



Department of Energy

Field Office, Oak Ridge
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February 10, 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 OCTOBER-DECEMBER 1991

The following items represent the significant activities and achievements related to the FUSRAP St. Louis Site for the period October-December 1991:

- All Federal Facilities Agreement milestone activities were completed on schedule. In December, the draft Baseline Risk Assessment was completed and forwarded to EPA and the Missouri Department of Natural Resources (MDNR) for review.
- A meeting was held with MDNR in Rolla, Missouri on October 29 to discuss the state's siting criteria for establishment of a permanent storage/disposal cell in Missouri.
- DOE provided Mallinckrodt with technical assistance to perform repairs to the roof of Building 51. The roof does contain radiological contamination; however, following a walkdown of the building it was concluded that the repair work would not disturb the contamination -- and would, in fact, stabilize the contamination.
- Work continued on upgrading Building 116 at the St. Louis Downtown Site (SLDS) for use as an interim storage location. The building was cleaned, sealed, and prepared for acceptance of waste generated during future removal actions at the site. A Hypalon liner for the floor was installed, and a decontamination pad with a sump pump system was constructed adjacent to the building. Comprehensive procedures that will guide operations in the facility are currently being developed.
- Installation of the "geogrid" reinforcing covers for the storage piles at the Hazelwood Interim Storage Site (HISS) was completed.

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These high-strength, synthetic mesh covers will provide stability during periods of high winds at the site.

- The installation of storm water outfall monitoring structures at HISS was completed in December. The monitoring system was upgraded to comply with NPDES permit requirements for the site.
- Because the storage piles and the construction trailers at HISS are located in a 100-year floodplain, a number of modifications were made to comply with the floodplain ordinance governing the site. The modifications included additional tie-downs for the trailers, raising electrical boxes, and sealing the sanitary sewer storage tanks that service the trailers.
- In response to a request from Stone Container Corporation (the business located immediately east of HISS), DOE personnel provided existing characterization data to support preliminary engineering for an extension of the company's parking lot. The DOE site manager met with a representative of the company to discuss the construction plans. The property owner also advised the company owner to not initiate the site modifications without proper coordination with DOE.
- Consolidation of waste stored in containers at SLAPS was initiated on November 11; this effort will reduce the number of waste storage containers at the site. Aging containers that had begun to rust are also being replaced. The work is expected to be completed after the weather improves in early spring.
- Preparations were made for the January 28, 1992 public scoping/planning meeting for the RI/FS-EIS process. The DOE site manager met with several members of the public in advance of the meeting.
- The DOE site manager made a presentation to the St. Louis County Department of Community Health in October. This presentation addressed the status of FUSRAP activities as well as plans for future activities.
- An informational bulletin on FUSRAP activities in St. Louis was mailed to approximately 350 area residents and interested organizations during December.

During this quarterly period, environmental sampling consisted of the routine quarterly monitoring, sampling of storm water at HISS, and some limited sampling of materials at SLDS. A summary of the sampling results is enclosed. As you may recall from our previous discussions, we agreed that a summary of the sampling results would better suit your need to be advised of the sampling that occurs each quarter than copies of all the data, sampling, test results, descriptions, locations, etc. Should you find that you would

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like additional detail in future reports, please let me know. As always, all raw data and analysis are available for your review and inspection to the extent that you request.

During the first quarter of 1992 (January-March), DOE will submit the following items for EPA review:

- Final draft of the Remedial Investigation Report (Note: this item was submitted on January 13).
- The Initial Screening of Alternatives (ISA) for the St. Louis Site will be submitted in mid-February.
- The Sampling and Analysis Plan (SAP) for additional field sampling during the summer of 1992. This will consist of a Field Sampling Plan (FSP) and a Quality Assurance project Plan (QAPjP). It will be submitted in March.

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

Sincerely,



David G. Adler, Site Manager
Former Sites restoration Division

Enclosure

cc: D. Bedan, MDNR
H. Hickman, M&E
G. Palau, BNI

Summary of Fourth Quarter Sampling and Analysis

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 the St. Louis Downtown Site (SLDS). A total of 264 samples were collected during the fourth quarter of 1991 and submitted for various radionuclide and chemical analyses and exposure measurements. It should be noted that all groundwater, surface water, sediment, radon, and external gamma data reported for HISS and SLAPS were collected as part of the existing environmental monitoring program. Specific information on the locations of sampling and results from past monitoring events are available in the published annual site environmental monitoring reports for these sites.

Groundwater

Thirty groundwater samples were collected from thirteen monitoring wells at HISS. Fifteen of the samples were submitted for the following radiological analyses: radium-226, thorium-230, and total uranium. Of the radiological samples submitted for analysis, two were field duplicates and two were collected from background locations. The remaining fifteen samples were submitted for basic chemical indicator analyses which included: total organic carbon (TOC), total organic halides (TOX), pH, and specific conductivity. Of the chemical samples submitted for analysis, two were field duplicates and two were collected from background locations. All analytical results for groundwater samples collected at HISS were consistent with results from previous sampling efforts.

Forty-six groundwater samples were collected from twenty-one monitoring wells at SLAPS. Twenty three of the samples were submitted for the following radiological analyses: radium-226, thorium-230, and total uranium. Of the radiological samples submitted for analysis, two were field duplicates and two were collected from background locations. The remaining twenty-three samples were submitted for basic chemical indicator analyses which included: TOC, TOX, pH, and specific conductivity. Of the chemical samples submitted for analysis, two were field duplicates and two were collected from background locations. All analytical results for groundwater samples collected at SLAPS were consistent with results from previous sampling efforts.

Surface Water

Six surface water samples were collected from five locations in Coldwater Creek adjacent to HISS. Each sample was submitted for the following radiological analyses: radium-226, thorium-230, and total uranium. Of the six samples submitted for analysis at

HISS, one was a field duplicate and one was collected from a background location. All analytical results for surface water samples collected at HISS were consistent with results from previous sampling efforts.

Eight surface water samples were collected from eight locations in Coldwater Creek adjacent to SLAPS. Each sample was submitted for the following radiological analyses: radium-226, thorium-230, and total uranium. Of the eight samples submitted for analysis at SLAPS, one was a field duplicate and one was collected from a background location. All analytical results for surface water samples collected at SLAPS were consistent with results from previous sampling efforts.

Sediment

Five sediment samples were collected from five locations along Coldwater Creek adjacent to HISS. Each sample was submitted for the following radiological analyses: radium-226, thorium-230, and total uranium. Of the five samples submitted for analysis at HISS, one was collected from a background location. All analytical results for sediment samples collected at HISS were consistent with results from previous sampling efforts.

Five sediment samples were collected from five locations along Coldwater Creek adjacent to SLAPS. Each sample was submitted for the following radiological analyses: radium-226, thorium-230, and total uranium. Of the five samples submitted for analysis at SLAPS, one was collected from a background location. All analytical results for sediment samples collected at SLAPS were consistent with results from previous sampling efforts.

Radon

Thirteen radon measurements were taken at twelve locations at HISS. Of the thirteen measurements taken, five were on-site; five were from along the property line; two were collected from background locations, and one was a field duplicate. All analytical results for radon concentrations at HISS were consistent with results from previous sampling efforts.

Twelve radon measurements were taken at eleven locations at SLAPS. Of the twelve measurements taken, eight were from along the property line; three were collected from background locations, and one was a field duplicate. All analytical results for radon concentrations at SLAPS were consistent with results from previous sampling efforts.

External Gamma

Thirteen external gamma measurements were taken at twelve locations at HISS. Of the thirteen measurements taken, five were

on-site; five 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.

Twelve external gamma measurements were taken at eleven locations at SLAPS. Of the twelve measurements taken, eight were from along the property line; three were collected from background locations, and one was a field duplicate. All analytical results for external gamma measurements at SLAPS were consistent with results from previous sampling efforts.

Radon Flux

As part of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) compliance program at HISS, radon flux measurements were taken on the two storage piles consistent with applicable requirements outlined in Subpart Q of NESHAPs. Twenty measurements were taken on the small interim storage pile, and seventy-eight measurements were taken on the large interim storage pile. Results from the radon flux monitoring activities have not been received from the laboratory and therefore are not available at this time. Based on the results of previous flux measurements we do not expect any to exceed the current NESHAPs criteria.

Stormwater

As part of the National Pollutant Discharge Elimination System (NPDES) compliance program at HISS, stormwater discharge samples were collected at two locations and analyzed for eight radiological analyses, twelve chemical indicator analyses, and general water condition parameters (temperature, pH, specific conductance, etc). The results indicated that radionuclide levels were elevated compared to previous sampling. Gross alpha measurements were 68 pCi/l and 196 pCi/l at the two outfalls; and this is approximately two and six times higher than previous average results. These higher than average results are attributable to three factors associated with this sampling event: 1) there was disturbed soil in the immediate area in which the water samples were collected, resulting in a higher than normal level of suspended solids in the samples; 2) the storm event was very intense, which exacerbated suspension of solids in the disturbed soils; and 3) the samples were collected as a single grab sample at the beginning of storm event when water quality levels are at their worst (as opposed to flow-weighted samples taken during the entire rain event) -- and as such, the results are not truly representative of water quality during the entire duration of the storm event. The primary isotope resulting in the elevated radionuclide levels in these grab samples was thorium-230 (45 pCi/l and 165 pCi/l at the respective outfall locations); however, these levels are well

below DOE's derived concentration guide (DCG) value for thorium-230 of 300 pCi/l (the DCG is a reference value calculated in DOE Order 5400.5, providing concentrations that would give a member of the general public 100 millirem per year). In addition, as noted in the discussion on sediment sampling, there was no discernable change in contamination levels of downstream sediments.

Radiological Characterization

The following samples were collected at SLDS in support of various daily activities at the site. These activities include construction and maintenance operations at Mallinckrodt, as well as the collection of characterization data to better define boundaries of contamination. Two samples of concrete rubble and seven soil samples were analyzed for total uranium, thorium-232, thorium-230, and radium-226. Three water samples were analyzed for gross alpha and gross beta, and two sediment samples were analyzed for uranium-238, thorium-232, thorium-230, and radium-226. Results from any material that was being disturbed or generated as part of construction and maintenance operations was evaluated against appropriate Department of Energy (DOE) guidelines. If material exceeded these radiological guidelines the contaminated material was collected and stored on-site by DOE personnel to prevent any further spread of contamination at SLDS.

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Formerly Utilized Sites Remedial Action Program (FUSRAP)

ADMINISTRATIVE RECORD

for the St. Louis Site, Missouri



U.S. Department of Energy