



Department of Energy

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October 29, 1992

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

Dear Mr. McCabe:

QUARTERLY PROGRESS REPORT FOR THE PERIOD JULY-SEPTEMBER 1992

The following items represent the significant activities and achievements related to the FUSRAP St. Louis Site for the period July-September 1992:

- All Federal Facilities Agreement milestone activities were completed on or ahead of schedule:
 - 1) The draft final Initial Screening of Alternatives (ISA) was forwarded to EPA in July. DOE subsequently received additional EPA comments on the draft final ISA in September (and provided comment resolution in early October).
 - 2) DOE received approval of, as well as additional EPA comments on, the draft final Baseline Risk Assessment (BRA). A response to the comments was forwarded to EPA in July.
 - 3) The draft final Field Sampling Plan and the draft final Quality Assurance Project Plan were submitted to EPA in August. The draft final documents and comment resolutions reflected discussions and agreements reached during a meeting between EPA, MDNR, and DOE in mid-July.
- On September 15th and 16th, DOE sponsored a *FUSRAP Choices Workshop* to give DOE, EPA Regions, and state agencies an opportunity to discuss issues related to the cleanup of FUSRAP sites.
- Field teams mobilized in St. Louis in mid-July to begin the data gap field sampling activities. This followed a meeting between EPA, MDNR, and DOE in mid-July to discuss the FSP scope of work. EPA and MDNR

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tentatively approved DOE's proposed resolution of EPA comments on the FSP, as well as the start of field work, at that meeting.

The majority of the field sampling work was completed by mid-September; however, some wells remain to be developed and sampled. Samples have been shipped to the analytical laboratories for analysis, and results are expected to continue coming in through early 1993.

FUSRAP personnel worked closely with the U.S. Army Corps of Engineers to complete sediment sampling in the Mississippi River during the week of September 15th. At DOE's request, the St. Louis District of Corps allowed FUSRAP personnel to board the Corps' 65-ft boat stationed on the river, and the Corps piloted the boat to the sampling locations adjacent to SLDS. By using the Corps' boat (which is specifically designed for this type of work) instead of chartering a commercial vessel, DOE was able to (1) improve worker safety; (2) determine sample locations more accurately by using the Corps' ship-to-shore radio transponder system; (3) reduce government costs by not chartering a commercial vessel; and (4) enhance interagency cooperation between the Corps and DOE. DOE has agreed to provide analytical results from the river sediment sampling effort to the Corps.

- A FUSRAP representative met with representatives from Stone Container Company (the business adjoining the HISS property) to discuss their drainage problems and plans for expanding their parking lot. It was reiterated that the availability of HISS to store contaminated soil removed during construction or excavation at Stone depended on support from local government.
- At the St. Louis Downtown Site, FUSRAP performed a small, limited cleanup action to excavate approximately 110 cubic yards of material in the Plant 7S area. The excavation spoils were placed into bulk bags and moved into storage in Building 116. Mallinckrodt has subsequently constructed a RCRA waste storage pad at the excavation location.
- DOE provided Mallinckrodt with technical assistance in evaluating radiological conditions in an area north of Building 51 at SLDS where Mallinckrodt intends to construct a new laboratory. Similar evaluations were also performed for areas immediately south of the Building 50/51 complex where Mallinckrodt intends to construct a maintenance shop.
- In the last quarterly report it was noted that Mallinckrodt expressed the need to either perform significant structural improvements to Buildings 50/51 or to move their operations in these buildings to other facilities. They had requested that DOE evaluate the level of support (in the way of removal actions) that FUSRAP would provide in helping Mallinckrodt address building refurbishment or demolition to support their needs. During this past quarter, FUSRAP completed an engineering study and cost estimate to evaluate DOE options related to providing Mallinckrodt with assistance in relocating plant facilities.

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However, this study concluded that there is no near term technical or financial advantage to DOE that contributes to achieving FUSRAP objectives for the site by undertaking these activities at this time. Mallinckrodt was advised that DOE would limit its involvement in these activities to providing advice on worker protection and limiting the spread of contaminated material, as well as to facilitate storage of Mallinckrodt-generated, contaminated construction and excavation debris in Building 116.

- During the third quarter, 63 community relations interactions related to the St. Louis sites were documented. The interactions ranged from contact with local property owners and government officials to educational presentations for local high school students. Most of the 24 interactions recorded in July focused on the status of the data-gap sampling effort and proposed cleanup activities in the North County area; almost half were contacts with local public officials or Missouri congressional staff. Of the 19 interactions recorded during August, local public officials accounted for more than half, and property owners and utility representatives jointly accounted for most of the others.
- At the invitation of the director of the St. Louis County Department of Health, DOE provided an update on FUSRAP activities being conducted at the St. Louis site at an informational meeting in Clayton, Missouri, on August 12. The meeting was attended by representatives of EPA, MDNR, the Missouri Department of Health, DOE, and St. Louis City and County governments. The presentation included updates on the field sampling plan and the status of the St. Louis remedial investigation/feasibility study-environmental impact statement documents.
- A FUSRAP representative spoke at the monthly safety meeting of the Engineering Department of Southwestern Bell Company. He presented an overview of FUSRAP and discussed how contamination at FUSRAP sites affects phone company easements.

During this quarterly period, environmental sampling consisted of the routine quarterly monitoring and some limited radiological surveys and sampling. In addition, significant characterization activities were undertaken in accordance with the field sampling plan. A summary of these activities and the analytical results received to date is enclosed. As always, all raw data and analyses are available for your review and inspection to the extent that you request.

During the fourth quarter of 1992 (September-December), DOE will submit the following items for EPA review:

- A revised final draft of the Initial Screening of Alternatives (ISA) for the St. Louis Site (this was completed and submitted on October 5th).
- Resolution of additional EPA comments on the field sampling plan.

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



David G. Adler, Site Manager
Former Sites restoration Division

Enclosure

cc: D.E. Bedan (MDNR)
H. Hickman (M&E)

Enclosure

Summary of Third Quarter 1992
Sampling and Analysis
for the St. Louis Site

The following is a summary of environmental data collected for FUSRAP sites in St. Louis. The three sites are the Hazelwood Interim Storage Site (HISS), the St. Louis Airport Site (SLAPS) and its associated vicinity properties, and the St. Louis Downtown Site (SLDS). Data was collected in support of the routine environmental monitoring program, regulatory requirements, and characterization of the sites.

A total of 693 samples and measurements were collected during the third quarter of 1992 and submitted for various radionuclide and chemical analyses and exposure measurements. It should be noted that all surface water, external gamma, and radon data reported for HISS and SLAPS were collected as part of the existing environmental sampling program.

Surface Water

Three surface water samples were collected from two offsite locations at the Chain of Rocks water treatment facility. Each sample was submitted for the following radiological analyses: radium-226, thorium-230, and total uranium. Basic chemical indicator analyses were performed in the field and included pH and specific conductivity. Of the three samples submitted for analysis, one was a field duplicate. Analytical results for total uranium, radium-226, and thorium-230 were less than 0.7% of the DOE derived concentration guidelines (DCG) of 600 pCi/L, less than 1.0% of the DOE DCG of 100 pCi/L, and less than 0.3% of the DOE DCG of 300 pCi/L, respectively.

Radon

All radon samples were collected as part of an environmental monitoring and sampling program. At HISS 12 radon detectors were collected from 11 locations. Of the 12 detectors collected, one was a field duplicate and two were collected from background locations. Analytical results for radon concentrations at HISS were less than 25% of the DOE guideline of 3.0 pCi/L. At SLAPS 15 radon detectors were collected from 14 locations. Of the 15 detectors collected, one was a field duplicate and three were collected from background locations. Analytical results for radon concentrations at SLAPS were less than 40% of the DOE guideline of 3.0 pCi/L. Data was not available from one of the background locations due to a manufacturing defect in the detector.

External Gamma

All external gamma radiation samples were collected as part of an

environmental monitoring and sampling program. At HISS, 12 external gamma radiation detectors were collected at 11 dosimetry locations. Of the 12 external gamma radiation detectors collected, five were on-site, four were from along the property line, two were collected from background locations, and one was a field duplicate. All analytical results for external gamma measurements at HISS were consistent with results from previous sampling efforts, and except for location number two were below the DOE specified dose guideline of 100 mrem/yr. It is improbable that an individual would receive a dose greater than the guideline from the exposure at location two (142 mR/yr) due to the fact that the offsite area near this location is heavily wooded and not occupied for any length of time.

At SLAPS, 15 external gamma radiation detectors were collected from 14 dosimetry locations. Of the 15 detectors collected, one was a field duplicate and three were collected from background locations. All analytical results for external gamma measurements at SLAPS were consistent with results from previous sampling efforts. Exposure measurements obtained from the fenceline along McDonnell Boulevard remained high in areas that are known to be radioactively contaminated; however, the potential dose to an individual is relatively low because the area near the site is not used for purposes requiring high occupancy, and extended exposure times are not likely.

Characterization

Samples were collected at SLDS, SLAPS, and HISS to support characterization activities at the sites. These characterization activities included the data gap sampling effort and general support of Mallinckrodt Specialty Chemical Company (MSCC). The total number of samples collected for these activities was 511. Of these 511 samples, 108 were for chemical characterization, 391 were for radiological characterization, and 12 were samples taken from dumpsters to verify that waste materials generated by MSCC were below DOE guidelines.

All 108 chemical characterization samples were subjected to a full regimen of TCLP analyses. To date, 24 TCLP samples have returned from the laboratory, and one sample failed for lead. Of the 391 radiological characterization samples collected, 307 were soil samples, 22 were sediment samples, and 62 were decontamination water. Radiological characterization samples were analyzed for gross alpha, gross beta, radium-226, thorium-230, thorium-232, potassium-40, uranium-238, and total uranium (gross alpha and beta measurements were taken on decontamination water only). Analytical results for the radiological characterization samples collected for data gap sampling will be validated and compiled when all results have returned from the laboratory. Results will be reported in a remedial investigation addendum summarizing the data gap sampling effort.

The 12 samples of waste material collected from dumpsters were found to be below DOE guidelines of 50 pCi/g for uranium-238 and 5 pCi/g for radium-226, thorium-230, and thorium-232.

Polynuclear Aromatic Hydrocarbons (PAH)

PAH sampling was performed as part of a DOE research effort to evaluate correlation between portable gas chromatograph analyses and laboratory analyses. Sampling strategies and results were not intended for characterization purposes (i.e., determining contamination boundaries or concentrations) -- but for data correlation purposes only. Twelve PAH samples were collected at SLDS from 12 locations that were known to contain varying PAH levels. Preliminary indications showed good correlation between the field screening methods (gas chromatograph) and laboratory analyses.

Storm Water (NPDES)

Two stormwater samples were collected at HISS during the third quarter of 1992. Results from analysis did not indicate any violations of the NPDES permit MO-0111252. Additionally, results of radiological analyses were compared to DOE Derived Concentration Guidelines (DCG). For all analyzed radionuclides, concentrations in the stormwater runoff were at least an order of magnitude below the appropriated DCGs.

Radon Flux (NESHAPS)

Radon flux measurements were taken from the two storage piles and four buildings at HISS. A total of 111 measurements were taken from the site, including 10 duplicates. When all values were averaged, the resulting radon flux was only 1.3% of the NESHAPS guideline of 20 pCi/m²/sec.

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Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for the St. Louis Site, Missouri



U.S. Department of Energy