



United States
Environmental Protection
Agency

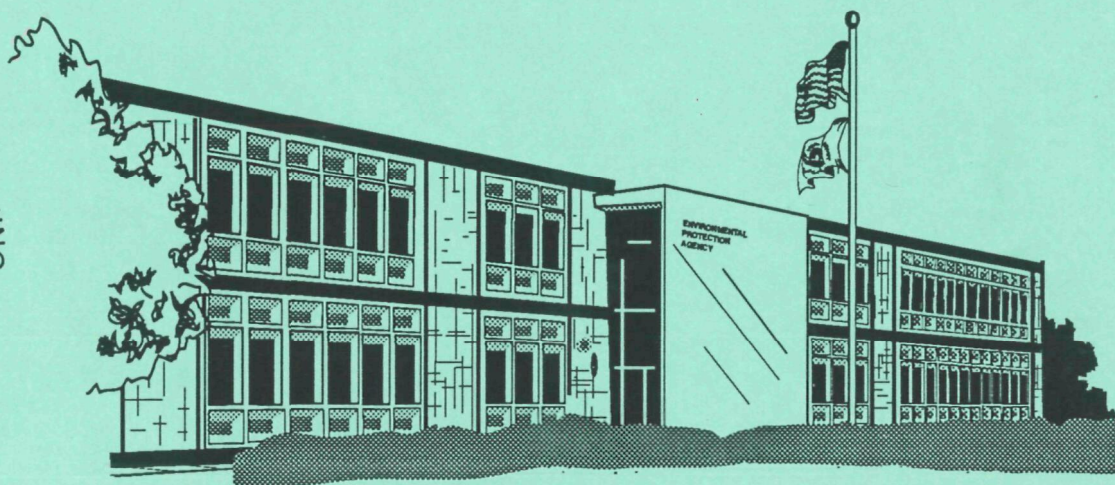
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September 1995

National Exposure Research Laboratory
Characterization Research
Division-Las Vegas
Superfund/RCRA Technology
Support Project

**Technology Support Center
for Monitoring and Site
Characterization FY95
Fourth Quarterly Report**

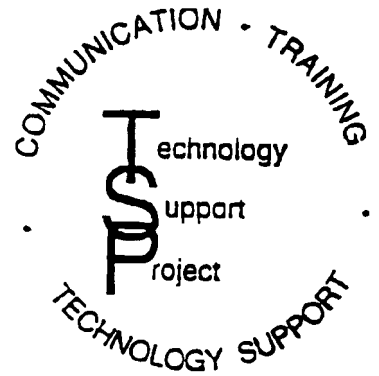
July - September 1995



U.S. Environmental Protection Agency, Characterization Research Division - Las Vegas



Superfund/RCRA
Technology
Support Project



**CRD-LV
TECHNOLOGY SUPPORT CENTER
MONITORING AND SITE
CHARACTERIZATION
FY95 FOURTH QUARTERLY REPORT
JULY-SEPTEMBER 1995**

September 30, 1995

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SUPERFUND

REGION 1

- Project Name: W.R. Grace Superfund Site
Site: Grace, W.R. SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:

Requested by: Lynn Jennings (617) 573-9634

Lead Scientist: A.K. Singh (702) 435-3731

Start Date: May 1995

Expected Completion Date: September 1995

Revised Completion Date: January 1996

Estimated Budget: \$5,000

Revised Budget: \$

Major Contaminants: Organics

Total Expenditures: \$3,988

Total FY95 Expenditures: \$3,988

Total 4th Qtr. Expenditures: \$0

The Region I Remedial Project Manager (RPM) requested that the Characterization Research Division Las Vegas (CRD-LV), Technology Support Center (TSC) examine the use of a formula for an **upper one-sided $100(1-\alpha)$ percent confidence limit**, for assessing site sampling/monitoring data. Three data sets were sent to the TSC for assessment. The following statistical tests were performed on the data sets:

- Summary statistics and sample histograms of concentration data and log-transformed concentration data were computed using the software package GEO-EAS.
- Kolmogorov-Smirnov test was used to test normality and log-normality of the data using the software package SCOUT.
- Tests for outliers were performed on the data using the software SCOUT.

A report that provided the statistical assessment and recommendations titled, "Statistical Analysis of Battery Separation Lagoon Post Excavation Sampling Data for W.R. Grace Superfund Site" was provided to the RPM. Additional review of site documents is anticipated.

- Project Name: F. O'Connor Company
Site: O'Connor, F. SF Site
Site ID:

Job Order No: 224 01109

Type-Lead:

Requested by: Ross Gilleland (617) 573-9662

Lead Scientist: A.K. Singh (702) 435-3731

Start Date: February 1995

Expected Completion Date: September 1995

Revised Completion Date: February 1996

Estimated Budget: \$10,000
Revised Budget: \$
Major Contaminants: PCBs

Total Expenditures: \$ 6,480
Total FY95 Expenditures: \$ 6,480
Total 4th Qtr. Expenditures: \$ 1,020

A geostatistical analysis of the distribution of soil contaminated with polychlorinated biphenyls (PCBs) was conducted to develop the sampling plan for the F. O'Connor Superfund Site in Augusta, Maine. The analysis was designed to support attainment of target cleanup goals as specified in the U.S. Environmental Protection Agency (EPA) Record of Decision (ROD) for the Site. Over 450 soil samples were collected during Remedial Investigation and pre-design phases of the study. Chemical analyses on these samples were performed for PCBs using both laboratory and field screening methods. Samples were initially collected at grid locations, while subsequent samples were collected to define areas of higher concentrations and to determine the clean boundaries of the site.

Analysis of the comprehensive data set as well as data subsets indicated a log-normal distribution of the data. Data subsets were developed based on knowledge of waste disposal and contaminant distributions. Variogram analysis was conducted using indicator parameters corresponding to the ROD specified threshold limits of 1 and 10 ppm PCBs.

The RPM has requested that the CRD-LV TSC evaluate the geostatistical model used by the PRP, the use of the geometric mean to establish compliance with the cleanup criteria, and to comment on the use of composite samples. CRD-LV personnel reviewed the provided data and submitted an initial response. Additional reviews of the utilized statistical procedures are anticipated.

- Project Name: Pine Street Canal
Site: Pine Street Canal SF Site
Site ID: 01NHG1

Job Order No: 224 10196

Type-Lead:
Requested by: Ross Gilleland (617) 573-5766
Lead Scientist: M. Silverstein (702) 897-3291/D. Jackson (702)

Start Date: July 1994
Expected Completion Date: March 1996
Revised Completion Date:

Estimated Budget: \$25,000
Revised Budget: \$40,000
Major Contaminants: PAHs

Total Expenditures: \$59,454, PC&B \$1900
Total FY95 Expenditures: \$43,030, PC&B \$1400
Total 4th Qtr. Expenditures: \$785, PC&B \$300

The Region 1 Project Officer requested that approaches be examined to determine whether the Pine Street Canal site characterization techniques are addressed sufficiently: A sampling/monitoring approach for confirming the vertical and lateral extent of soil/sediment contamination, procedures for identifying levels of soil, sediment, and possibly water contamination, the quality assurance/quality control (QA/QC) plan, the S&A plan and all other methods being proposed to fully characterize the site for remedial purposes. In addition, an assessment of data needs necessary to satisfy the characterization objectives was required. This data assessment involved data interpretation and recommendations involving statistical and other tests necessary for making decisions concerning the extent of site contaminants.

To characterize site contaminants, the selection of an appropriate immunoassay kit was an important factor in successfully completing the site characterization objectives. Addressing this effort required CRD-LV scientist(s) to identify critical elements that must be implemented by the PRPs to validate the

immunoassay technology. In addition, TSC scientist(s) will be required to assess the validation process/procedures and the data obtained.

Following the review and acceptance of the Work Plan, providing on-site oversight and field audit for the "Preliminary Soil/Sediment Screening/Sampling" of the Phase I ARI activities conducted by the PRPs was required. Field audit oversight included observing and documenting the field activities, and analyzing split samples using fix-lab analysis. During this quarter numerous reviews of site documents were completed. Split samples were collected and sent to CRD-LV for analysis. The analysis was completed during this quarter. In addition, a field on-site audit was completed. The results of the audit with suggestions and recommendations were sent to the RPM. The initial draft of the data validation report was provided to the RPM. The CRD-LV TSC provided additional recommendations and comments pertaining to the data validation report.

- Project Name: Pownal Tannery Sample Analysis
Site: Pownal Tannery SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:
Requested by: Terrance Connelly (617) 573-9638
Lead Scientist: Neal Amick (702) 897-3231

Start Date: May 1995
Expected Completion Date: September 1995
Revised Completion Date: December 1995

Estimated Budget: \$15,000	Total Expenditures: \$142, PC&B \$400
Revised Budget: \$	Total FY95 Expenditures: \$142, PC&B \$400
Major Contaminants: Dioxins/Furans	Total 4th Qtr. Expenditures: \$0, PC&B \$400

The Pownal Tannery Site is a pre-NPL Site that has been approved for inclusion in the SACM process. A removal action in 1993 documented the presence of metals, volatile and semi-volatile organics, and dioxins/furans. Developing a statistical evaluation of the risk posed by site contaminants required the analysis of a large number of samples. Obtaining the required data base required a cost and time effective analytical procedure. The RPM has requested the use of the Field-Portable Scanning Spectrofluorometer (FPSS) to measure dioxins/furans levels in site samples. To determine if the FPSS is a suitable measurement method, the RPM has sent site samples to the TSC for FPSS analysis. The analyses of these samples was completed during the third quarter of FY95. A data analysis report was provided to the RPM. Based on the results, it was determined that the FPSS could not be used at this site.

- Project Name: Western Sand & Gravel Data Review
Site: Western Sand & Gravel SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:
Requested by: Al Klinger (617) 573-9662
Lead Scientist: A.K. Singh (702) 435-3731

Start Date: June 1995
Expected Completion Date: September 1995
Revised Completion Date: December 1995

Estimated Budget: \$5,000
Revised Budget: \$
Major Contaminants: Organics

Total Expenditures: \$1,424
Total FY95 Expenditures: \$1,424
Total 4th Qtr. Expenditures: \$0

A number of years ago, the CRD-LV TSC provided statistical support to the RPM pertaining to the Wilcoxon Test to compare theoretical versus observed data. This effort was in support of completing the ROD. Relative to the Wilcoxon Test, the RPM provided the TSC with some site data (benzene levels in groundwater) for assessing "Outliers". The TSC provided the RPM with an assessment of the data that included:

- An assessment pertaining to the normal data distribution, and
- Statistical tests for Outliers using the following two options: (a) classical, and (b) Huber's Robust Procedure.

In addition to the statistical assessment, recommendations and conclusions pertaining to the data analysis were provided. Additional reviews of site documents is anticipated.

REGION 2

- Project Name: Diamond Alkali
Site: Diamond Alkali Site SF Site
Site ID:

Job Order No: 224 10179

Type-Lead: Fund
Requested by: Lance Richman (214) 264-6695
Lead Scientist: A.K. Singh (702) 435-3731, J.R. Donnelly

Start Date: July 1993
Expected Completion Date: February 1994
Revised Completion Date: January 1996

Estimated Budget: \$30,000
Revised Budget: \$
Major Contaminants: Organics, PCBs

Total Expenditures: \$27,507, PC&B \$500
Total FY95 Expenditures: \$1,325, PC&B \$500
Total 4th Qtr. Expenditures: \$0, PC&B \$500

The RPM requested that the TSC provide a quality assurance and RI review. In addition, a review of the suggested monitoring design approach was requested. CRD-LV provided a report that addressed QA aspects and provided a number of suggestions that would enhance the identity of the geographical distribution of PCBs in sediments in the Passaic River. CRD-LV has assisted the RPM in negotiations with the PRPs and assisted in the development of a definitive monitoring design approach. CRD-LV scientists received the final S&A Plan developed by the PRPs. Comments and suggestions pertaining to the final S&A Plan were provided to the RPM. Recommendations and comments pertaining to suggested statistical tests were provided to the RPM. A request to assess available dioxin analytical methods was received. Recommended analytical procedures were provided to the Region. The CRD-LV TSC provided additional dioxin analysis recommendations to the RPM.

- **Project Name:** Mercury Refining Data Sample Analysis
Site: Mercury Refining SF Site
Site ID:

Job Order No: 226 10112

Type-Lead:

Requested by: Thomas Taccone (212) 264-9128

Lead Scientist: Dave Dobb (702) 897-3273

Start Date: June 1995

Expected Completion Date: September 1995

Revised Completion Date: December 1995

Estimated Budget: \$10,000

Revised Budget: \$13,000

Major Contaminants: Mercury

Total Expenditures: \$11,441

Total FY95 Expenditures: \$11,441

Total 4th Qtr. Expenditures: \$9,902

The Region II RPM requested that the CRD-LV TSC analyze about ten (10) soil samples collected from the Mercury Refining Site for individual mercury species. The determination of various mercury species in these samples will allow the RPM and the State of New Jersey to determine the risk posed by bioavailable species. The following mercury species will be analyzed: organic (e.g. CH₃HgCl); water soluble (e.g. HgCl); and soluble (i.e. HgO and HgSO₄); metallic (HgO and amalgams); and mercury sulfide (HgS).

The samples were received and are currently being analyzed. A final report identifying the results was provided to the RPM during the fourth quarter FY95.

- **Project Name:** Warwick Landfill
Site: Warwick Landfill SF Site
Site ID: NYD980506679

Job Order No: 226-10106

Type-Lead: Remedial

Requested by: Damion Duda (212) 264-9589

Lead Scientist: Steve Pyle (702) 798-2529

Start Date: January 1994

Expected Completion Date: September 1993

Revised Completion Date: December 1995

Estimated Budget: \$10,000

Revised Budget: \$

Major Contaminants: Organics

Total Expenditures: \$ 6,149, PC&B \$6,100

Total FY95 Expenditures: \$ 6,149, PC&B \$3,200

Total 4th Qtr. Expenditures: \$ 0, PC&B \$300

The RPM requested that CRD-LV provide technical assistance in finding an analytical method to analyze cellosolves in environmental samples. The CRD-LV ASB tested the feasibility of using a quick-turn-around method using direct aqueous injection (DAI) by analyzing five test compounds. The results of these tests were provided to the RPM. The TSC has requested from the RPM samples from the site be sent to CRD-LV to definitively test the DAI method. The Region sent samples to CRD-LV for analysis. The samples were analyzed, and a report titled, "Report on Warwick Sample Analysis Using Direct Aqueous Injection GC/MS Methodology" was sent to the RPM. The RPM requested additional explanation of the reported results. Additional explanations were provided to the Region.

Aqueous Injection GC/MS Methodology" was sent to the RPM. The RPM requested additional explanation of the reported results. Additional explanations were provided to the Region.

REGION 3

- Project Name: Aberdeen Proving Ground
Site: Aberdeen Proving Ground SF Site
Site ID:

Job Order No: 226 01115

Type-Lead:

Requested by: Dawn Ioven (215) 597-1309

Lead Scientist: A. K. Singh (702) 435-3731

Start Date: July 1995

Expected Completion Date: September 1995

Revised Completion Date: February 1996

Estimated Budget: \$20,000

Revised Budget: \$

Major Contaminants: Organics

Total Expenditures: \$7,570

Total FY95 Expenditures: \$7,570

Total 4th Qtr. Expenditures: \$7,570

The Aberdeen Proving Ground (APG) occupies 79,000 acres of land and water near the head of the Chesapeake Bay. The APG consists of two areas that are listed separately on the NPL: the Edgewood area and the Michaelsville area. The Edgewood area is 13,000 acres and includes Gunpowder Neck, Pooles Island, Carroll Island, and Graces Quarters.

Preliminary on-site groundwater sampling has identified various metals, phosphorus, and volatile organic compounds (VOCs) including chloroform and benzene. Preliminary on-site soil contamination sampling has identified various VOCs, metals, and unexploded ordnance in surface and subsurface soil.

To address some risk assessment issues, the RPM requested that the CRD-LV TSC review the report, *"Installation Restoration Program Carroll Island/Graces Quarters, Aberdeen Proving Ground Risk Assessment Framework, Draft, May 1995."* Based upon the data in the report, the RPM requested that the CRD-LV TSC address the following questions:

- Is it appropriate to use non-parametric methods to determine site-wide concentrations when contaminants were detected in <50% of samples?
- If yes, how should non-detects be handled?
- Is it appropriate to use the UTL to define background concentrations in inorganics (for comparison to on-site levels)?

The TSC provided a report to the RPM that addressed the above three issues. Additional support is anticipated.

- Project Name: Atlantic Wood Industries (AWI) Superfund Site
Site: Atlantic Wood Industries SF Site
Site ID:

Job Order No: 226 01110

Type-Lead:

Requested by: David J. Iacono (215) 597-8485

Lead Scientist: Neal Amick (702) 897-3231

Start Date: May 1995

Expected Completion Date: September 1995

Revised Completion Date: December 1995

Estimated Budget: \$20,000

Revised Budget: \$

Major Contaminants: Organics

Total Expenditures: \$9,545, PC&B \$500

Total FY95 Expenditures: \$9,545, PC&B 500

Total 4th Qtr. Expenditures: \$1,975, PC&B 500

The Atlantic Wood Industries (AWI) PRP's are planning to conduct an EPA-approved removal action that requires the excavation of about 520 cubic yards of contaminated sediments. PAHs are the primary contaminants in the sediment(s). The RPM was required to make decisions pertaining to the boundaries (width and depth) of the excavation as a function of the cleanup standards.

The RPM requested that the CRD-LV TSC assist in making on-site measurements of PAHs using the Field-Portable Scanning Spectrofluorometer (FPSS) during the removal phase. In support of this request on-site FPSS measurements were made. The data obtained from the FPSS was used to identify levels and the distribution of PAHs during the removal. A report identifying the measurements was provided to the RPM.

- Project Name: Elrama School Superfund Site
Site: Elrama School SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:

Requested by: Glen S. Lapsley (215) 597-6684

Lead Scientist: A.K. Singh (702) 435-3731

Start Date: July 1995

Expected Completion Date: September 1995

Revised Completion Date: January 1996

Estimated Budget: \$12,000

Revised Budget: \$

Major Contaminants: Lead

Total Expenditures: \$2,866

Total FY95 Expenditures: \$2,866

Total 4th Qtr. Expenditures: \$2,866

This site is located in Elrama Township, Washington County, Pennsylvania. Disposal of waste, including filter cake residue, solvents, and acid clay catalysts from the production of hydrocarbon resins, has occurred in a ravine located on the site.

Currently, the EPA Region III Removal Enforcement Section is overseeing actions taken at the site by the Potentially Responsible Party (PRP), in accordance with an EPA Administrative Order. The PRP has submitted a risk assessment based on analysis of samples taken of material which remains on-site. This assessment will be used to determine if further excavation of waste material is necessary.

The current agreement is that the representative concentration (statistically determined as 95% of the U.C.L. on the mean) of the chemicals remaining in each excavated area shall meet the target risks specified by EPA.

The CRD-LV TSC was requested by the OSC to evaluate the statistical tests and procedures that the PRP's have suggested to use for calculating and identifying soil cleanup concentrations. The CRD-LV TSC provided a number of suggestions and recommendations pertaining to the PRP's suggested approaches.

- Project Name: Fort George Meade
Site: Fort George Meade SF Site
Site ID:

Job Order No: 224 10106

Type-Lead:
Requested by: Drew Lausch (215) 597-3161
Lead Scientist: A.K. Singh (702) 435-3731

Start Date: January 1994
Expected Completion Date: April 1995
Revised Completion Date: September 1995

Estimated Budget: \$6,000
Revised Budget: \$
Major Contaminants: Inorganics/Organics

Total Expenditures: \$4,785, PC&B \$600
Total FY95 Expenditures: PC&B \$600
Total 4th Qtr. Expenditures: PC&B \$200

The objective of this Region III request is to determine the extent of which two completed UXO surveys have attained a more stringent detection/removal requirement specified in the DOD-DOI transfer agreement. In order to ascertain the effectiveness of the previous UXO surveys, DOD outlined the following technical approach: (1) develop a UXO sampling plan; (2) conduct a UXO survey; (3) perform a statistical analysis on data obtained from the UXO survey and (4) evaluate potential impacts to human health from UXO by employing a probabilistic risk assessment. The TSC provided an initial assessment of the past surveys. Based on the TSC comments and recommendations, a meeting with the RPM, DOD, and CRD-LV scientist(s) was held at CRD-LV. The TSC is involved with the statistical design approach and data assessment. Additional design approach reviews and geostatistical data assessments were provided to the RPM.

- Project Name: Metcoa Radiation Superfund Site
Site: Metcoa SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:
Requested by: Jeffery Dodd (303) 234-0254, Kathleen Root (215) 597-8920
Lead Scientist: A.K. Singh (702) 435-3731

Start Date: August 1995
Expected Completion Date: March 1996
Revised Completion Date:

Estimated Budget: \$20,000
Revised Budget: \$
Major Contaminants:

Total Expenditures: \$7,593
Total FY95 Expenditures: \$7,593
Total 3rd Qtr. Expenditures: \$7,593

The Metcoa site located in Pulaski, Pennsylvania is contaminated with a number of inorganic contaminants including nickel, cadmium, and thorium. The PRP's at this site have suggested that a "CRG" statistical data assessment approach is appropriate to use for determining if soil remedial actions are necessary. The OSC has requested that the CRD-LV TSC evaluate the "CRG" approach. CRD-LV TSC personnel have provided a number of assessments of the Metcoa data, provided a preliminary geostatistical analysis, participated in numerous conference calls with the Department of Justice, Regional Council, the OSC and the PRP's, and is currently evaluating the "CRG" approach.

- Project Name: Morgantown Ordnance Works NPL Superfund Site
Site: Morgantown Ordnance SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:
Requested by: Melissa Whittington (215) 597-1286
Lead Scientist: A.K. Singh (702) 435-3731

Start Date: April 1995
Expected Completion Date: September 1995
Revised Completion Date: December 1995

Estimated Budget: \$7,000
Revised Budget: \$
Major Contaminants: Organics

Total Expenditures: \$4,130
Total FY95 Expenditures: \$4,130
Total 4th Qtr. Expenditures: \$0

The Region III RPM requested assistance in the proper use of statistical tests pertaining to a biotreatability remedial study at the Morgantown site. The following issues were identified by the RPM:

- For a T-Test, when is the Paired T-Test used?
- When is a 2-tailed test used?
- When making the comparison using a T-Test, does n (number) have to be the same?, and
- When is it appropriate to pool data sets?

The TSC provided the RPM with the report titled, "Comments on Statistical Tests Pertaining to a Biotreatability Remedial Study for Morgantown Ordnance Works NPL Superfund Site." The questions asked by the RPM were addressed in the report. In addition, statistical calculations using site data were provided along with suggested recommendations.

TSC personnel participated in discussions with the PRP's pertaining to the use of suggested statistical tests. Additional review of the PRP's suggested approaches is anticipated.

- Project Name: Naval Air Warfare Center (NAWC)
Site: Naval Air Warfare SF Site
Site ID:

Job Order No: 224 01102

Type-Lead:

Requested by: Darius Ostrauskas (215) 597-0549

Lead Scientist: D. Jackson/Glen Carpenter (208) 526-4166

Start Date: November 1994

Expected Completion Date: September 1995

Revised Completion Date: January 1996

Estimated Budget: \$10,000

Revised Budget: \$

Major Contaminants: Organics

Total Expenditures: \$7,200

Total FY95 Expenditures: \$7,200

Total 4th Qtr. Expenditures: \$320

The TSC was requested by the Region III RPM to examine suggested site characterization approaches to determine if these approaches would be adequate to define the levels and geographical extent of site contaminants. The initial effort of this review focused on the following two areas: The *first* was to review and comment on the results of the Phase I RI Soil Gas and Geophysical surveys. The *second* was to review and comment on the additional Soil Gas and Geophysical survey work being proposed in the Draft Phase III work plan. Additional efforts may focus on all suggested sampling/monitoring contamination, procedures for identifying levels of soil, sediment, and possible water contamination, the quality assurance/quality control (QA/QC) plan, the S&A plan and all other methods that are being proposed to fully characterize the site for remedial purposes. In addition, an assessment of data needs necessary to satisfy the characterization objectives may be required if past characterization efforts have not adequately characterized the sites contaminants. This data assessment could involve data interpretation and recommendations involving statistical and other tests necessary for making decisions concerning the extent of site contaminants. The design of additional sampling/monitoring approaches may be required.

The TSC completed a review of the Phase I RI Soil-Gas and Geophysical Survey Report. Comments and suggestions were provided to the RPM. Additional data assessments and site document reviews were completed.

- Project Name: Naval Ships Parts Control Center (SPCC) Superfund Site
Site: Naval Ships Control Center SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:

Requested by: Andrew Sochanski (215) 597-3167

Lead Scientist: A.K. Singh (702) 435-3731

Start Date: May 1995

Expected Completion Date: September 1995

Revised Completion Date: March 1996

Estimated Budget: \$8,000
Revised Budget: \$
Major Contaminants: Dioxins

Total Expenditures: \$7,366
Total FY95 Expenditures: \$7,366
Total 4th Qtr. Expenditures: \$3,164

The Region III RPM requested technical assistance in developing a monitoring design for sampling a biopile to determine the levels and distribution of dioxin contamination. The biopile consisting of about 15,000 cubic yards of contaminated soil excavated from burn pits is six (6) feet deep, 240 feet in width and 390 feet long.

The TSC provided the report titled, "Design for Dioxin Sampling - Navy Ships Parts Control Center, Burn Pits (Site 3), Mechanicsburg, PA". This report identifies the number of samples required to characterize the dioxin contamination and also provides various statistical tests that can be used to assess the resultant data. The site has been sampled and the samples analyzed. The CRD-LV TSC will evaluate and assess the resultant data.

- Project Name: Naval Training Center-Bainbridge (NTCB) Superfund Site
Site: Naval Training Center-Bainbridge SF Site
Site ID: Job Order No: 226 10106

Type-Lead:
Requested by: Drew Lausch (215) 597-3161
Lead Scientist: A.K. Singh (702) 435-3731

Start Date: September 1995
Expected Completion Date: March 1996
Revised Completion Date:

Estimated Budget: \$10,000
Revised Budget: \$
Major Contaminants: Asbestos

Total Expenditures: \$0
Total FY95 Expenditures: \$0
Total 3rd Qtr. Expenditures: \$0

The Naval Training Center-Bainbridge (NTCB) occupies approximately 1250 acres of land near Port Deposit, MD and was constructed in 1941 as a World War II training facility. A majority of NTCB was deactivated in 1976, although a portion of this installation was used by the Department of Labor for a job training program until 1990. NTCB is presently owned by the U.S. Navy (EPA ID Number MDD985397256). This federally-owned facility is listed on the Federal Agency Hazardous Waste Compliance Docket, which was established pursuant to Section 120(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA). Consequently, NTCB is subject to evaluation for potential NPL listing pursuant to CERCLA Section 120(d).

The EPA has determined that previous sampling efforts developed by the U.S. Navy have been inadequate in terms of characterizing asbestos contaminated soils. To assist in characterizing site contaminants, the CRD-LV TSC has been requested to review and provide comments on the proposed sampling/monitoring approach.

REGION 4

- **Project Name:** Aberdeen Pesticide Dumps NPL Superfund Site
Site: Aberdeen Pesticide SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:
Requested by: Kay Crane (404) 347-7791 **Extension:** 2079
Lead Scientist: A.K. Singh (702) 435-3731

Start Date: June 1995
Expected Completion Date: September 1995
Revised Completion Date:

Estimated Budget: \$10,000
Revised Budget: \$
Major Contaminants: Organics

Total Expenditures: \$4,890
Total FY95 Expenditures: \$4,890
Total 4th Qtr. Expenditures: \$4,890

The Region IV RPM requested that the CRD-LV TSC review a soil remedial design that was proposed by the PRP's. The design and the statistical tests required to assess cleanup attainment were provided in a "Data Acquisition Report/Preliminary Outline Document and a Design Criteria Report".

The TSC reviewed these documents and provided suggestions and recommendations for improving the suggested approach. The PRP's reviewed the TSC recommendations and requested further explanations. The RPM requested additional reviews of site documents.

- **Project Name:** Ross Metals
Site: Ross Metals SF Site
Site ID:

Job Order No: 222 101104

Type-Lead:
Requested by: Matthew W. Taylor (1-800)962-6216 **extension** 6120
Lead Scientist: Conrad Kuharic

Start Date: November 1994
Expected Completion Date: September 1995
Revised Completion Date: April 1995

Estimated Budget: \$12,000
Revised Budget: \$
Major Contaminants: Lead

Total Expenditures: \$3,371
Total FY95 Expenditures: \$3,371
Total 4th Qtr. Expenditures: \$423

Ross Metals, completed in the First Quarter FY95, was reentered this quarter due to Administrative contract costs.

The TSC was requested by the Regional OSC to assist in conducting an on-site effort to characterize lead contaminated soils. This characterization effort will involve the review of site documents pertaining

to the use of XRF technologies to adequately measure and identify lead levels, and review documents that identify suggested sampling/monitoring approaches and sample preparation methods. This effort will also involve on-site support in instrument calibration and implementation. Following the measurement of site contaminants, assessment of the resulting data will be required. An initial assessment of the analytical methods was made. Comments and suggestions were provided to the RPM.

REGION 5

- Project Name: Allied Chemical/Ironton Coke Superfund Site
Site: Allied Chemical/Ironton Coke SF Site
Site ID:

Job Order No: 226 10106

Type-Lead:

Requested by: Thomas Alcamo (312) 886-7278
Lead Scientist: Neal Amick (702) 897-3231

Start Date: May 1995

Expected Completion Date: September 1995

Revised Completion Date: April 1996

Estimated Budget: \$20,000

Revised Budget: \$

Major Contaminants: PAHs

Total Expenditures: \$142

Total FY95 Expenditures: \$142

Total 4th Qtr. Expenditures: \$0

The Allied Chemical site is a former coke plant that has five lagoons that were used for wastewater treatment and disposal. The site remedy consists of incineration of approximately 122,000 cubic yards of lagoon five wastes along with other contaminated materials having contaminant concentrations greater than 1000 ppm. The primary contaminants are four carcinogenic PAHs (benzo (a) pyrene), chrysene, benz (a) anthracene and dibenz (a,h) anthracene).

The remedial approach requires that the contaminated materials be screened and segregated prior to incineration. To address this screening requirement, the RPM has requested that the CRD-LV TSC provide on-site PAH measurements using the Field Portable Scanning Spectrofluorometer (FPSS).

Because of the uncertainty pertaining to the FPSS's performance in adequately measuring these PAHs, the RPM sent samples from the site to Las Vegas for analysis. The samples were analyzed and the data provided to the RPM. An assessment of the FPSS analytical performance is in process.

- Project Name: Byron Salvage Yard
Site: Byron Salvage SF Site
Site ID:

Job Order No:

Type-Lead:

Requested by: Doug Yeskis (312) 886-0408

Lead Scientist: Alan Crockett (208) 526-0603/Bob Starr INEL

Start Date: March 1995
Expected Completion Date: September 1995
Revised Completion Date: December 1995

Estimated Budget: \$10,000
Revised Budget: \$
Major Contaminants: VOCs

Total Expenditures: \$8,921
Total FY95 Expenditures: \$8,921
Total 4th Qtr. Expenditures: \$0

A Regional Groundwater Forum member requested CRD-LV TSC's assistance in reviewing soil-gas work completed on the Byron Salvage Yard Superfund site. The Byron Salvage Yard site is located in Byron, Illinois in an area with fractured dolomite/limestone overlain by approximately 10 feet of glacial till. The till is mainly composed of sandy loam. The depth to groundwater is approximately 65-70 feet below ground surface.

The specific issues which require TSC's attention are related to whether soil-gas concentrations are related to volatilization from the groundwater, or indicative of a source of VOCs directly from a nearby disposal area. An initial assessment of the data was completed and provided to the Region. Additional review of site documents is anticipated.

- Project Name: North Drive Site/Oak Street Superfund Site
Site: North Drive/Oak Street SF Site
Site ID:

Job Order No: 224 10106

Type-Lead:
Requested by: Rose Ellison (312) 692-7269
Lead Scientist: Laurie Ottmar (702) 897-3473

Start Date: May 1995
Expected Completion Date: September 1995
Revised Completion Date: December 1995

Estimated Budget: \$15,000
Revised Budget: \$
Major Contaminants: Cyanide

Total Expenditures: \$3,154, TSC \$0, Region \$3,154, PC&B \$900
Total FY95 Expenditures: TSC \$0, Region \$3,154, PC&B \$900
Total 4th Qtr. Expenditures: TSC \$0, Region \$259, PC&B \$300

The Regional OSC requested that the CRD-LV TSC evaluate available cyanide analytical methods to determine which method should be used to quantify the amount of cyanide that is bioavailable. Site samples were collected and sent to CRD-LV. Prior to sample analysis, a QAPjP and SOP were approved.

The samples were analyzed and the results provided to the Region in a document titled, "Determination of Total, Weak Acid Dissociable and Bioavailable Cyanide in North Drive/Oak Street Soil Samples." Because of the high leads of cyanide encountered, a number of modifications in the methods used were made. These modifications included reduced sample sizes for distillation and the use of ion chromatography rather than pyridine-barbituric acid derivitization/colorimetry for determination of Total, WAD and bioavailable cyanides.

- Project Name: Petoskey Municipal Well Field
Site: Petoskey Municipal SF Site
Site ID: MID006013049 Job Order No: 224 10197

Type-Lead:

Requested by: Terese Van Donsel (312) 353-6564

Lead Scientist: Joe Donnelly (208) 897-3387/Wayne Sovocool (702) 798-2212

Start Date: October 1994

Expected Completion Date: December 1995

Revised Completion Date: March 1996

Estimated Budget: \$25,000

Total Expenditures: \$1,716

Revised Budget: \$

Total FY95 Expenditures: \$1,716

Major Contaminants: Organics

Total 4th Qtr. Expenditures: \$162

The TSC was requested by the Regional RPM to provide analytical support. A number of site matrices are involved. For example, nearby wells contain volatile organic compounds such as trichloroethylene. In addition, because of the use and disposal of spent solvents and/or paint sludges, the soils are contaminated with high levels of VOCs and SVOCs and elevated levels of metals. A hydraulic fluid release also complicated the contaminant profile of both soils and groundwaters.

Because of the large number of tentatively identified compounds (TICs) in the site matrices, the CRD-LV will receive samples for analysis. The TICs fingerprinting analysis is currently on hold.

REGION 6

- Project Name: RAB Valley Wood Preserving Superfund Site
Site: RAB Valley SF Site
Site ID: Job Order No: 226 01107

Type-Lead:

Requested by: Lon Biasco (214) 665-6673

Lead Scientist: Neal Amick (702) 897-3231

Start Date: December 1994

Expected Completion Date: June 1995

Revised Completion Date: December 1995

Estimated Budget: \$25,000

Total Expenditures: \$30,746

Revised Budget: \$33,000

Total FY95 Expenditures: \$30,746

Major Contaminants: PCP, PAHs, Dioxins

Total 4th Qtr. Expenditures: \$944

The RAB Valley Wood Preserving Site covers approximately 30 acres in a predominately rural area southeast of Panama, LeFlore County, Oklahoma. The site was utilized as a wood preserving facility from the early 1900s until 1976, when the wood treatment operations were abandoned.

Hazardous substances associated with wood preserving operations (i.e., PCP and the PAH components of creosote) have been identified and quantified at locations within the boundaries of the RAB Site. Two site samples (one soil, one water), collected by the Oklahoma State Department of Health in 1989 for a Preliminary Assessment, indicated the presence of 617 mg/Kg (ppm) of lead, and five PAH compounds (total concentration of approximately 52,000 mg/kg) in the soil sample.

The TSC was requested by the RPM to provide Field Screening support utilizing the Field-Portable Scanning Spectrofluorometer (FPSS). The principle contaminants are PCPs, PAHs, and Dioxins.

On-Site FPSS measurements and sampling of site soils and sediments were conducted during the second quarter of 1995. The data obtained from the FPSS will be used to define the levels and distribution of the identified organic contaminants. A report identifying the measurement results was provided to the Region.

- Project Name: South Cavalcade
Site: South Cavalcade SF Site
Site ID: TXD980810386

Job Order No: 226 01106

Type-Lead:

Requested by: Glenn Celerier (214) 665-8523

Lead Scientist: A.K. Singh (702) 435-3731

Start Date: July 1994

Expected Completion Date: January 1995

Revised Completion Date: March 1996

Estimated Budget: \$7,000

Revised Budget: \$35,000

Major Contaminants: Organics

Total Expenditures: \$30,224, PC&B \$300

Total FY95 Expenditures: \$26,484, PC&B \$300

Total 4th Qtr. Expenditures: \$13,913, PC&B \$300

Beazer East, Inc. (BEI) representing the PRP(s) is implementing a Record of Decision issued for the South Cavalcade Superfund Site in Houston, Texas. In July, the RPM requested a review of these statistical methods as described in Section 2.0 and Section 4.0 of *"Draft Confirmational Sampling Plan (Dames & Moore, June 1994, REV 1)"* for the South Cavalcade Superfund Site.

The confirmational sampling plan outlines the overall sampling strategy and specific sampling and analysis procedures for the confirmation of the clean perimeter of the impacted areas, and for verification that impacted soils have been remediated in accordance with EPA guidance.

CRD-LV TSC scientist(s) reviewed the appropriate sampling plan sections and provided the Regional RPM with suggestions and recommendations. CRD-LV TSC scientists participated in a negotiation meeting with the PRPs during the second and third quarters to discuss monitoring/sampling design approaches. The CRD-LV TSC completed two data audits during the fourth quarter. The results were provided to the RPM.

REGION 7

- Project Name: Cherokee County Kansas
Site: Cherokee County SF Site
Site ID:

Job Order No: 226 10106

Type-Lead: Fund
Requested by: David P. Williams (913) 551-5030
Lead Scientist:

Start Date: July 1995
Expected Completion Date: March 1996
Revised Completion Date:

Estimated Budget: \$10,000
Revised Budget: \$
Major Contaminants: Heavy Metals

Total Expenditures: \$1,879
Total FY95 Expenditures: \$1,879
Total 4th Qtr. Expenditures: \$1,879

The Cherokee County site is a mining area covering about 110 square miles. It is part of a larger area sometimes call the Tri-State Mining District, which encompasses Cherokee County in Kansas, Jasper County in Missouri, and Ottawa County in Oklahoma. One hundred years of widespread lead and zinc mining created piles of mine tailings, covering 4,000 acres in southeastern Cherokee County alone. The mine tailings, containing lead, zinc, and cadmium, have leached into the shallow groundwater. Runoff from the waste piles also has moved contaminants into nearby streams. The Regional OSC requested the use of CRD-LV TSC's X-Ray Fluorescence technology and equipment to measure site contaminants.

- Project Name: Kem-Pest Laboratories
Site: Kem-Pest Laboratories SF Site
Site ID: MOD980631113

Job Order No: 226 10189

Type-Lead: Fund
Requested by: C. Thigpen (913) 551-7414
Lead Scientist: P. Fitzpatrick (702) 897-3379

Start Date: December 1993
Expected Completion Date: May 1994
Revised Completion Date: December 1995

Estimated Budget: \$25,000
Revised Budget: \$50,000
Major Contaminants: Pesticides/Metals

Total Expenditures: \$40,518
Total FY95 Expenditures: \$10,225
Total 4th Qtr. Expenditures: \$169

The RPM requested that the TSC develop a site specific S&A Plan, analytical approach, and a QAPjP to determine if site contaminants have penetrated the walls and floor of the Formulation Building. The TSC provided the Sampling/Monitoring QA plan titled, "Quality Assurance Project Plan and Sampling Plan for the Kem-Pest Superfund Site Cape Girardeau County, Missouri", to the RPM. The PRP's have reviewed the QAPjP/Sampling Plan. The Region has requested that the CRD-LV TSC provide on-site

sampling support. Efforts to address this request are currently in process. A delay in the on-site sampling effort has occurred. This TSC project is currently on hold.

- Project Name: Lindsay Manufacturing Soil Partitioning
Site: Lindsay Manufacturing SF Site
Site ID:

Job Order No: 224 01108

Type-Lead: Fund

Requested by: Cecilia Tapia (913) 551-7733

Lead Scientist: Marti Minnich (702) 897-3258

Start Date: February 1995

Expected Completion Date: September 1995

Revised Completion Date: December 1995

Estimated Budget: \$12,000

Revised Budget: \$

Major Contaminants: Organics

Total Expenditures: \$8,073

Total FY95 Expenditures: \$8,073

Total 4th Qtr. Expenditures: \$94

The Regional RPM requested assistance in the determination of site-specific soil-water partition coefficients for the Lindsay Manufacturing Superfund site located in Lindsay, Nebraska. The partition coefficients will be used in the calculation of subsurface soil cleanup levels for the site.

The CRD-LV TSC has selected a method that was specifically designed to measure soil-water partitioning of volatile organic compounds. Five (5) soil samples have been collected and received from the site for this analysis. Two of the samples were previously air-dried and sieved. Three of the samples were moist. The moist samples appeared very sticky and cohesive, indicating substantial clay contents. The soil sorption coefficient K_d for 1,1-dichloroethene (1,1-DCE), 1,1,1-trichloroethane (1,1,1-TCA), and tetrachloroethene (PCE) was determined on all five samples. A report titled, "Soil K_d Determination for Lindsay Manufacturing Site", and the "raw" data was provided to the Region. The Region is assessing the data provided.

- Project Name: Oronogo-Duenweg Mining Belt
Site: Oronogo-Duenweg Mining Belt SF Site
Site ID:

Job Order No: 226 10106

Type-Lead: Fund

Requested by: David P. Williams (913) 551-5030

Lead Scientist: Jimmie Morales (702) 361-1626 Extension 245

Start Date: July 1995

Expected Completion Date: March 1996

Revised Completion Date:

Estimated Budget: \$10,000

Revised Budget: \$

Major Contaminants: Heavy Metals

Total Expenditures: \$1,000

Total FY95 Expenditures: \$1,000

Total 4rd Qtr. Expenditures: \$1,000

The Oronogo-Duenweg Mining Belt site, which covers 6,400 acres, is considered to be part of the Tri-State Mining District of Missouri, Kansas, and Oklahoma. Two other sites in the district, Cherokee County in Kansas and Tar Creek in Oklahoma, were placed on the NPL in 1983. Lead and zinc ores, as well as some cadmium ores, were mined from 1848 to the late 1960. The site is honeycombed with underground workings, pits, shafts, (open, closed, and collapsed), mine tailings, waste piles, and ponds holding tailing waters. An estimated 10 million tons of wastes or tailings are on the site.

The OSC has requested the assistance of the CRD-LV TSC to provide FPXRF support in characterizing soils for heavy metal contamination.

REGION 8

- Project Name: Utah Power/Light-American Barrel Site
Site: Utah Power/Light-American Barrel SF Site
Site ID: Job Order No: 224 10186

Type-Lead:
Requested by: David Ostrander (303) 293-1530
Lead Scientist: Neal Amick(702) 897-3231

Start Date: November 1993
Expected Completion Date: June 1994
Revised Completion Date: December 1995

Estimated Budget: \$25,000	Total Expenditures: \$5,119
Revised Budget: \$	Total FY95 Expenditures: \$2,879
Major Contaminants: Organics	Total 4th Qtr. Expenditures: \$360

The RPM requested that the TSC provide field measurements using the Field Portable Scanning Spectrofluorometer (FPSS). The measurements will be used relative to the excavation of contaminated soils and possibly for confirming sample analysis. A field test of the FPSS was completed at the American Creosote NPL Site. The results of this field test (instrument performance) will be used in the development of an analysis and QA Plan for the American Barrel Site. Site samples were sent to the CRD-LV TSC for instrument calibration purposes. Site samples have been analyzed and the data evaluated. It is anticipated that field measurements will take place during the second quarter 1996.

REGION 9

- Project Name: Allied Signal North Hollywood
Site: Allied Signal SF Site
Site ID: Job Order No: INEL

Type-Lead:

Requested by: Dave Setter (415) 744-2260

Lead Scientist: Alan Crockett (208) 526-1574/Jeff Sondrup (208) 526-8396

Start Date: June 1994

Expected Completion Date: March 1995

Revised Completion Date: June 1996

Estimated Budget: \$30,000

Revised Budget: \$100,000

Major Contaminants: Organics

Total Expenditures: \$71,980

Total FY95 Expenditures: \$53,275

Total 4th Qtr. Expenditures: \$46,010

The Region IX RPM requested that the TSC provide assistance in evaluating the Allied Signal site as a source of ground water contamination within the North Hollywood Operable Unit. Specifically, the TSC evaluation will focus on the following:

- Determine if Allied's soil gas investigation was performed using appropriate field and analytical methodology,
- Perform an independent assessment of the data, and compare these findings with those made by Allied's contractor,
- Determine whether the placement of probes was adequate to characterize source area, and
- Identify data gaps and make recommendations as to whether additional work is necessary.

In addition, the TSC will provide assistance in determining if Allied's soil boring investigation was performed using appropriate field and analytical methodology, determine whether the placement of borings was adequate to characterize source areas, attempt to determine whether the findings of the soil boring study are consistent or inconsistent with the soil gas results, comment on the soil matrix data in light of the subsurface conditions found, particularly address the likelihood that contaminant releases would have a 'wandering' pattern through the subsurface, and identify data gaps and make recommendations as to whether additional work is necessary.

In support of this effort, TSC scientist(s) provided the document titled, "*Review of Environmental Characterization Data concerning the Allied Signal, Inc., North Hollywood Site, San Fernando Operable Unit, San Fernando Valley, California.*" A Conflict of Interest (COI) problem was resolved during the second quarter of FY95. A meeting between Region 9, NEIC, INEL and CRD-LV personnel was held to address and identify further assessment needs. These needs included additional assessment of site data and to testify in court concerning sources of contaminants.

- Project Name: Apache Powder
Site: Apache Powder SF Site
Site ID:

Job Order No: 224 10194

Type-Lead: Fund

Requested by: Andria Benner (415) 744-2361

Lead Scientist: Conrad Kuharic/Bill Cole

Start Date: April 1994
Expected Completion Date: December 1994
Revised Completion Date: September 1995

Apache Powder, completed in the Second Quarter FY95, was reentered this quarter due to Administrative contract costs.

Estimated Budget: \$12,000	Total Expenditures: \$13,369
Revised Budget: \$15,000	Total FY95 Expenditures: \$2,026
Major Contaminants: Metals/Explosives	Total 4th Qtr. Expenditures: \$462

The RPM requested assistance from the EMSL-LV TSC for the remedial design phase. At this point in time the assistance will address the sampling/monitoring requirements for identifying the type and quantity of confirmatory sampling needed to determine the vertical and lateral extent of soil contamination. The following areas will be initially addressed: White Waste Material and Drum Yard Disposal Areas, Wash 3, and a number of inactive evaporation ponds. EMSL-LV scientists have worked with remote sensing scientist(s) developing an appropriate sampling/monitoring approach. A report that provided recommendations pertaining to additional sampling/monitoring requirements was provided to the RPM. Additional reviews of site documents were completed.

- Project Name: Carson River Mercury
Site: Carson River Mercury SF Site
Site ID:

Job Order No: 224 10101

Type-Lead:Fund
Requested by: Sean P. Hogan (415) 744-2236
Lead Scientist: David Dobb (702) 897-3273

Start Date: September 1993
Expected Completion Date: February 1994
Revised Completion Date: December 1996

Estimated Budget:\$10,000	Total Expenditures: \$29,253, PC&B \$2,700
Revised Budget:	Total FY95 Expenditures:\$27,853, PC&B \$1500
Major Contaminants: Mercury	Total 4th Qtr. Expenditures: \$459, PC&B \$200

The Regional RPM requested support from the CRD-LV TSC to perform mercury speciation analyses on ten soil samples from the Carson River Mercury Site (CRMS). As part of EPA's effort to characterize mercury levels in soils at and around historic mill sites, the Region collected samples to measure the levels of different mercury species (i.e., elemental mercury, mercuric sulfide, methyl mercury and mercuric chloride) in the soil matrix. The purpose for acquiring these analytical data is to more accurately characterize the human health risks associated with soils that have different mercury species and different toxicity characteristics. The samples were analyzed and the results provided to the RPM. For confirmatory purposes, additional analyses was performed. The RPM requested additional support in developing a monitoring approach for the site. The results of additional analysis was provided to the RPM. In addition, a preliminary sampling/monitoring design approach was provided to the RPM. The CRD-LV TSC provided a geostatistical assessment of data collected near Dayton. A data assessment explanation was provided to the RPM.

- Project Name: Concord Naval Weapons Station NPL Site
Site: Concord Naval SF Site
Site ID:

Job Order No:

Type-Lead: Fund

Requested by: Richard Freitas (415) 744-2315/Barbara M. Smith (415) 744-2366

Lead Scientist: Alan Crockett (208) 526-1574/Bob Starr (208) 526-5687

Start Date: March 1995

Expected Completion Date: December 1995

Revised Completion Date:

Estimated Budget: \$12,000

Total Expenditures: \$3,820

Revised Budget:

Total FY95 Expenditures: \$3,820

Major Contaminants: Mercury (Heavy Metals)

Total 4th Qtr. Expenditures: \$500

The Naval Weapons Station Concord is in the north-central portion of Contra Costa County, approximately 30 miles northwest of San Francisco, California. The station operated an ocean terminal facility to transship ordnance from trucks or railcars to ships and vice versa. The base realignment and closure activities at other facilities in the west have made Concord a significant military ordnance and transshipment facility on the west coast. The station encompasses nearly 13,000 acres.

At the present time, RI work plans and field sampling plans for Tidal and Inland Areas have been submitted and approved by the Navy, State, and EPA. Work will commence on these sites in April, 1995. The work plan for an Ecological Assessment of the Litigation Sites has been approved to evaluate the remaining effects of hazardous levels of heavy metals not previously removed by the Navy. This work is also scheduled to begin in April, 1995. Investigations of groundwater as a contaminant transport pathway into the Tidal Area Sites and Litigation Sites has been postponed, pending data from soils, sediments, and surface water, and input from the CRD-LV TSC technical experts.

The evaluation and implementation of better approaches to address the question of groundwater as a transport pathway for organic and inorganic contaminants in wetland soils and sediments is a significant technologic gap in the investigation of wetland sites at Concord. The CRD-LV TSC is currently reviewing available site data. A recommended sampling approach was provided to the Region.

- Project Name: Luke Air Force Base Superfund Site
Site: Luke AFB SF Site
Site ID:

Job Order No: 226 01113

Type-Lead: Fund

Requested by: Steve Remaley (415) 744-1496

Lead Scientist: Mary Wolf (702) 897-3384

Start Date: July 1995

Expected Completion Date: September 1995

Revised Completion Date: October 1995

Estimated Budget: \$20,00
Revised Budget: \$
Major Contaminants:

Total Expenditures: \$15,584
Total FY95 Expenditures: \$15,584
Total 4th Qtr. Expenditures: \$15,584

The TSC was requested to conduct an audit of raw data generated by the analysis of samples collected at the Luke AFB Superfund Site. The audit of these data will focus on authenticating laboratory adherence to the principles of good laboratory practice in reporting results for compounds with contractual criteria. The audit will address laboratory results for calibrations (criteria compounds), surrogates, internal standards areas, and tuning compound results. The audit was completed during the fourth quarter FY95. Additional data audit explanations were provided to the Region.

- Project Name: Mare Island Data Audit
Site: Mare Island SF Site
Site ID:

Job Order No: 224 01103

Type-Lead:
Requested by: Stephen Remaley (415) 744-1496
Lead Scientist: Mary Wolf (702) 897-3384

Start Date: November 1994
Expected Completion Date: March 1995
Revised Completion Date: October 1995

Estimated Budget: \$10,000
Revised Budget: \$
Major Contaminants: Inorganics/Organics

Total Expenditures: \$4,314, PC&B \$500
Total FY95 Expenditures: \$4,314, PC&B \$500
Total 4th Qtr. Expenditures: \$383, PC&B \$200

The TSC was requested to conduct an audit of raw data generated by the analysis of samples collected at the Mare Island Superfund Site. The audit of these data will focus on authenticating laboratory adherence to the principles of good laboratory practice in reporting results for compounds with contractual criteria. The audit will address laboratory results for calibrations (criteria compounds), surrogates, internal standards areas, and tuning compound results. The audit was completed during the second quarter FY95. Additional data audit explanations were provided to the Region.

- Project Name: Marine Corps Air Station Yuma (MCASY) Superfund Site
Site: Marine Corps Air Station Yuma SF Site
Site ID:

Job Order No: 246 10106

Type-Lead: Fund
Requested by: Rachel Simons (415) 744-2383
Lead Scientist: Mary Wolf (702) 897-3384

Start Date: September 1995
Expected Completion Date: December 1995
Revised Completion Date:

Estimated Budget: \$10,000
Revised Budget: \$
Major Contaminants: Organics

Total Expenditures: \$0
Total FY95 Expenditures: \$0
Total 4th Qtr. Expenditures: \$0

The TSC was requested to audit raw data generated by a commercial laboratory from samples collected from the MCASY Superfund Site. The audit of these data utilizing magnetic tapes will address authenticating laboratory adherence to principles of good laboratory practice in reporting results for compounds with contractual criteria. This audit will include laboratory results for calibrations, (criteria compounds), surrogates, internal standards and tuning compound results.

Project Name: McCormick-Baxter Wood-Treating Plant

Site: McCormick-Baxter Wood-Treating SF Site

Site ID:

Job Order No: 222 01111

Type-Lead:

Requested by: Marie Lacy (415) 744-2234

Lead Scientist: Joe R. Donnelly (702) 897-3387/Wayne Sovocool (702) 798-2212

Start Date: March 1995

Expected Completion Date: September 1995

Revised Completion Date: October 1995

Estimated Budget: \$10,000

Total Expenditures: \$10,093

Revised Budget: \$

Total FY95 Expenditures: \$10,093

Major Contaminants: Creosote

Total 4th Qtr. Expenditures: \$639

The McCormick and Baxter Wood-Treating site is nine acres in size located in a light industrial area near the Port of Stockton. From 1942 to 1990, utility poles and railroad ties were treated with creosote, pentachlorophenol (PCP), and arsenic compounds. Waste oils generated from the wood-treatment process were disposed of on site in unlined pools and concrete tanks.

The RREL Technical Support Center will test a remediation strategy in or after April 1995 at this site. The process involves thermal desorption at 800° followed by bicarbonate, carbonate, and/or oxide treatment of the organics to dechlorinate them. RREL will run a ten day test, with slightly different experimental conditions each day. The contaminants are expected to be creosotes, pentachlorophenols (PCPs), and trace-level dioxins. Chromium-copper-arsenic catalyst may also be present.

The TSC was requested by the RPM to provide Field Screening support utilizing the Field-Portable Scanning Spectrofluorometer (FPSS). The principle contaminants are PCPs, PAHs, and Dioxins.

On-Site FPSS measurements and samplings of site soil and sediments were conducted. The data obtained from the FPSS will be used to define the levels and distribution of the identified organic contaminants. A report identifying the measurement results was provided to the Regional RPM.

Project Name: Modesto Groundwater Superfund Site

Site: Modesto SF Site

Site ID:

Job Order No:

Type-Lead:

Requested by: John Lucey (415) 744-2222

Lead Scientist: Alan Crockett (208) 526-1574, Bob Starr (208) 526-5687 Greg Hulet (208) 526-0283

Start Date: December 1994
Expected Completion Date: September 1995
Revised Completion Date: December 1995

Estimated Budget: \$50,000
Revised Budget: \$
Major Contaminants: Radionuclides/Organics

Total Expenditures: \$45,953
Total FY95 Expenditures: \$45,953
Total 4th Qtr. Expenditures: \$3,500

The Regional RPM requested technical support for the Modesto Groundwater Contamination Superfund Site located in Modesto, California. The Site consists of a dry cleaner facility which leaked PCE contamination into the soil and groundwater. It was recently discovered that the groundwater is also contaminated with naturally occurring uranium. EPA has performed an RI/FS at the site and selected a preferred cleanup alternative which consists of pump and treat with GAC for groundwater contamination, and SVE for soil contamination. The FS will now have to be revised to evaluate remedial technologies for the cleanup of radiation related to the naturally occurring uranium.

The objective of this technical support effort is to assist the RPM in selecting the most reliable, efficient and cost effective remedial technologies to clean up the site. The following three areas are being addressed by the CRD-LV TSC:

- Identify data gaps in existing data and recommend additional data requirements. The groundwater, soil, and soil gas, were tested for many different parameters during the RI. Besides uranium the groundwater was also tested for gross alpha, gross beta, and radium. The soil-soil gas was not analyzed for radiation.
- Identify potential radiation remedial technologies. There are several remedial technologies (or combination of technologies) which could be utilized for groundwater remediation at the site. Potential technologies including reverse osmosis, ion exchange, air stripping, and granular activated carbon (GAC).
- Prepare site cleanup cost estimate for each appropriate technology. After the appropriate technologies are identified a cost estimate will be prepared.

In support of this effort the CRD-LV TSC has provided, "Recommended Data Acquisition for the Modesto Groundwater Contamination Site" and the report, "Treatment Alternatives Report Modesto Groundwater Contamination Site." The RPM is currently reviewing these documents. A site visit to audit sampling procedures was made during the fourth quarter.

Project Name: Ogden Data Audit
Site: Ogden SF Site
Site ID:

Job Order No: 226 01105

Type-Lead:
Requested by: S. Remaley (415) 744-1496
Lead Scientist: Mary Wolf/Wade Pullman

Start Date: December 1994
Expected Completion Date: April 1995
Revised Completion Date: October 1995

Estimated Budget: \$7,000
Revised Budget: \$
Major Contaminants:

Total Expenditures: \$4,895
Total FY95 Expenditures: \$4,895
Total 4th Qtr. Expenditures: \$210

Ogden, completed in the Second Quarter FY95, was reentered this quarter due to Administrative contract costs.

The TSC was requested to audit raw data generated by R.F. Weston Laboratory from samples collected from the Ogden Superfund Site. The audit of these data utilizing magnetic tapes will address authenticating laboratory adherence to principles of good laboratory practice in reporting results for compounds with contractual criteria. This audit will include laboratory results for calibrations, (criteria compounds), surrogates, internal standards and tuning compound results. An audit report was completed during the second quarter of FY95 and provided to the Region.

- Project Name: Phelps Dodge Douglas Reduction Works ESI/RI
Site: Phelps Dodge SF Site
Site ID:

Job Order No: 224 10199

Type-Lead:

Requested by: Michael E. Bellot (415) 744-2243/Kira Lynch (510) 412-2334
Lead Scientist: Conrad Kuharic (702) 897-3246/Danny Jackson

Start Date: October 1994
Expected Completion Date: September 1995
Revised Completion Date:

Estimated Budget: \$20,000
Revised Budget: \$
Major Contaminants: Metals

Total Expenditures: \$9,827
Total FY95 Expenditures: \$9,827
Total 4th Qtr. Expenditures: \$292

The TSC was requested to review site documents (i.e., QAPjP, S&A Plan) and provide on-site support for measuring the levels and distribution of metal contamination. The sites ESI/RI was developed to determine if smelter emissions have impacted nearby communities. X-Ray Fluorescence will be used, if appropriate, to measure metal contaminants.

Specifically the TSC will provide:

- A quick turn-around review of the proposed XRF procedures,
- Identifying analytical methods that are capable of "fingerprinting" lead from specific sources,
- Review of suggested investigation plan approaches,
- Field support for XRF calibration and implementation,

- Remote sensing applications, and
- Monitoring design and data assessment.

A report that addresses the TSC review of available site documents was prepared and submitted to the Region. This project is currently on hold.

- Project Name: San Fernando Valley Basin (SFV)
Site: San Fernando SF Site
Site ID:

Job Order No:

Type-Lead:

Requested by: Ned Black (415) 744-2253

Lead Scientist A.K. Singh (702) 435-3731

Start Date: October 1994

Expected Completion Date: September 1995

Revised Completion Date:

Estimated Budget: \$5,000

Revised Budget: \$

Major Contaminants: Organics

Total Expenditures: PC&B, \$500

Total FY95 Expenditures: PC&B, \$500

Total 4th Qtr. Expenditures: PC&B, \$200
(No TSC Resources were utilized)

Four sites are within the San Fernando Valley (SFV) for inclusion on the National Priority List (NPL): North Hollywood, Crystal Springs, Pollock, and Verdugo. Currently, EPA is managing the four areas as one large site referred to as the SFV Superfund Site. This site includes the four NPL sites and adjacent areas where groundwater contamination is known or presumed to have migrated. There are currently a total of 87 RI monitoring wells located inland adjacent to the four NPL sites. Three of the shallow water table wells are screened in bedrock and do not have pumps installed. Trichloroethylene (TCE) and tetrachloroethylene (PCE) data were used to separate the 84 RI wells into two categories: those recommended to be sampled quarterly, and those recommended to be sampled annually. All 84 of the RI wells were originally included in the annual monitoring program. Of these 84 wells, 41 historically having concentrations of TCE and/or PCE in excess of federal and state maximum contaminant levels (MCLs) were placed into the quarterly monitoring program.

The Region is concerned with both PCE and TCE as contaminants in the groundwater. It has been suggested that kriging using plume maps might be a good way to access changes in contaminant concentrations over time. In addition, the Region is interested in any other means of characterizing migration of the contaminant plumes or changes in contaminant concentrations over time which seem pertinent.

The CRD-LV TSC reviewed the provided data and identified a number of data assessment methods that could be used to assess contaminant behavior over time. The TSC provided some additional recommendations to the RPM.

REGION 10

- Project Name: ASARCO Smelter Superfund Site
Site: ASARCO Smelter SF Site
Site ID:

Job Order No: INEL

Type-Lead:
Requested by: Bernard Zavala (206) 553-1562
Lead Scientist: Glen Carpenter (208) 526-4166

Start Date: June 1995
Expected Completion Date: September 1995
Revised Completion Date: December 1995

Estimated Budget: \$2,000
Revised Budget: \$
Major Contaminants: Organics

Total Expenditures: \$600
Total FY95 Expenditures: \$600
Total 4th Qtr. Expenditures: \$500

The Regional Groundwater Forum requested that the CRD-LV TSC review the adequacy of changing a proposed seismic velocity survey from a "cross-hole" configuration to a "surface to borehole" configuration. The TSC reviewed the geophysical approach(s) and provided recommendations to the region.

- Project Name: Bunker Hill
Site: Bunker Hill SF Site
Site ID: IDD048340921

Job Order No: 224 10198

Type-Lead:
Requested by: Greg Gervais (206)553-1906/Danny Jackson (702) 897-3245
Lead Scientist: Russ Plumb (702) 897-3265

Start Date: September 1994
Expected Completion Date: September 1995
Revised Completion Date: January 1996

Estimated Budget: \$25,000
Revised Budget: \$35,000
Major Contaminants: Inorganics

Total Expenditures: \$25,182
Total FY95 Expenditures: \$25,182
Total 4th Qtr. Expenditures: \$4,741

The Region X Project Officer requested that approaches be examined to determine whether the Bunker Hill site characterization techniques have been addressed sufficiently: A sampling/monitoring approach for confirming the vertical and lateral extent of soil/sediment contamination, procedures for identifying levels of soil, sediment, and possibly water contamination, the quality assurance/quality control (QA/QC) plan, the S&A plan and all other methods that have been used to fully characterize the site for remedial purposes. In addition, an assessment of data needs necessary to satisfy the characterization objectives will be required if past characterization efforts have not adequately characterized the sites contaminants. This data assessment will involve data interpretation and recommendations involving statistical and other tests necessary for making decisions concerning the extent of site contaminants.

This technical support project will increase the knowledge of how to assess impacts on local hydrology/geology for the tailings. This effort is critical not only to site characterization and to development of monitoring strategies for detecting pollution, but also for contributing to appropriate corrective action programs. Also, this effort will integrate saturated and unsaturated zone monitoring, and site characterization methods used in developing a monitoring well and sampling network design at mine sites. Assessing site documents and data is in process. A number of recommendations pertaining to the monitoring design and data assessment were provided to the Region.

SUPERFUND SHORT-TERM REQUESTS

- Project Name: Short Term Requests
Site: Short Term Requests
Site ID:

Job Order No: 224 10106

Type-Lead:
Requested by: See Below
Lead Scientist: TSC/CRD-LV Staff Scientists

Start Date: October 1991
Expected Completion Date: September 1995
Revised Completion Date:

Estimated Budget: \$150,000
Revised Budget: \$200,000
Major Contaminants: Variable

Total Expenditures: \$235,774
Total FY95 Expenditures: \$36,116
Total 4th Qtr. Expenditures: \$10,662

TSC requests that can be completed within a 40-hour period:

REGION STATE	DATE	SITE	REQUESTOR	TELEPHONE NUMBER	NATURE OF REQUEST
9	Sept		S. Hogan	(415)744-2236	Beryllium
10	Sept	INEL	A. Crockett	(208)526-1574	Beryllium
10	Sept	Aberdeen	K. Crane	(404)347-7791	Sampling
9	Aug	U.S. Army	W. Craig		Audits
9	Aug	YUMA	R. Simmons	(415)744-2383	Audits
9	Aug		R. Sakamoto	(415)744-2481	Sampling
9	July	YUMA	S. Remaley	(415)744-1496	Audits
3	Aug	Metcoa	J. Dodd	(303)234-0254	
5	Sept	Kinchloe AFB	D. Spytma	(616)773-5998	Sampling
5	Sept	Kinchloe AFB	M. Stutz	(410)612-6856	Analysis
3	Sept	Navy Ships Parts	A. Sohanski	(215)597-3167	Monitoring
INEL	Sept	Allied Signal	J. Sondrup	(208)526-8396	Meeting
9	Sept		K. Erickson	(415)744-2324	Issue Paper
3	Sept	Morgantown	N. Rios Jafolla	(215)597-6682	Monitoring Design

REGION STATE	DATE	SITE	REQUESTOR	TELEPHONE NUMBER	NATURE OF REQUEST
1	Sept	Penn State	J. O'Connor	(212)637-3792	Monitoring Design
3	Sept	Chem-Solv	D. Rossi	(215)597-9238	Sampling
5	Sept	Petoskey	T. Van Donsel	(312)353-6564	Reports
Hdqr	Sept		J. Town	(301)589-5318	Forums
	Aug		T. Thurnblad	(612)296-8582	Sampling
1	July		R. Huang	(617)292-5530	Sampling
4	July		W. Arthur	(214)665-8504	XRF
	July		D. Shrum	(801)273-2472	Sampling
	July		K. Johnson	(801)558-3950	Sampling
6	Aug	RAB Valley	L. Biasco	(214)665-6673	Analysis
9	Aug	McCormick	M. Lacey	(415)744-2234	Analysis
3	Aug		D. Iacono	(215)579-8485	Analysis
7	Aug	Mining Sites	D. Williams	(913)551-5030	XRF
1			B. Brandan	(613)573-9629	Sampling

RCRA CORRECTIVE ACTION

REGION 5

- Project Name: Columbus Solid Waste Reduction
Site: Columbus Waste-To-Energy RCRA Facility
Site ID:

Job Order No: 222 10609

Type-Lead:

Requested by: Carole T. Braverman (312) 886-2910

Lead Scientist: A. K. Singh (702) 435-3731/Vicki Ecker (702) 897-3223

Start Date: March 1995

Expected Completion Date: September 1995

Revised Completion Date: March 1996

Estimated Budget: \$10,000

Revised Budget: \$75,000

Major Contaminants: Dioxin

Total Expenditures: \$26,293

Total FY95 Expenditures: \$26,293

Total 4th Qtr. Expenditures: \$12,760

The Columbus municipal Electric Utility Boiler, also known as the Columbus Municipal Electric Plant (CMEP), is located south of downtown Columbus, Ohio. The facility is a power generating plant fueled by coal and refuse. It has been in operation since 1983 and is owned and operated by the City of Columbus.

In 1987, the US EPA initiated a study of the incinerator ash at CMEP because of the presence of dioxin and furan isomers associated with incinerator ash. The special study report indicated that incinerator ash contains dioxin and furan isomers, lead and cadmium. Concentrations of dioxin and furan isomers range from 0.33 ppb to 2.13 ppb. The highest concentrations were found in top ash from a conveyor belt. A relatively high concentration (0.84 ppb) was found from a stack scape sample. Dioxins (up to 0.38 ppb) were also found in two areas in the soil where ash was allowed to accumulate. Lead in the ash was found to exceed EP toxicity limits.

The Regional Risk Assessor has requested that the CRD-LV TSC design a sampling/monitoring strategy and a quality assurance project plan that would identify the concentration of soil dioxins. The soil dioxin concentrations that are of interest are 20, 40, 70 and 100 ppt. The CRD-LV TSC is in the process of designing a sampling/monitoring program and finalizing the quality assurance project plan.

REGION 8

- Project Name: EXXON Billings Refinery
Site: EXXON Refinery RCRA Facility
Site ID:

Job Order No: 226 10611

Type-Lead:

Requested by: Stephanie Wallace (406) 449-5414 Ext 227

Lead Scientist: Neal Amick (702) 897-3231

Start Date: June 1995
Expected Completion Date: September 1995
Revised Completion Date:

Estimated Budget: \$8,000
Revised Budget: \$
Major Contaminants: PAHs

Total Expenditures: \$2,607
Total FY95 Expenditures: \$2,607
Total 4th Qtr. Expenditures: \$2,607

The Region is currently over-seeing a facility investigation at the EXXON Refinery. The objective(s) of this investigation are to identify and determine if waste constituents have affected soil or groundwater quality and to summarize the nature and geophysical extent of any affected soils and/or groundwater.

The CRD-LV has been requested to assist in this effort by measuring the levels of PAHs in sampled media using the Field-Portable Scanning Spectrofluorometer. The measurements were made during the fourth quarter of FY95. Following the on-site measurements, a report identifying the samples analyzed and the results obtained was provided to the RCRA Project Officer.

REGION 9

- Project Name: Gosford Lease/Former Magna Facility
Site: Magna RCRA Facility
Site ID:

Job Order No: 222 10608

Type-Lead: RCRA
Requested by: Ron Leach (415) 744-2031
Lead Scientist: D. Jackson (702) 897-3245

Start Date: February, 1995
Expected Completion Date: September 1995
Revised Completion Date: October 1995

Estimated Budget: \$5,000
Revised Budget: \$
Major Contaminants: Petroleum Hydrocarbons

Total Expenditures: \$1,654
Total FY95 Expenditures: \$1,654
Total 4th Qtr. Expenditures: \$187

The Magna Facility is a 1.5 acre site in Bakersfield, CA with soil contamination. The contamination is very acidic refinery waste containing petroleum hydrocarbons, VOCs, SVOCs and sulfur compounds. The waste was deposited in the 1940s by Agri-Chem, a now-defunct lessee of the current property owner, Southern Pacific Transportation Company. There is no current information pertaining to the business practices and processes at Agri-Chem in the 1940s.

A Corrective Measure Study (CMS) approach for the Magna facility has been prepared. The Regional Project Officer (RPO) has requested that the CRD-LV TSC review the CMS report to determine if the suggested approaches are appropriate. The TSC provided the Region a report titled, "Technical Support Review of Corrective Measures Study Gosford Lease/Former Magna Facility", dated February 14, 1995. Additional information was provided.

- **Project Name:** Review of Geophysical Workplans
Site: TOSCO Refinery Facility
Site ID:

Job Order No: 222 10606

Type-Lead: RCRA
Requested by: Elaine Ngo, (415) 744-2044
Lead Scientist: Conrad Kuharic

Start Date: May 20, 1991
Expected Completion Date: September 1991
Revised Completion Date: January 1996

Estimated Budget: \$4,045
Revised Budget: \$28,000
Major Contaminants: Organics

Total Expenditures: \$29,075
Total FY95 Expenditures: \$1,555
Total 4th Qtr. Expenditures: \$423

Tosco, completed in the Second Quarter FY95, was reentered this quarter due to Administrative contract costs.

The TSC was requested to evaluate geophysics workplans and reports for two solid waste management units (SWMU) at this site. In addition to geophysics, XRF technology review was required. Reviews of both geophysics and XRF measurement approaches were completed and submitted to the Region. A team from EMSL-LV provided XRF on-site oversight. The Region requested additional reviews of SWMU work plans. The TSC has reviewed the "Phase II RCRA Facility Investigation Workplan for the TOSCO Refinery". A report pertaining to the suggested sampling/monitoring approaches was provided to the Region. A meeting at Region IX with the project officer was completed. An initial assessment of available data was completed and provided to the Region. Additional assessment of site data and characterization approaches are anticipated. This project is currently on hold.

RCRA SHORT TERM REQUEST

- Project Name: Short-term RCRA Technical Support
Site: Short Term RCRA Technical Support
Site ID:

Job Order No: 226 10602

Type-Lead:

Requested by: See below

Lead Scientist: CRD-LV/TSC Staff Scientists

Start Date: October 1, 1991

Expected Completion Date: September 1995

Revised Completion Date:

Estimated Budget: \$8,000

Revised Budget: \$40,000

Major Contaminants:

Total Expenditures: \$40,366

Total FY95 Expenditures: \$1,665

Total 4th Qtr. Expenditures: \$226

TSC requests that can be completed within a 40-hour period. See request below:

REGION	DATE	SITE	REQUESTOR	TELEPHONE NUMBER	NATURE OF REQUEST
8	Sept		S. Zazzali		Sampling
9	July		J. Woodson	(702)367-6370	Sampling
5	Aug	Columbus	P. Gehring		Contracts
Hdqr	July	Columbus	M. Lorber	(202)260-9824	Sampling
5	Sept	Columbus	C. Braverman	(312)886-2910	Sampling
Hdqr	Sept	Columbus	R. Landy	(202)260-0650	Sampling
8	Sept	Exxon	C. Canfield	(406)245-7600	Analysis
4	Aug	General Components	D. Gerard	(813)971-3882	Analysis

SUPERFUND REMOTE SENSING SHORT TERM REQUEST

- **Project Name:** Remote Sensing

Site: Superfund Short Term Remote Sensing Technical Support

Site ID:

Job Order No: 221 95755

Type-Lead:

Requested by: See below

Lead Scientist: CRD-LV/TSC Staff Scientists

Start Date: 1993

Expected Completion Date: September 1995

Revised Completion Date:

Estimated Budget: \$20,000

Revised Budget: \$30,000

Major Contaminants:

Total Expenditures: \$25,518

Total FY95 Expenditures: \$902

Total 4th Qtr. Expenditures: \$(76)

TSC Remote Sensing requests that can be completed within a 40-hour period. The CRD-LV TSC is requested to provide Remote Sensing support that requires a quick-turn-around time. Projects that may be addressed within this 40 hour time frame include:

- The use of Geographic Information Systems (GIS) for site characterization.
- Providing plots of geostatistical related data for site characterization.
- Review of RI/FS reports and workplans, pertaining to the use of multi-spectral scanner, remote sensing and GIS technologies.
- Review of identification and technological techniques and methods used in remote sensing site assessment.
- Providing expert testimony, coordinating and/or contributing to the validity and authenticity of "remote sensing" data used in cost recovery cases.

REGION	DATE	SITE	REQUESTOR	TELEPHONE NUMBER	NATURE OF REQUEST
9	August		S. Hogan	415-744-2236	Maps
1	July		R. Huang	617-556-1193	Remote Sensing
			T. Thurnblad	612-296-8582	Remote Sensing

RCRA REMOTE SENSING SHORT TERM REQUEST

- Project Name: Remote Sensing
Site: RCRA Short Term Remote Sensing Technical Support
Site ID: Job Order No: 221 95615

Type-Lead:
Requested by: See below
Lead Scientist: CRD-LV/TSC Staff Scientists

Start Date: 1993
Expected Completion Date: September 1995
Revised Completion Date:

Estimated Budget: \$20,000
Revised Budget: \$30,000
Major Contaminants:

Total Expenditures: \$742
Total FY95 Expenditures: \$742
Total 4th Qtr. Expenditures: \$0

TSC Remote Sensing requests that can be completed within a 40-hour period. The CRD-LV TSC is requested to provide Remote Sensing support that requires a quick-turn-around time. Projects that may be addressed within this 40 hour time frame include:

- The use of Geographic Information Systems (GIS) for site characterization.
- Providing plots of geostatistical related data for site characterization.
- Review of RI/FS reports and workplans, pertaining to the use of multi-spectral scanner, remote sensing and GIS technologies.
- Review of identification and technological techniques and methods used in remote sensing site assessment.
- Providing expert testimony, coordinating and/or contributing to the validity and authenticity of "remote sensing" data used in cost recovery cases.

REGION	DATE	SITE	REQUESTOR	TELEPHONE NUMBER	NATURE OF REQUEST

ISSUE PAPER

Project Name: Identifying Background
Site: Identifying Background
Site ID:

Type-Lead: Frank Vavra (215) 597-0676
Requested by: Engineering Forum
Lead Scientist: Bob Breckenridge (208) 526-0757, Alan Crockett (208) 526-1574

Start Date: March 1993
Expected Completion Date: July 1994
Revised Completion Date: September 1995

Estimated Budget: \$25,000
Revised Budget: \$30,000
Major Contaminants: Metals

Total Expenditures: \$59,416
Total FY95 Expenditures: \$32,858
Total 4th Qtr. Expenditures: \$6,940

Background: Many states have developed requirements for cleanups that are more stringent than risk based levels and sometimes to background levels. The variability of naturally occurring inorganics may lead Federal/state representatives to conclude that an area of a site has elevated metals just because of this variability. Establishment of background based both on site specific sampling and comparison to normal background ranges can help resolve this issue. Additionally, Natural Resource Trustees may request/require remediation of streams to levels below typical background levels of man-made substances in developed areas. Areas near roads usually have elevated levels of lead from leaded gasoline, elevated levels of PAHs from exhaust and asphalt road material, elevated levels of zinc from oxidation of car metals and elevated levels of inorganics from road salt/ashes. These contaminants are washed into ditches near the road and accumulate with time. Sites that were used as farmland may have elevated levels of pesticides and inorganics from fertilizers and pesticides. For example, lead arsenate was the pesticide of choice for orchards at one time in the past and fertilizers often contain lead which can accumulate in soils. Identification of representative background levels is often difficult and is complicated by the presence of roads, farms or other land use.

The CRD-LV TSC was requested by the Engineering Forum to develop a standard process/procedure to identify background levels of naturally occurring inorganics and typical levels of man-made substances in soils and sediments that may also be site contaminants. The goal is to produce an issue paper that identifies critical elements that must be taken to obtain representative background levels and the available processes that can assist in this determination. Existing documents and sources of information will be reviewed and appropriate material will be referenced. A planning meeting was held to scope out and generate an outline identifying elements that will be addressed in the Issue Paper. This outline was completed and reviewed by the Engineering Forum. During the 1st Quarter, FY 94 an initial draft of the issue paper was completed. The draft issue paper was provided to the Engineering Forum for review. The TSC addressed the Forum's comments, and prepared the document for peer review. The document has been peer reviewed and is currently being finalized for publication.

ISSUE PAPER

Project Name: Field Sampling and Screening Methods for Explosive Compounds in Soil

Site: Field Sampling and Screening Methods for Explosive Compounds in Soil

Site ID:

Type-Lead:

Requested by: Groundwater Forum/Federal Facilities Forum

Lead Scientist: Alan Crockett (208) 526-1574

Start Date: March 1995

Expected Completion Date: December 1995

Revised Completion Date:

Estimated Budget: \$25,000

Revised Budget:\$0

Major Contaminants: Explosives

Total Expenditures: \$14,050

Total FY95 Expenditures: \$14,050

Total 4th Qtr. Expenditures: \$7,677

There are over 100 RCRA Facilities that are regulated under Subpart X. These sites are required to have groundwater exposure assessments, and establish groundwater monitoring systems. Approximately 90% or more are Open Burning/Open Detonation (OB/OD) facilities. Besides RCRA facilities, there are CERCLA sites across the Nation that are currently being investigated, especially for base closure, that will also have similar explosive problems.

The EMSL-TSC is obtaining available information concerning the sampling methods, monitoring approaches and analytical protocols for addressing the characterization of these contaminants. Following the assessment of available data the CRD-LV TSC prepared a suggested outline that identifies the major elements that will be addresses in the Issue Paper. The Federal Facilities Forum has suggested that an Issue Paper addressing a different source of explosive contaminants be developed.

Due to the common interests of the Groundwater and Federal Facilities Forums in an Issue Paper addressing field measurement technologies for explosive compounds in soil, the CRD-LV TSC has submitted a suggested outline to both forums. The forum members are currently reviewing the outline.

COORDINATION

Project Name: Superfund Coordination
Site: Superfund Coordination
Site ID:

Job Order No: 226 10101

Type-Lead:
Requested by: Ken Brown
Lead Scientist: Phil Malley

Start Date: On-going October 1991
Expected Completion Date: September 1995
Revised Completion Date:

Estimated Budget: \$100,000
Revised Budget: \$106,000
Major Contaminants: N/A

Total FY95 Expenditures: \$106,712
Total 4th Qtr. Expenditures: \$21,868

This project provides for Superfund coordination of requests received by the Technology Support Center and implemented when assigned to the off-site contractor. Activities include preparation of reports and tracking of projects, and documenting costs.

Project Name: RCRA Coordination
Site: RCRA Coordination
Site ID:

Job Order No: 226 10601

Type-Lead: Ken Brown
Requested by: Phil Malley
Lead Scientist:

Start Date: On-going October 1991
Expected Completion Date: September 1995
Revised Completion Date:

Estimated Budget: \$40,000
Revised Budget: \$7,000
Major Contaminants: N/A

Total FY95 Expenditures: \$5,161
Total 4th Qtr. Expenditures: \$45

This project provides for RCRA coordination of requests received by the Technology Support Center and implemented when assigned to the off-site contractor. Activities include preparation of reports, tracking of projects, and documenting costs.

TECHNOLOGY TRANSFER

Project Name: Superfund Technology Transfer

Site: Superfund Technology Transfer

Site ID:

Job Order No: 224 10020

Type-Lead:

Requested by: Director TSC

Lead Scientist: Clare Gerlach

Start Date:

Expected Completion Date:

Revised Completion Date: September 1995

Estimated Budget: \$80,000

Revised Budget: \$

Major Contaminants:

Total Expenditures: \$ 75,018

Total FY95 Expenditures: \$ 75,018

Total 4th Qtr. Expenditures: \$4,328

One of the objectives of the CRD-LV TSC is to identify and make available CRD-LV measurement technologies that are applicable for characterizing contaminants. Documenting the adequacy of these technologies, the application and their identity requires the development of case studies, fact sheets, demonstrations and workshops. During this quarter a case study identifying the sampling/monitoring and analytical methods that were used to characterize mercury contamination at Oak Ridge was printed. In addition, several one-page fact sheets and two four-page fact sheets were developed.