ferrous sulfate and then blending this mixture with pre-mixed Portland cement. On December 4, a final report was issued to MDNR describing this treatment methodology and the TCLP results for this waste.

- DOE has completed a "Task Force Review Draft" of an Engineering Evaluation/Cost Analysis (EE/CA) report for the St. Louis Area ballfield site. The EE/CA was prepared to analyze remedial alternatives proposed by the St. Louis Site Remediation Task Force -- including the possibility of capping the ballfields with a layer of cover soils. The EE/CA describes several potential actions and also discusses remediating the west side of Eva Avenue and the ditch along the north side of McDonnell Boulevard. The goal of this EE/CA is to develop one or more remedial action alternatives that are protective of human health and the environment, and that allow a range of options for timely, beneficial reuse of the site. The EE/CA is currently undergoing internal review by the Task Force prior to being made available to the general public for comment.

During this quarterly period, environmental sampling conducted by FUSRAP consisted of routine surveillance, radiological surveys, and sampling associated with ongoing site remediation activities. A summary of these sampling/surveying activities and the analytical results received to date is enclosed. As always, all raw data and analyses are available for EPA review and inspection to the extent that you request.

During the second quarter of 1996, there are no scheduled FFA milestones. In the interim, DOE will continue to work with EPA and MDNR to implement appropriate interim removal actions and to facilitate the process of selecting the final cleanup remedy. This includes continuing to assess the impact of the extension of the St. Louis Task Force's work into September 1996 on the preparation of a revised Feasibility Study and Proposed Plan.

Please advise if you have questions or comments regarding this quarterly report.

Sincerely,

for Robert G. Adler
for David G. Adler, Site Manager
Former Sites Restoration Division

Enclosures

cc: R. Geller (MDNR)

Enclosure 1

SIGNIFICANT CONCLUSIONS OF THE
ST. LOUIS SITE REMEDIATION TASK FORCE

The significant conclusions drawn by the task force to date include:

- A general agreement that the cleanup criteria (5/15 pCi/g for radium and thorium, 50 pCi/g for uranium-238) are protective and represent appropriate standards for St. Louis Site remediation;
- A consensus that the cleanup of SLDS Plant 10 is a beneficial interim removal action contributing positively to the overall St. Louis Site cleanup objectives;
- A consensus that cleanup of the pile of radioactively contaminated soil on Latty Avenue vicinity property 3L is (was) a prudent interim removal action;
- A consensus that additional site stabilization activities at the St. Louis Airport Site are appropriate, including upgrading the fence and revegetating areas prone to erosion. While the Task Force originally supported an EPA recommendation to mitigate the exposure of a radiological hot spot along the northern fenceline, it concluded that the hot spot posed no imminent health risk and subsequently withdrew support for a removal action that would have shielded the hot spot and reduced the fenceline dose rates by a factor of twenty. EPA and MDNR subsequently agreed it would be appropriate to shift the funds for this activity to other St. Louis remediation work.
- A consensus that any additional FY-95 funding available for St. Louis cleanup work should be directed toward vicinity properties -- including completion of remediation of Property 3L (Quaker State property).
- A consensus on the budget priorities for FY96 and FY97 that recommends approximate spending allocations as follows:
 - \$200,000/yr to evaluate local disposal options;
 - \$200,000/yr to evaluate suitable locations for an in-state disposal cell;
 - \$4,000,000/yr to remove contaminated soils from haul route properties;
 - \$4,000,000/yr to restore/stabilize Airport-owned properties;
 - \$4,000,000/yr to continue cleanup efforts at SLDS;
 - \$200,000/yr to continue soil treatability investigations.
- A consensus that the Task Force should conduct routine publicity activities, including mailing news releases and notices of meetings to interested parties, to inform the public about its discussions. The publicity is being conducted by FUSRAP at the request of the Task Force.

- A consensus that the Task Force evaluate its membership and, where appropriate add members from stake holder groups that potentially may be impacted by activities as the St. Louis Site. The Task Force approached officials in the cities of Black Jack and Florissant, which are impacted by Coldwater Creek, as well as representatives of McDonnell Douglas Corporation, the U.S. Army Corps of Engineers, the City of Bridgeton, Southwestern Bell Telephone Company, and the Metropolitan St. Louis Sewer District. The City of Bridgeton, the Metropolitan St. Louis Sewer District, and the City of Florissant opted to join the Task Force as voting participants; the other stakeholder groups chose to only be added to the Task Force mailing list.
- A consensus that the Task Force use a matrix tool to develop remediation alternatives for various components of the St. Louis Site. These alternatives will be discussed as the Task Force develops its final recommendations.

Enclosure 2

Summary of First Quarter 1996
Sampling and Analysis

The following is a summary of environmental data collected for FUSRAP sites in St. Louis, Missouri during the first quarter of 1996. Samples were collected and analyzed in support of environmental surveillance and characterization of the sites. In addition to the collection of radon detectors and TETLDs, a total of seven samples were collected for various radiological and non-radiological analyses during the quarter. Except for one characterization sample, analytical results for these analyses have been compiled and validated. Preliminary evaluation of the data indicates results consistent with past characterization and environmental surveillance findings at the sites.

Radon

Radon detectors were collected from HISS, SLAPS, and SLDS in support of routine environmental surveillance activities. The maximum concentrations of radon detected at HISS, SLAPS, and SLDS were 0.3, 2.1, and 1.0 pCi/L, respectively, well below the DOE radon guideline of 3.0 pCi/L for occupied or habitable structures.

The results of the radon detectors collected from HISS during the fourth quarter of 1995 were not available for the fourth quarter report. The maximum concentration of radon detected at HISS for this time period was 0.6 pCi/L.

External Gamma Radiation

Tissue equivalent thermoluminescent dosimeters (TETLD) were collected from HISS, SLAPS, and SLDS to determine the external gamma radiation exposure rates in support of routine environmental surveillance activities. However, due to laboratory quality control concerns, the results from these TETLDs are not considered valid and are not presented. There were no significant changes in the site configuration during the course of 1995; hence, the TETLD data for the first six months of 1995 (provided in the 4th quarter 1995 report) is considered to be representative and typical of site conditions during the entire year.

Stormwater Surveillance

Six stormwater samples were collected from the two outfalls at HISS to comply with the requirements delineated in the NPDES permit number MO-0111252. Samples are taken monthly to analyze for settleable solids and quarterly to analyze for chemical and radioactive contaminants. The concentration of settleable solids was less than 0.50 mL/L/hr, well below the 1.0 mL/L/hr permit requirement. The concentrations of total organic halides and total organic carbon were 0.0485 mg/L and 15.4 mg/L respectively. The concentrations of radioactive

analytes were 16.23 pCi/L of gross alpha, 13.23 pCi/L of gross beta, 16.49 pCi/L of total uranium, 4.26 pCi/L of thorium-230, < 0.36 pCi/L of thorium-232, 4.15 pCi/L of radium-226, < 4.88 pCi/L radium-228, and 1.7 pCi/L lead-210.

Environmental Surveillance Summary

The above radionuclide concentrations were less than the DOE derived concentration guide (DCG) reference values for all groundwater, surface water, and stormwater samples collected in the first quarter of 1996. The DCG is a reference value calculated in DOE Order 5400.5, "Radiation Protection of the Public and the Environment." The DCGs (for ingested water) for the radionuclide analytes included in the first quarter environmental surveillance are: radium-226, 100 pCi/L; radium-228, 100 pCi/L; thorium-230, 300 pCi/L; thorium-232, 50 pCi/L; lead-210, 30 pCi/L; and total uranium, 600 pCi/L.

Characterization Samples

One sample of wood from the floor joists in the 50 series buildings at SLDS was collected in support of waste management for the possible future demolition of the buildings. The results for this sample were not available for the first quarter report but will be provided in the second quarter report for 1996.

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Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for the St. Louis Site, Missouri



U.S. Department of Energy

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