

ST. LOUIS FUSRAP OVERSIGHT COMMITTEE

c/o 111 So. Meramec

Clayton, MO 63105

314.615.1635

Summary of Meeting

January 14, 2000

Committee Members Present: Ric Cavanagh, Tom Manning, Sally Price, Jan Titus, Bill Brandes, Jack Frauenhoffer

Other Interested Parties: Lou Dell'Orco, Sharon Cotner, Jim Moos, Eric Gilstrap, JoAnne Wade, Doug Roberts, Bob Boland, Steve Welling, Mike Spomer, Jeff Price, Randy Davis, Dave Wagoner, Barry Power

The following comments are in addition to the handouts provided by USACE at the meeting (see attached).

The meeting was held in two parts: first, a status briefing on the current projects was presented. Second, a briefing on MARSSIM was presented.

Page 4 – Committee will be briefed on Radium pits in February. YTD started in October.

Page 5 – GIFREHC owns Stone Container next door to HISS. Though nothing has been shipped YTD, there should be no problem reaching 12,650 cyds. Envirocare can dump 60- 70 cars per day in the summer. They will have no problem receiving the volume we anticipate.

Page 7 – The diesel fuel that is being pumped out is not contaminated. Right of Entry should be finalized by 2/4. Several Vicinity Properties and other buildings still need to be done.

Page 8 – CX (Center of Excellence) comments received 1/14. Issues will have to be worked out item by item. Ultimately, Washington will have to resolve some issues.

Initially, the objective was a signed ROD by December, 2000: that schedule may need to be revised. USACE can continue to operate for at least another two years under the EE/CA's (but the work ultimately needs to comply with the ROD). A/E to be awarded in May. (SAIC still under contract through June).

We will get at least 50% of the \$7.357 million requested (possibly 100%).

At the conclusion of the briefing, discussion was held about a possible date for a meeting with DOE Long Term Stewardship staff from Grand Junction, Colorado (who will be responsible for drafting and implementing a Long Term Stewardship Plan for St. Louis FUSRAP sites per the MOU between DOE and USACE). The meeting was ultimately held January 27, 2000. Content will be discussed at the February 11, Committee meeting.

MARSSIM

Page 10 – The Multi-Agency Radiation Survey and Site Investigation Manual was issued in December, 1997. It is a better approach to conducting surveys on final status radiological compliance with dose or risk-based standards than approaches previously used by DOE.

Page 11 – Scoping (sampling and analysis of potential content). Verification (if an outside agency comes in to double check (eg. MDNR).

Page 12 – DCGL(emc): hot spot criteria, averages out to meet standard.

Page 14 – Null hypothesis: have to prove that it is clean.

Page 15 - Class 1(must excavate); Class 2 (may excavate, eg. VP's); Class 3 (no excavation)

Page 18 – DQO: Data Quality Objectives. Type 1 error (false positive – regulator error); Type 2 error (false negative – contractor's error, the dug more than needed).

Page 21 – This is an example from Plant 2

Page 22 – Walk over shows potential hot spots

Page 25 – SOR: sum of ratios

NEXT MEETING:

Friday, February 11, 2000

11:30 am

Trailers on Latty Ave.

Will include a Radium Pits briefing and lab tour.



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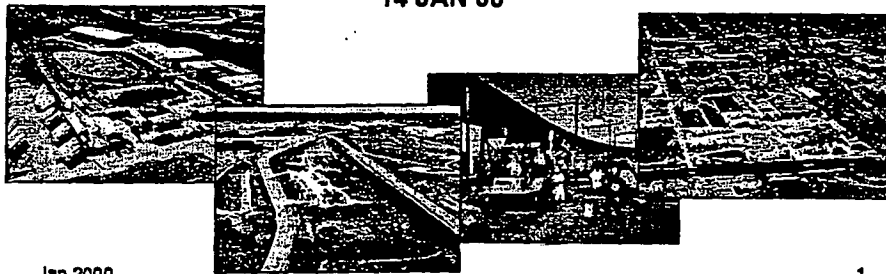
FUSRAP



Gateway to Excellence

St. Louis Oversight Committee Meeting Corps Update

14 JAN 00



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1



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Agenda



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- **Mississippi Valley Division**
- **Progress Report**
- **MARSSIM**
- **Community Interactions**
- **Taskers**
- **Questions**

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2

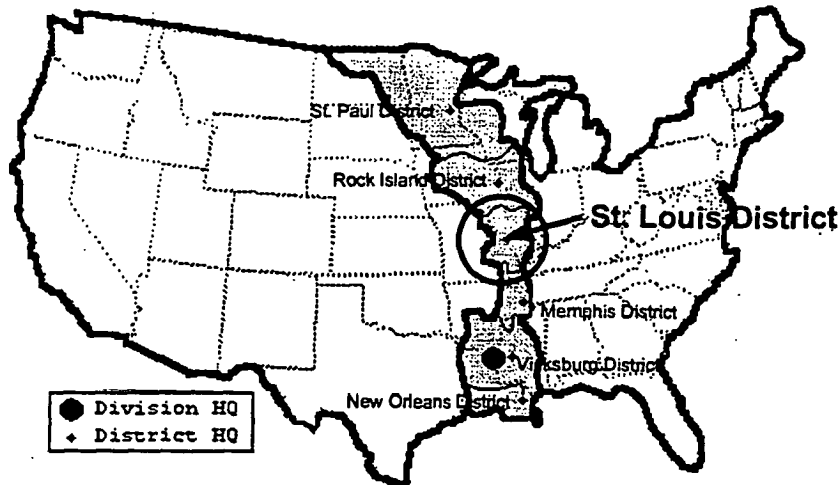


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Mississippi Valley Division



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3



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Progress Report St. Louis Airport Site (SLAPS)



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- **Remedial Design**
 - Radium Pits - Rev B (90%) Sent to Regulators on 10 JAN
 - Brief to Regulators on plan was held 13 JAN
- **Construction Progress**
 - Backfilling of soil from the East End continues
 - 6,000 cyds shipped to date / 40,000 scheduled
 - Stone and Webster continuing shipment of asbestos
 - 964 of 1,500 cyds shipped to date
- **North Ditch regrading is ongoing - 90% complete**
- **Rail Shipments off SLAPS and Eva**
 - 88 gondola railcars & 64 intermodals shipped to date in FY 00 (6,000 cyds)
- **Radium Pits - Remediation to begin in MAR 00**

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4



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Progress Report Hazelwood Interim Storage Site (HISS)/Latty Avenue



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- **HISS Eastern & Railspur Spoils Pile Removal (12,650 cy total).**
 - **Contractor on board for Eastern Piles**
 - Notice To Proceed issued 7 JAN 00, 150 day contract
 - Contractor & CoE resolved bonding issues & modified contract
 - CoE continues to resolve GIFREHC issues
 - FY00 removal is 0 cyds to date
 - **Supplementary Pile Plans and Specifications due 1 MAR**

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5



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Progress Report SLAPS Vicinity Properties



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- **Lab occupied and operational at SUPERVALU (VP38) property**
 - Punch list items remain for contractor to address
- **VP38 (Supervalu) remediation scheduled - 1 MAR start (1,500 cyds)**
- **Remediation strategy**
 - Completed internal review of draft prioritization plan, currently incorporating internal comments

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6



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Progress Report St. Louis Downtown Site (SLDS)



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- **IT Corp. design activities**
 - **Plant 1 Remedial Design completed 9 DEC**
 - Expected volume is 1,500 cyds
 - Subsurface remediation & sheet piling scheduled to start 28 FEB 00
 - **Plant 6E/ 6E1/2 90% Design to MVS 15 DEC**
 - Rev B submission due 1 FEB 00
- **IT Corp. remediation efforts**
 - **Plant 2 began on 6 JAN with slab break up. Subsurface excavation ongoing (8,500) - 95% complete.**
 - Phase I remediation completed 3 DEC - 70% backfilled
 - Phase II (Remediation of remainder of excavation) began 6 DEC and is expected to be complete 21 JAN 00 - 5,500 cyds are affected
 - **Contractor currently remediating the final hotspot in Plant 2**
 - Diesel fuel in final hotspot not MED/AEC related
 - **2,100 cyds shipped this FY (28 railcars) / 9,600 scheduled**
 - **Right of Entry renewal with MI going slowly**

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7



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Progress Report Other Issues



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- **North County Feasibility Study/ Proposed Plan**
 - FS/PP comments received from HTRW-CX 1 NOV
 - Issued relevant portions to regulators on 11 NOV & 23 DEC
 - Brief to MDNR Director and staff was held 3 JAN
 - Formal release for regulator review has not occurred
 - CoE awaiting HTRW-CX Office of Counsel comments
 - USEPA Remedy Review Board was held 10 JAN 00
- **Site A/E Contract - Currently evaluating proposals**
- **Requested additional capability funding from HQUSACE, \$7.357 million**
 - Expect receipt of funds by 15 FEB, funds were requested for all sites
 - Funding is necessary to execute our FY00 program
- **DoE Program POC's (HQ level) provided by HQUSACE**
 - No site contact to date

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8



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Final Status Surveys

MARSSIM Approach (Non-parametric Statistics)

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9



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MARSSIM

◆ Multi-Agency Radiation Survey and Site Investigation Manual

- Provides a nationally consistent consensus approach to conducting surveys
- Specifically addresses "surface soil final status radiological surveys for demonstrating compliance with dose or risk-based standards"

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10



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MARSSIM



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◆ Types of Surveys

- Scoping
- Characterization
- Remedial Action Support
- *Final Status*
- Verification

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11



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MARSSIM



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◆ Terminology

- DCGL_W - (derived concentration guideline level) A derived, radionuclide-specific activity concentration within a survey unit corresponding to the release criterion.
- DCGL_{EMC} - Concentration level for a specific areal size that corresponds to the release criteria; value increases as areal size decreases

$$DCGL_{EMC} = DCGL_W \times \text{Area Factor}$$

- WRS Test - Wilcoxon Rank Sum test; a nonparametric statistical test used to determine compliance with the release criterion when the contaminant of concern is present in background.

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12



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MARSSIM Summary



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- ◆ Determine area classification and size
- ◆ Determine number of data points
 - Based on DCGL, uncertainty factors, standard deviation of reference area/survey unit, Type I and Type II errors
- ◆ Analyze for areas of elevated activity (gamma walkover survey)
- ◆ Determine sample locations
- ◆ Collect soil samples
- ◆ Evaluate soil sample results using WRS test

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13



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MARSSIM Data Quality Objective



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Null Hypothesis

H_0 = residual radioactivity exceeds the release criteria

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MARSSIM

Classification of Survey Units



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- ◆ **Class 1 Area**
 - Areas having a potential for contamination that exceeds guidelines ($DCGL_W$ and/or $DCGL_{EMC}$)
- ◆ **Class 2 Area**
 - Areas having a potential for contamination, but contamination is unlikely to exceed the average $DCGL_W$
- ◆ **Class 3 Area**
 - Areas expected to have little or no contamination in excess of background

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15



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MARSSIM Survey Units



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- ◆ **Fundamental compliance unit for final status surveys**
- ◆ **Each survey unit includes only one classification**
- ◆ **Recommended default minimum and maximum sizes**
- ◆ **Survey unit size consistent with dose assessments**

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16



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MARSSIM Suggested Survey Unit Size



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Classification	Suggested Area
Class 1 Structures Land Areas	up to 100 m ² up to 2,000 m ²
Class 2 Structures Land Areas	100 to 1,000 m ² 2,000 to 10,000 m ²
Class 3 Structures Land Areas	no limit no limit

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17



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MARSSIM Survey Design



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- ◆ DQOs
- ◆ WRS vs. Sign Test
- ◆ Type I and Type II Errors
- ◆ Calculate Number of Samples Required
- ◆ Determine if Additional Samples Required to Detect Elevated Measurements
- ◆ Establish Sample Point Locations

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18



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FUSRAP Final Status Surveys Data Quality Objectives



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◆ Decision Errors for Hypothesis Testing

– Type I (Alpha)

- FUSRAP Sites will not exceed an average of 0.05 with an absolute limit for any area of 0.075.
- Provides a confidence level of 95% that the statistical test will not incorrectly determine that a surveyed area satisfies criteria when, in fact, it does not

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19



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FUSRAP Final Status Surveys Data Quality Objectives



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◆ Decision Errors for Hypothesis Testing

– Type II (Beta)

- FUSRAP Sites range from 0.05 to 0.20
- Provides a confidence level range of 80% to 95% that the statistical test will not incorrectly determine that a surveyed area does not satisfy criteria when, in fact, it does
- This provides a 5%-20% chance of incorrectly failing to release the survey unit

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20

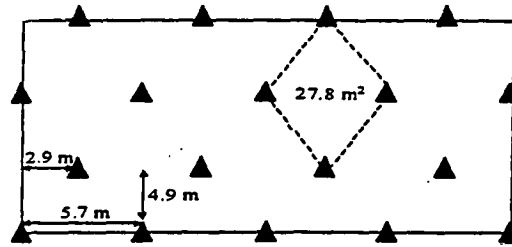


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SLDS Survey Design Sample Point Locations Example



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21



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FUSRAP Final Status Surveys

Sequence of Survey Activities



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- ◆ Surface Scanning (Gamma Walkover Survey)
- ◆ Soil Sampling
- ◆ Data Evaluation

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FUSRAP Final Status Surveys Sample Collection Protocols



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- ◆ Biased (hot spot) samples collected by Final Status Survey Contractor
- ◆ Systematic Samples collected with direct USACE oversight by RA Contractor
- ◆ Samples collected in accordance with FUSRAP SAG
- ◆ QA/QC Samples
 - 1 in 20 locations
 - Collect 3 samples
 - Actual Sample
 - Duplicate Sample
 - Split Sample (to be analyzed by separate laboratory)

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23



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FUSRAP Final Status Surveys Sample Analysis



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- | | |
|---|---|
| <ul style="list-style-type: none">◆ Gamma Spec Analysis<ul style="list-style-type: none">– Ra-226– Ac-227– Ra-228– Pa-231– U-238– Other radioisotopes that can be identified | <ul style="list-style-type: none">◆ Alpha Spec Analysis<ul style="list-style-type: none">– Th-228– Th-230– Th-232 |
|---|---|

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24



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FUSRAP Final Status Surveys Preliminary MARSSIM Assessment



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◆ 6-Step Process

1. Evaluate is enough samples were collected based on actual survey unit data after remediation.
2. Calculate SOR for each sample analyzed.
3. Evaluate areas of elevated activity against elevated measurements criteria (EMC).
4. Calculate the weighted average of the data for the area to determine if below the $DCGL_w$ (i.e., $SOR < 1.0$).
5. Perform the WRS test.
6. Calculate the residual dose/risk of the survey unit.

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25



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Community Interactions



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- Recent Events
 - None
- Upcoming Events
 - Update of Community Relations Plan - issue in FEB 00
 - Newsletter to be published in FEB 00

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26



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Taskers



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- Old Taskers
 - Provide a laboratory tour for the Oversight Committee in JAN 00 (Not Complete - Rescheduled for FEB 00)
- New Taskers

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27



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Questions



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Questions? Questions? Questions?
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28

Data Entry Form

{Technical Managers fill in C through G. Document Managers fill in the rest}

A. Document ID Number: Will be assigned by database 00-249 B. Further Information Required?: ☐

C. Primary Category: (Choose One):

USACE ☐
~~St. Louis Sites~~ ☒
Downtown ☐
North County ☐
Madison Site ☐
Inaccessible Areas ☐
PRP ☐
Oversight Committee ☒

D. Site (Optional):

SLDS VP ☐
Mallinckrodt ☐
SLAPS ☐
SLAPS VP ☐
CWC ☐
HISS ☐
Madison ☐

E. Area (Optional): _____

F. Primary Document Type (Choose One):

Site Management Records ☒
Removal Response ☐
Remedial Investigation ☐
Feasibility Study ☐
Record of Decision ☐
Program Management ☐

Remedial Design ☐
Remedial Action ☐
Public Affairs/Community Relations ☒
Congressional Relations ☐
Freedom of Information Act Requests ☐
Real Estate ☐

G. Secondary Document Type (see back of form): Public meeting minutes Correspondence

H. Bechtel Number: _____

I. SAIC Number: _____

J. MARKS Number(Choose One): FN: 1110-1-8100e ☐ FN: 1110-1-8100f ☐ FN: 1110-1-8100g ☒

K. Subject: Summary of meeting minutes from 1/14/00

L. Title: _____

M. Author: Richard Casarano N. Author's Company: Oversight Chairman

O. Recipient: Committee members P. Recipient's Company: _____

Q. Version (Choose One): Draft ☐

Final ☒

R. Date: 11-00 2/01/00

S. Include in the ARF? ☐

T. Include in the AR? ☐

U. Filed as Confidential/Privileged? ☐

V. To Be Microfilmed? ☐

W. Document Format (Choose one):

Paper ☒
Electronic ☐

Photographic ☐
Audio-visual ☐

Cartographic/Oversize ☐
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X. Physical Location (Choose One):

Central Files ☒
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Y. Filed in AR Volume Number: _____

Z. Associated with Document(s): _____

