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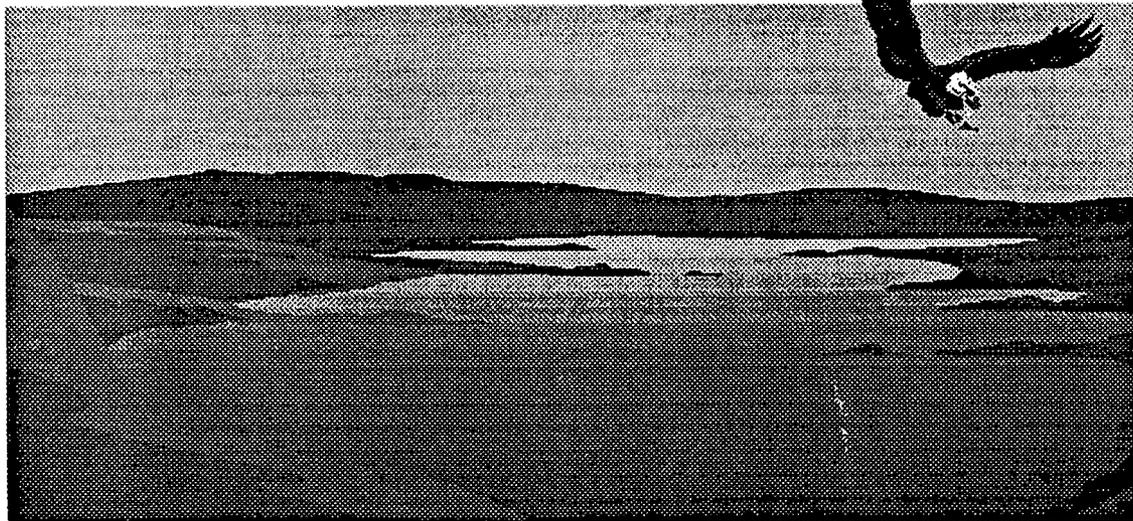


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# ENVIRONMENTAL RESTORATION PROGRAM

Monthly Report For

*June, 1992*



July 20, 1992

**Rocky Flats Office**

ADMINISTRATIVE

DOCUMENT CLASSIFICATION  
REVIEW WAIVER PER  
CLASSIFICATION OFFICE

A-SW-001406

**U.S. DEPARTMENT OF ENERGY  
ROCKY FLATS PLANT**

**ENVIRONMENTAL RESTORATION  
PROGRAM**

**MONTHLY REPORT FOR**

**JUNE 1992**

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## 1.0 INTRODUCTION

This monthly status report presents the current status and technical achievements of the Rocky Flats Environmental Restoration Program for June 1992. This program implements the Interagency Agreement (IAG) between the U.S. Department of Energy, the U.S. Environmental Protection Agency, and the State of Colorado to investigate, assess, and remediate, where necessary, contaminated areas at or adjacent to DOE's Rocky Flats Plant in Golden, Colorado. This agreement was signed on January 22, 1991. The work is being performed for DOE by EG&G Rocky Flats, Inc.

Section 2.1 of this report highlights significant achievements and summarizes the milestones completed during June. Section 2.2 presents any major unresolved issues of the program. Technical progress, schedule status, and milestone status for each Operable Unit as well as other program activities are presented in Section 3.0. Section 4.0 contains the schedules for routine environmental sampling as required by paragraph 210 of the Interagency Agreement. Section 5.0 contains a list which identifies the contractors and subcontractors performing work on the program as required by paragraph 13 of the IAG.

## **2.0 EXECUTIVE SUMMARY**

### **2.1 SIGNIFICANT ACTIVITIES AND ACHIEVEMENTS FOR JUNE 1992**

In a letter dated June 30, 1992, EPA and CDH offered to extend the July 30, 1992 IAG milestone for submittal of the OU 1 Draft Phase I RFI/RI Report to October 28, 1992. DOE had requested an extension to January 1993.

DOE approved the OU 1 interim remedial action (IRA) French Drain Monitor Plan with comments during June. The final document was resubmitted to the regulatory agencies on June 12, 1992. The revegetation in the french drain IRA excavation area is growing rapidly with all of the moisture that fell during June.

The OU 2 assessment field crew completed demobilization on June 19, 1992. Pump and tracer tests for Site #2 were completed the week ending June 26. Surficial soil sampling program field activities continued during June.

The Draft Responsiveness Summary document for the OU 2 Phase I granular activated carbon (GAC) system was delivered to the regulatory agencies on June 25, 1992. The Final Treatability Study Report for the Phase I GAC system has been completed and was delivered to EPA and CDH on June 2, 1992, the IAG milestone date.

DOE extended the public comment period for the OU 2 proposed Subsurface Interim Measures/Interim Remedial Action Plan/Environmental Assessment (IM/IRAP/EA) and Decision Document until July 9, 1992 in order to accommodate a request from the public for more time to study the plan document. The Subsurface Draft Responsiveness Summary was delivered to EPA and CDH on June 25, 1992.

Mobilization for the start of OU 3 field operations continues. Spring season water and sediment sampling continued with shoreline sediment sampling on Standley Reservoir. DOE was successful in collecting 28 of 30 total shoreline sediment samples. These remaining samples will not be collected until the water level falls to expose the shoreline. The spring "window" to collect the shoreline reservoir sediment samples has passed.

The revised OU 8 Draft RFI/RI Work Plan was delivered to CDH and EPA on June 22, 1992 as required by the CDH Notice of Violation (NOV) letter. The NOV gave DOE and EG&G until that date to correct deficiencies in the OU 8 work plan and submit an acceptable revised draft document.

The Draft Final Phase I RFI/RI Work Plan for OU 14 was delivered to the regulatory agencies on June 26, 1992, the revised IAG milestone date.

The Final Historical Release Report was submitted on May 29, 1992, three days ahead of the IAG milestone date. The quarterly update to the Historical Release Report is scheduled to start September 30, 1992

## 2.2 PROBLEMS AND PROGRAMMATIC ISSUES

Completion of OU 3 field work access agreements with local municipalities and landowners is taking longer than originally planned. Delay in approving the Health and Safety Plan (HSP) and the impact of the *Spiranthes diluvialis* issue, an endangered species, has also delayed the start of OU 3 field work.

The *Spiranthes diluvialis* issue may effect the start of field work in several operable units scheduled to begin field work in the July/August time frame. The issue is determining the presence of the plant, which is difficult until the plant flowers in August after field work is scheduled to begin in several areas. Some areas within operable units have been eliminated from protection consideration by determining which habitats would or would not support the *Spiranthes diluvialis* species. Those areas that do not support the species present no obstacle to field work.

The OU 8 dispute concerning the DOE acquisition problem is near resolution. DOE has determined that aggressive acquisition planning and careful scope definition can avoid conflict of interest problems with contractors working on multiple phases of a project. Steps are being taken to train project managers and procurement support staff as required. Additionally, award of the first streamlined Master Task Subcontracts is expected in July 1992.

## 2.3 NEAR-TERM IAG MILESTONES

<u>OU#</u>	<u>Milestone Description</u>	<u>Scheduled Completion</u>	<u>Actual Completion</u>
08	Submit Draft Phase I RFI/RI Work Plan	01 May 92	01 May 92
10	Submit Final Phase I RFI/RI Work Plan	01 May 92	01 May 92
12	Submit Draft Phase I RFI/RI Work Plan	08 May 92	08 May 92
13	Submit Draft Phase I RFI/RI Work Plan	15 May 92	15 May 92
14	Submit Draft Phase I RFI/RI Work Plan	22 May 92	22 May 92
15	Submit Draft Phase I RFI/RI Work Plan	01 Jun 92	27 May 92
02	Submit Final Treatability Test Report (GAC)	02 Jun 92	02 Jun 92
SW	Submit Final Historical Release Report	03 Jun 92	29 May 92
14	Submit Draft Phase I RFI/RI Work Plan	26 Jun 92	26 Jun 92
16	Submit Final No Further Action Justification Document	30 Jul 92	

### 3.0 PROJECT STATUS

#### 3.1 OU 1 - 881 HILLSIDE AREA

##### DESCRIPTION:

The alluvial ground water at the 881 Hillside Area, located north of Woman Creek in the southeast section of RFP, was contaminated in the 1960s and 1970s with solvents and radionuclides. The area is almost two miles from the eastern, outer edge of the plant's buffer zone at Indiana Street. The various Individual Hazardous Substance Sites (IHSSs) that make up OU 1 are being investigated and treated as high-priority sites because of elevated concentrations of organic compounds in the near-surface ground water and the proximity of the contamination to a drainage system leading to an offsite drinking water supply. The selected Interim Remedial Action (IRA) at OU 1 involved construction of an underground drainage system called a French drain that intercepts and contains near-surface ground water flowing from the OU 1 area. The near-surface water is treated at the 891 treatment facility, designed for this purpose, and released onsite into the South Interceptor Ditch alongside Woman Creek. IRA construction was completed in April 1992. The remedial investigation and feasibility study (RI/FS) to determine the final remedial action are continuing in parallel with the IRA.

##### 3.1.1 OU 1 ASSESSMENT

SCOPE OF WORK CHANGES THIS REPORTING PERIOD:                      None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD:                      None

##### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase III RFI/RI Work Plan	06 Feb 90
Submit Final Phase III RFI/RI Work Plan	31 Oct 90

##### JUNE WORK ACTIVITY STATUS:

In a letter dated June 2, 1992, EPA and CDH notified DOE and EG&G that EPA and CDH were deferring action on the extension request for submittal of the OU 1 Draft Phase I RFI/RI Report from July 30, 1992 to January 30, 1993 pending results of the laboratory audit. In a letter dated June 30, 1992, EPA and CDH offered to extend the July 30, 1992 IAG milestone to October 28, 1992 while the laboratory audit continued. In accepting this extension, DOE and EG&G agreed to increase the involvement of the regulatory agencies in the baseline human health risk assessment and the environmental evaluation for OU 1.

EPA visited the EG&G Environmental Management Interlocken facility in Broomfield on June 8, 1992 to conduct their audit of the lab/Rocky Flats Environmental Database System (RFEDS)/Procurement problems. The audit is designed to investigate the following:

- Laboratory capacity, utilization, and availability.
- Laboratory qualification protocol.
- Contract quality, quantities, and start dates.
- Contract incentives and penalties.
- Streamlining the flow of information.
- Validation procedures.
- Impact of RFEDS.

Once the audit has been completed, its findings and recommendations will be documented by EPA and CDH.

**PLANNED WORK FOR JULY:**

Work on the RI Report will continue and will include submittal of Technical Memoranda supporting the Risk Assessment process.

The French Drain Monitoring Plan will be implemented in July with the installation of wells to monitor the french drain effectiveness.

**PROBLEMS:** None

**OPEN ITEMS:**

Technical Memoranda 6, Exposure Scenarios (Revised), to be submitted July 10, 1992.

Technical Memoranda 7, Model Descriptions, to be submitted July 17, 1992.

Technical Memoranda 8 and 9 are scheduled to be submitted in September 1992.

### 3.1.2 OU 1 REMEDIATION

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Proposed IM/IRA Decision Document	18 Sep 89
Submit Proposed IM/IRA Decision Document	06 Oct 89
Submit Final IM/IRA Decision Document	05 Jan 90
Begin Phase I-A IM/IRA Construction	15 Jan 90
Restart Phase I-A IM/IRA Construction (after shutdown)	20 Jun 90
Begin Phase I-B IM/IRA Construction (ahead of schedule)	28 Sep 90
Submit IM/IRA Implementation Document	22 Feb 91
Begin Phase II-A IM/IRA Construction	01 Apr 91
Begin IM/IRA Testing	05 Aug 91
Begin Phase II-B IM/IRA Construction	03 Sep 91
Complete IM/IRA Construction	02 Mar 92

#### JUNE WORK ACTIVITY STATUS:

The revegetation in the french drain interim remedial action (IRA) excavation area is growing rapidly with all of the moisture that fell the first part of June.

DOE gave approval and comments on the French Drain Monitor Plan during June. The final document was resubmitted to the regulatory agencies on June 12, 1992. EPA requested a status meeting on the IM/IRA treatment system which was also held on June 12, 1992.

OU 1 IRA Effluent Tank 205 remains approximately 40% full. Lab results for effluent tanks 206 and 207 were received, and analysis revealed ethylbenzene and xylene contamination, high total dissolved solids (TDS) and high chlorides. The organic contamination (ethylbenzene and xylene) has been traced to the storage tanks internal epoxy coating. EPA and CDH will not allow discharge of the effluent tanks even though the contaminant levels are below the maximum concentration levels (MCL). At a meeting on June 12, 1993, EPA and CDH agreed to allow discharge the tanks if the UV/peroxide system could adequately clean the water. Based on recent lab results, the UV/peroxide system will adequately treat the organic contamination.

Tank 206 water still contains elevated TDS and chloride levels; however, it is presently being retreated for removal of the TDS and chlorides. The water in Tank 207 meets discharge specifications for TDS and chlorides. Tank 207 will be discharged as soon as piping modifications can be completed which would allow discharge to the South Interceptor Ditch immediately following UV/peroxide treatment for the organics.

Additional tests are still needed to characterize the operating parameters of the UV/peroxide Unit, in particular, the effect of flow rate, lamp intensity, residence time, and peroxide dosage. These tests have been temporarily suspended so that water in the effluent tanks can be retreated. These tests have been tentatively rescheduled for July 1992. Once these tests are completed a report on the System Operation (SO) tests as well as optimization tests will be prepared.

Piping modifications were completed to allow for the installation of the gamma sensing equipment. After installation and calibration of the gamma sensor, work will be initiated to determine whether the output from gamma sensor can be substituted for analytical radionuclide laboratory analyses as criteria for discharging water out of the effluent tanks. If it can be substituted, it would increase the treatment system capacity by reducing the hold time for the effluent water. Presently effluent samples must be expedited to meet the required 14 day lab turnaround time.

**PLANNED WORK FOR JULY:**

French drain and 891 Treatment Building IRA operations and optimization testing will continue.

Installation of gamma sensing unit

Investigation/Design for installation of portable gas chromatograph

**PROBLEMS:**           None

**OPEN ITEMS:**       None

### 3.2 OU 2 - 903 PAD, MOUND, AND EAST TRENCHES

#### DESCRIPTION:

The contamination at the 903 Pad and Mound areas is largely attributed to the storage in the 1950s and 1960s of waste drums that corroded over time, allowing hazardous and radioactive material to leak into the surrounding soil. Additional contamination may have resulted from wind dispersion during drum removal and soil movement activities. The East Trenches Area was used for disposal of plutonium- and uranium-contaminated waste and sanitary sewage sludge from 1954 to 1968. Two areas adjacent to the trenches were used for spray irrigation of sewage treatment plant effluent, some of which may have contaminants that were not removed by the treatment system.

An Interim Measures/Interim Remedial Action (IM/IRA) provides for surface water in source areas of contamination to be collected, treated, and discharged to the surface water drainage. Operation of a field-scale treatability unit for the South Walnut Creek drainage began in May 1991. The effectiveness of the treatment process will be evaluated at three locations: the entrance to the treatment facility, several points within the facility, and the discharge point. After completion of the field-scale treatability tests, the unit is anticipated to remain in service until the final remedial action is operational. The RI and FS are continuing in parallel with the IRA.

A second IM/IRA was established in late-1991. This Proposed Subsurface Investigation IM/IRAP/EA is north of Woman Creek and encompasses the 903 Pad, the Mound Area, and the East Trenches Area of OU 2. This IM/IRAP/EA identifies and evaluates interim remedial actions for removal of residual free-phase VOC contamination from three distinct subsurface environments at OU 2. Each of the proposed VOC-removal actions involve in situ vacuum-enhanced vapor extraction technology. The interim remedial actions are proposed for the collection of information that will aid in the selection and design of final remedial actions that address subsurface, residual free-phase VOC contamination at OU 2.

#### 3.2.1 OU 2 ASSESSMENT

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase II RFI/RI Work Plan (Alluvial)	21 Dec 89
Submit Final Phase II RFI/RI Work Plan (Alluvial)	12 Apr 90
Submit Draft Phase II RFI/RI Work Plan (Bedrock)	05 Feb 91
Submit Final Phase II RFI/RI Work Plan (Bedrock)	02 Jul 91

**JUNE WORK ACTIVITY STATUS:**

The OU 2 field crew completed demobilization on June 19, 1992. Pump and tracer tests for Site #2 were completed the week ending June 26.

Surficial soil sampling program field activities continued. Activities to dig five trenches are ongoing. Ground Penetrating Radar (GPR) and electromagnetic (EM) surveys were conducted over the anticipated trench areas. The GPR survey indicated zones of discontinuities within the upper 15 feet of the soil column. The EM survey was completed June 24, 1992.

Technical Memorandum #1 (exposure scenarios) was submitted to the regulatory agencies on June 19, 1992. Hydrographs for the wells were completed on June 24, 1992.

**PLANNED WORK FOR JULY:**

Data evaluation required to support the OU 2 Draft Phase II RFI/RI Report due to the regulatory agencies on March 12, 1993 will continue.

**PROBLEMS:**       None

**OPEN ITEMS:**     None

### 3.2.2 OU 2 REMEDIATION

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Proposed IM/IRA Decision Document	19 Jun 90
Submit Proposed Plan IM/IRA Decision Document	18 Sep 90
Submit Draft Responsiveness Summary	13 Dec 90
Submit Final Responsiveness Summary and Final IM/IRA Decision Document	11 Jan 91
Field Treatability Test System Installation Complete	10 May 91
Begin Field Treatability Testing (Carbon System)	13 May 91
Submit Draft Treatability Test Report (Phase I GAC)	01 Apr 92
Complete IM/IRA Construction (radionuclides removal system)	24 Apr 92
Begin Field Treatability Testing (radionuclides removal system)	27 Apr 92

#### JUNE WORK ACTIVITY STATUS:

The Field Treatability Unit (FTU) collected, treated, and discharged approximately 590,000 gallons of surface water during the month of June 1992. Twenty-four hour per-day manned operations continues including all three locations for surface water collection.

SW59 experienced a leaking primary transport pipe on June 21, 1992. Repairs were initiated immediately and completed on June 22, 1992. Collection of surface water resumed. Surface water not collected by SW59 during this period was collected by the down gradient SW61. The estimated flow at SW59 is 1-2 gallons/per minute (gpm).

As of June 22, 1992, sulfuric acid feed from the Auxiliary Tank to Reactor Tank 1 has been discontinued. However, flush water used to facilitate cleaning of the auxiliary tank continues to be pumped to Tank 1.

Since modifying the chemical feed rates, it appears less sludge generation will be realized as well as less chemical usage. The minimization of chemical usage and sludge production will continue to be pursued.

Analytical data from the spent carbon unit for the granular activated carbon unit (GAC) has been forwarded to the RCRA permit group for classification. DOE has decided to store the spent units as RCRA hazardous waste. The six original drums of sludge have been repackaged consistent with RCRA requirements. The repackaging effort resulted in additional total drums as well as new sludge drums. A total of 12 drums of sludge exist, now estimated to contain 300 pounds of sludge each. Sludge minimization efforts are underway and initial results are encouraging.

The Draft Responsiveness Summary document for the Phase I GAC system was delivered to the regulatory agencies on June 25, 1992. The Final Treatability Study Report for the Phase I GAC system has been completed and was delivered to EPA and CDH on June 2, 1992, the IAG milestone date. Development of the Procedures Manual and Health and Safety Plan for the system continued during June 1992.

DOE extended the Public Comment period for the proposed Subsurface Interim Measures/Interim Remedial Action Plan/Environmental Assessment (IM/IRAP/EA) and Decision Document until July 9, 1992 in order to accommodate a request from the public for more time to study the plan document. Consequently, the Draft Responsive Summary document milestone was moved from June 16, 1992 to June 25, 1992. The Subsurface Draft Responsiveness Summary was delivered to EPA and CDH on June 25, 1992. The OU 2 Subsurface documents (RS and IM/IRAP/EA) are scheduled to be available to the public in September 1992.

#### PLANNED WORK FOR JULY:

The Field Treatability Unit will continue collecting and treating water.

EPA and CDH review of the Subsurface IM/IRAP/EA Responsiveness Summary will end July 7, 1992 and DOE will resolve comments and prepare the document during July for submittal to EPA and CDH on August 20, 1992.

PROBLEMS: None

OPEN ITEMS: None

### 3.3 OU 3 - OFFSITE AREAS

#### DESCRIPTION:

OU 3 can be divided into two categories based on two main activities. The IAG directs activities according to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This involves assessment of contamination in offsite areas also referred to as IHSSs: Contamination of the Land Surface (IHSS 199), Great Western Reservoir (IHSS 200), Standley Lake (IHSS 201), and Mower Reservoir (IHSS 202). The second category responds to a 1985 out-of-court lawsuit settlement, McKay v. U.S., which directed that the surface soil contamination be remediated. Remedial activities in compliance with the Settlement Agreement (deep disc plowing) began in 1985. The disturbance resulting from remediation is being revegetated with mediocre success. The overall schedule for this activity is determined by the year-to-year success of the revegetation effort and requirements of the land owners.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Past Remedy Report	26 Oct 90
Submit Draft Historical Information/Preliminary Health Risk Assessment Report	09 Nov 90
Submit Final Past Remedy Report	02 Apr 91
Submit Final Historical Information/Preliminary Health Risk Assessment Report	16 Apr 91
Submit Draft Phase I RFI/RI Work Plan	10 Jul 91
Submit Final Phase I RFI/RI Work Plan	06 Dec 91

#### JUNE WORK ACTIVITY STATUS:

Mobilization for the start of field operations continues. A meeting was held June 5, 1992 to discuss health and safety requirements for OU 3 field work. An agreement on requirements was reached. The Health and Safety Plan (HSP) is needed prior to beginning field work. The subcontractor's HSP was approved on June 26, 1992.

Spring season water and sediment sampling continued with shoreline sediment sampling on Standley Reservoir. All but 2 of 30 shoreline sediment samples were collected during June. These remaining samples will not be collected until the water level falls to expose the shoreline. The spring "window" to collect the shoreline reservoir sediment samples has passed.

The drilling for groundwater sampling and excavation of soil trenches cannot begin until the process of determining the presence or absence of the threatened plant species *Spiranthes diluvialis* is clarified. DOE has provided direction that these sampling activities cannot begin until the U.S. Fish and Wildlife Service provides further consultation on criteria for potential habitat identification. A negative schedule impact is not expected but could develop if these sampling activities do not occur until an actual species presence survey is conducted in August 1992.

**PLANNED WORK FOR JULY:**

Mobilization for the start of field operations will continue and well as resolution of any health and safety requirements for OU 3 field work.

**PROBLEMS:**

Completion of access agreements with local municipalities and landowners is taking longer than originally planned. Delay in approving the HSP and the impact of the *Spiranthes diluvialis* issue has also delayed the start of OU 3 field work.

Remedial actions required under the 1985 McKay v. U.S. Settlement Agreement may be in conflict with CERCLA. Tilling of the land surface to mix plutonium contaminated surface soil, as required under the Settlement Agreement, prior to completion of the RI/FS will probably not be allowed by EPA. The remedial action as determined by the RI/FS process, if any, will probably not include plutonium soil mixing through tilling.

**OPEN ITEMS:**      None



**IAG MILESTONE ACCOMPLISHMENTS:**

Submit Draft Phase I RFI/RI Work Plan  
Submit Final Phase I RFI/RI Work Plan

08 Jun 90  
26 Nov 91

**JUNE WORK ACTIVITY STATUS:**

Responses to comments received by CDH in their conditional approval of the OU 4 RFI/RI Work Plan letter dated May 8, 1992 were completed. Technical evaluations were performed on the proposals that were received to implement the Phase I RFI/RI Work Plan.

Construction of the three flash-type 910 evaporators supporting pondcrete operations is on schedule with testing of the evaporators to commence the first week in July. Hydrostatic tests of the evaporators began on the outside pipe and the cooling towers. Conduit work was completed on the cooling towers and generators, and piping fabrication was completed on June 20, 1992.

Construction of the pondcrete modular tanks has been impacted by recent unexpected subsurface soil and ground water conditions. The schedule for operation of the tanks may be impacted due to additional construction activities required for ground water control. Erection of the modular tanks has been completed and tank liner installation has been initiated with a 20 millimeter protective liner. Primary and secondary containment of the modular tanks has been completed.

**PLANNED WORK FOR JULY:**

Completion of the technical evaluations of proposals for implementation of the OU 4 Phase I RFI/RI Work Plan are scheduled to be completed in July 1992.

**PROBLEMS:**

The delay in removal of sludge from the solar ponds and the requirement for an IM/IRA for the surge tanks has impacted the IAG scheduled start of the RFI/RI field activities in January 1992. The impact, if any, to the IAG milestone for delivery of the RFI/RI Report is being evaluated.

**OPEN ITEMS:** None

### 3.5 OU 5 - WOMAN CREEK

#### DESCRIPTION:

This activity encompasses assessment and remediation in the Woman Creek drainage of 10 IHSSs. These are: Original Landfill (IHSS 115); Ash Pits (IHSS 133.1 - 133.4); Incinerator (IHSS 133.5); Concrete Wash Pad (IHSS 133.6); Detention Ponds C-1 and C-2 (IHSS 142.10 and 142.11); Surface Disturbance (IHSS 209), southeast of Building 881. Two additional surface disturbances have been identified and are located, one south of the Ash Pits and a second west of IHSS 209. These last two sites have been included in the OU 5 work plan. Possible contamination in this operable unit was caused by landfill operations, stormwater run-off into holding ponds, and ash-pit operations. Constituents in OU 5 are believed to include nitrates, plutonium, uranium, metals, beryllium, solvents, pesticides, oils, paints, and cleaners. Media affected include soils, sediments, surface water, ground water, and air resuspension.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	05 Apr 91
Submit Final Phase I RFI/RI Work Plan	30 Aug 91

#### JUNE WORK ACTIVITY STATUS:

A draft copy of Technical Memoranda 1 (TM1), originally entitled TM2, Surface Water and Sediment Sampling and Analysis Plan, was received by DOE on June 22, 1992. This TM revises the work plan and is undergoing DOE review in preparation for submittal to EPA and CDH.

A scoping meeting on the baseline risk assessment of the OU 5 work plan was held with the subcontractor on June 10, 1992. The subcontractor resubmitted the baseline risk assessment section of their proposal on June 17, 1992.

A meeting was conducted at DOE on the *Spiranthes diluvialis* (a threatened species) on June 12, 1992. The impact for OU 5 and OU 6 is that prior to drilling, a habitat survey must be done to ensure that *Spiranthes* is not present. *Spiranthes* likes the fringe of wetland areas.

The technical evaluation of the OU 5 Phase I RFI/RI Work Plan implementation proposal was completed on June 2, 1992. On June 5, 1992, a request for a letter contract to implement the work plan was approved and started the procurement cycle on June 8, 1992. A letter contract for work plan implementation was completed on June 26, 1992.

**PLANNED WORK FOR JULY:**

The draft TM 1 will be reviewed by DOE and revised by late-July or early-August.

The draft Health and Safety Plan for work plan implementation is scheduled for completion the last week of July. Field work will follow in August.

**PROBLEMS:**       None

**OPEN ITEMS:**    None

### 3.6 OU 6 - WALNUT CREEK

#### DESCRIPTION:

This activity encompasses assessment and remediation in the Walnut Creek Drainage of 21 Individual Hazardous Substance Sites (IHSSs). They are the A-series Detention Ponds, Ponds A-1 through A-4 (IHSS 142.1 through 142.4 and 142.12); the B-series Detention Ponds, Ponds B-1 through B-5 (IHSS 142.5 through 142.9); the North, Pond, and South Area Spray Fields (IHSS 167.1, 167.2 and 167.3); the East Area Spray Field (IHSS 216.1), the Trenches A, B and C (IHSS 166.1, 166.2 and 166.3); the Sludge Dispersal Area (IHSS 141); the Triangle Area (IHSS 165), and the Old Outfall Area (IHSS 143). One additional site, the Soil Dump Area (IHSS 156.2), was transferred from OU 14 to OU 6 in 1991. Two IHSSs, Property Utilization And Disposal Yard (IHSS 170) and Property Utilization and Disposal Container Storage Facilities (IHSS 174) have been transferred from OU 6 to OU 10. 13 ground water monitoring wells will be installed throughout OU 6 to monitor the alluvial aquifer. 5 bedrock ground water monitoring wells will be installed in the vicinity of North Walnut Creek during the OU 6 remedial investigation. To characterize the bedrock aquifer in the vicinity of the A-series ponds up to 9 additional bedrock ground water monitoring wells may be installed.

Sediment samples will be collected from the Walnut Creek drainage where existing data are insufficient to adequately characterize the sediments. Sediment sampling has been proposed along each stream segment on North and South Walnut Creeks where additional characterization is needed. Based on a review of the data collected at the existing locations along the OU 6 drainage, there is sufficient information about the sediments in many parts of OU 6; therefore, the sampling locations specified in the RFI/RI work plan have been reduced in those areas.

The surface soil sampling has been modified for the Triangle Area (IHSS 165) and the Old Outfall Area (IHSS 143) so that the surface soil samples specified in the IAG will be obtained from the original surface of these units. This will entail borings through the overlying fill material down to the original surface to collect samples.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	19 Apr 91
Submit Final Phase I RFI/RI Work Plan	16 Sep 91

**JUNE WORK ACTIVITY STATUS:**

The OU 6 RFI/RI Final Work Plan revisions have been made that responded to CDH's comments, as required in the conditional EPA approval of the work plan. The initial field sampling work plan for OU 6 was rejected by the regulatory agencies. The final revised field sampling plan and other sections of the work plan were rewritten and substantially revised.

A proposal to implement the work plan for OU 6 has been technically evaluated. It was originally determined that the proposal would not be processed because of an organizational conflict of interest (OCI). After a final review of the OU 6 work plan by DOE, it was determined that OU 6 did not pose a conflict of interest.

A request for a letter contract was submitted on June 22 within RFP to expedite the start of field activities.

**PLANNED WORK FOR JULY:**

Work will continue on the Field Implementation Plan and the Health and Safety Plan.

**PROBLEMS:**       None

**OPEN ITEMS:**    None



### 3.8 OU 8 - 700 AREA

#### DESCRIPTION:

The 24 IHSSs which constitute OU 8 encompass separate sites inside and around the production area of the Rocky Flats Plant. Contamination sources within the various IHSSs include above ground and underground tanks, equipment washing areas, and releases inside buildings which potentially affected areas outside the buildings. Contaminants from these sources may have been introduced into the environment through spills on the ground surface, underground leakage and infiltration, and in some cases through precipitation runoff. The chemical composition of the contaminants also varies widely between the IHSSs, ranging from low-level radioactive mixed wastes to nonradioactive organic and inorganic compounds.

During April 1992, 14 IHSSs were deleted from OU 8 and added to OU 9 as part of a IHSS realignment pursuant to Part 32, Paragraph 191 (Additional Work or Modification to Work) of the IAG. The IHSSs that were transferred to OU 9 include: 123.2-Valve Vault West of Building 707, 125-Holding Tank, 126.1 and 126.2-Out-of-Service Process Waste Tanks, 127-Low-Level Radioactive Waste Leak, 132-Radioactive Site - 700 Area Site #4, 146.1-146.6-Concrete Process Waste Tanks, 149-Effluent Pipe, 159-Radioactive Site Building 559. These IHSS changes were recommended by DOE in the now-approved OU 9 Phase I RFI/RI Work Plan and approved by CDH and EPA in April 1992.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan 01 May 92

#### JUNE WORK ACTIVITY STATUS:

The Draft Phase I RFI/RI Work Plan was submitted to EPA and CDH on May 1, 1992, the IAG milestone date. CDH sent a Notice of Violation letter to DOE and EG&G on May 22, 1992 concerning deficiencies in the work plan. CDH gave DOE and EG&G until June 22, 1992 to correct deficiencies in the OU 8 work plan and submit an acceptable revised draft document to both CDH and EPA for review. The revised Draft RFI/RI Work Plan was delivered to CDH and EPA on June 22, 1992 as required by the CDH Notice of Violation letter.

**PLANNED WORK FOR JULY:**

RFP is awaiting comments from EPA and CDH on the revised OU 8 RFI/RI Work Plan.

**PROBLEMS:** None

**OPEN ITEMS:**

DOE, EPA and CDH are close to informal resolution of the DOE dispute regarding acquisition procedures and procurement support.

### 3.9 OU 9 - ORIGINAL PROCESS WASTE LINES

#### DESCRIPTION:

This activity involves characterizing a series of tanks and associated process waste lines. The Original Process Waste Lines (OPWL) consisted of a system of 57 designated pipe sections extending between 73 tanks and 24 buildings connected by 35,000 feet of buried pipeline that transferred process wastes from point of origin to onsite treatment plants. The system was placed into operation in 1952, and additions were made to the system through 1975. The original system was replaced over the 1975-1983 period by the new process waste system. Some tanks and lines from the original system have been incorporated into either the new process waste system or the fire water deluge collection system.

The original system is known to have transported or stored various aqueous process wastes containing low-level radioactive materials, nitrates, caustics and acids. Small quantities of other liquids were also introduced in the system, including pickling liquor from foundry operations, medical decontamination fluids, miscellaneous laboratory liquids from Building 123, and laundry effluent from Buildings 730 and 778. The RFI/RI plan includes inspection and sampling of the OPWL tanks and pipelines which are accessible, and soil sampling to determine the extent of contamination in the vadose zone. The soil sampling will be performed by installing test pits and borings where known or suspected releases occurred, near pipe joints and valves, at approximately 200-foot intervals along the pipelines and by installing borings around the tanks which are outdoors. Soil characterization studies will determine the need for soil removal and/or treatment. The results of the RFI/RI will determine the need for interim and/or final remediation action.

During April 1992, 20 IHSSs were deleted from OUs 8, 10, 12, 13, and 15 and added to OU 9 as part of a IHSS realignment pursuant to Part 32, Paragraph 191 (Additional Work or Modification to Work) of the IAG. The IHSSs that were transferred to OU 9 include: 123.2-Valve Vault West of Building 707, 125-Holding Tank, 126.1 and 126.2-Out-of-Service Process Waste Tanks, 127-Low-Level Radioactive Waste Leak, 132-Radioactive Site - 700 Area Site #4, 146.1-146.6-Concrete Process Waste Tanks, 149-Effluent Pipe, 159-Radioactive Site Building 559, 124.1-124.3-Radioactive Liquid Waste Storage Tanks, 147.1-Process Waste Leaks/Maas Area, 122-Underground Concrete Tank, and 215-Tank T-40.

The above IHSSs all constitute part of the Original Process Waste Lines and will be investigated and remediated as such. These IHSS changes were recommended by DOE in the now-approved OU 9 Phase I RFI/RI Work Plan and approved by CDH and EPA in April 1992.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

**IAG MILESTONE ACCOMPLISHMENTS:**

Submit Draft Phase I RFI/RI Work Plan	08 Jun 90
Submit Final Phase I RFI/RI Work Plan	26 Nov 91

**JUNE WORK ACTIVITY STATUS:**

Requests for proposals for implementation of the OU 9 RFI/RI Work Plan were distributed on June 15, 1992 to small businesses. RFP Procurement has designated implementation of the OU 9 work plan as a small business set aside. Five small businesses will be submitting proposals in response to EG&G's solicitation for implementation of the work plan. Subcontract award is anticipated by July 31, 1992.

**PLANNED WORK FOR JULY:**

Subcontract award for implementation of the work plan is anticipated on July 31, 1992.

PROBLEMS: None

OPEN ITEMS: None



**PLANNED WORK FOR JULY:**

The revised Final Phase I RFI/RI Work Plan will be submitted to the regulatory agencies for review on July 17, 1992.

**PROBLEMS:** None

**OPEN ITEMS:** None

### 3.11 OU 11 - WEST SPRAY FIELD

#### DESCRIPTION:

The West Spray Field is located within the Rocky Flats Plant buffer zone immediately west of the plant security area. The West Spray Field was in operation from April 1982 to October 1985. During operation, excess liquids from solar evaporation ponds 207-B North and Center (contaminated ground water in the vicinity of the ponds and treated sanitary sewage effluent) were pumped periodically to the West Spray Field for spray application. The spray field boundary covers an area of approximately 105.1 acres, 38.3 of which received direct application of hazardous waste. The RFI/RI process will entail field studies to investigate the presence or absence of hazardous constituents in soil and ground water.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	08 Jun 90
Submit Final Phase I RFI/RI Work Plan	02 Jan 92

#### JUNE WORK ACTIVITY STATUS:

There are some minor issues regarding standard operating procedures and the adequacy of soil test pits that need clarification in the OU 11 RFI/RI Work Plan. Responses to these issues are being prepared.

Concerning the Western Aggregates request to mine minerals which they own located in OU 11, the proposed exchange of mining rights for property outside OU 11 was not acceptable to Mr. McKay (private landowner). In addition, the Bureau of Land Management (BLM) determined that the Rocky Flats Plant is outside BLM authority and has decided not to support the mineral assessment that is needed to determine the value of minerals in and near the West Spray Field. DOE will obtain mineral assessment support elsewhere and continue to negotiate with Mr. McKay regarding mining rights inside OU 11.

#### PLANNED WORK FOR JULY:

Begin finalization of the conditionally approved OU 11 RFI/RI Phase I Work Plan.

PROBLEMS: None

OPEN ITEMS: None

### 3.12 OU 12 - 400/800 AREA

#### DESCRIPTION:

The 400/800 Area involves assessment and remediation of the 11 IHSSs at the 400/800 Area, including: Multiple Solvent Spills at the West and South Loading Dock Areas (IHSSs 116.1 and 116.2); Fiberglassing Areas North and West of Building 664 (IHSSs 120.1 and 120.2); Cooling Tower Ponds - Northeast, South, and West of Building 460 (IHSSs 136.1, 136.2, and 136.3); Process Waste Leak - Owen Area (147.2); Radioactive Site - South Area (IHSS 157.2); Acid Leaks (2) (IHSS 187); and Multiple Acid Spills (IHSS 189).

Assessment will consist of preparing a Phase I RFI/RI Work Plan, which will include both an Environmental Evaluation and a Human Health Risk Assessment. After implementation of this work plan, fieldwork and sample analysis will be conducted, data will be analyzed, and the Phase I RI Report will be prepared. A Feasibility Study to determine the best methods to remediate the area will be conducted as part of the assessment.

Remediation will consist of development and execution of a Remedial Action Plan based on results obtained during the assessment phase of the project. This process includes review and approval by EPA and CDH, followed by a Record of Decision, release to the public, and implementation of the plan.

During April 1992, IHSS 147.1 (the Process Waste Leaks-Maas Area), was deleted from OU 12 and added to OU 9 as part of a IHSS realignment pursuant to Part 32, Paragraph 191 (Additional Work or Modification to Work) of the IAG. This change was recommended by DOE in the now-approved OU 9 Phase I RFI/RI Work Plan and approved by CDH and EPA in April 1992.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	08 May 92
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#### JUNE WORK ACTIVITY STATUS:

The Draft OU 12 RFI/RI Work Plan is currently undergoing EPA and CDH review. Comments are expected to be received from the regulatory agencies in early August. Preliminary discussion would indicate that only minor comment resolution will be needed on the OU 12 Work Plan, specifically the Field Sampling Plan portion of the document.

A tour was given of the OU 12 area for EPA and CDH on June 18, 1992.

**PLANNED WORK FOR JULY:**

Standard operating procedures for implementing the Field Sampling Plan will be developed.

Field work is scheduled to begin in November 1992 after approval of the OU 12 Final RFI/RI Work Plan to be submitted to EPA and CDH on October 5, 1992.

**PROBLEMS:**           None

**OPEN ITEMS:**       None

### 3.13 OU 13 - 100 AREA

#### DESCRIPTION:

Cleanup of the 100 Area involves the assessment and remediation of 14 IHSSs including: Chemical Storage - North, Middle, and South Sites (IHSSs 117.1, 117.2 and 117.3); Oil Burn Pit #1 (IHSS 128); Lithium Metal Destruction Site (IHSS 134); Waste Spills (IHSS 148); Fuel Oil Tank (IHSS 152); Radioactive Site - North Area (IHSS 157.1); Radioactive Site - Building 551 (IHSS 158); Waste Peroxide Drum Burial (IHSS 169); Solvent Burning Ground (IHSS 171); Valve Vault 12 (IHSS 186); Caustic Leak (IHSS 190); and the Hydrogen Peroxide Spill (IHSS 191).

Assessment will consist of preparing a Phase I RFI/RI Work Plan, which will include both an Environmental Evaluation and a Human Health Risk Assessment. After implementation of this work plan, fieldwork and sample analysis will be conducted, data will be analyzed, and the Phase I RI Report will be prepared. A Feasibility Study to determine the best methods to remediate the area will be conducted as part of the assessment.

Remediation will consist of development and execution of a Remedial Action Plan based on results obtained during the assessment phase of the project. This process includes review and approval by EPA and CDH, followed by a Record of Decision, release to the public, and implementation of the plan.

During April 1992, IHSS 122, the Underground Concrete Tank, was deleted from OU 13 and added to OU 9 as part of a IHSS realignment pursuant to Part 32, Paragraph 191 (Additional Work or Modification to Work) of the IAG. This change was recommended by DOE in the now-approved OU 9 Phase I RFI/RI Work Plan and approved by CDH and EPA in April 1992.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	15 May 92
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#### JUNE WORK ACTIVITY STATUS:

The Draft OU 13 RFI/RI Work Plan is currently undergoing EPA and CDH review. Regulatory agency comments are expected to be received by DOE in the beginning of August 1992. The subcontractor is preparing a comment summary document containing all comments on the plan.

**PLANNED WORK FOR JULY:**

The RFI/RI Work Plan will continue to be reviewed by EPA and CDH.

**PROBLEMS:**           None

**OPEN ITEMS:**       None

### 3.14 OU 14 - RADIOACTIVE SITES

#### DESCRIPTION:

Work at the "Radioactive Sites" involves the assessment and remediation of eight IHSSs, including: Radioactive Site - 700 Area Site #1 and Site #2 (IHSS 131); Radioactive Soil Burial - Building 334 Parking Lot and Soil Dump Area (IHSSs 156.1); Building 444 Parking Lot (IHSS 160) and Building 664 (IHSS 161); and Radioactive Site - 700 Area Site #2 (IHSS 162); and Radioactive Sites - 800 Area which includes the Concrete Slab, Building 886 Spills, and the Building 889 Storage Pad (IHSSs 164.1, 164.2, and 164.3). In 1991, one of two Soil Dump Area IHSSs (156.2) was deleted from OU 14 and added to OU 6.

Assessment will consist of preparing a Phase I RFI/RI Work Plan, which will include both an Environmental Evaluation and a Human Health Risk Assessment. After implementation of this work plan, fieldwork and sample analysis will be conducted, data will be analyzed, and the Phase I RI Report will be prepared. A Feasibility Study to determine the best methods to remediate the area will be conducted as part of the assessment.

Remediation will consist of development and execution of a Remedial Action Plan based on results obtained during the assessment phase of the project. This process includes review and approval by EPA and CDH, followed by a Record of Decision, release to the public, and implementation of the plan.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	26 Jun 92
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#### JUNE WORK ACTIVITY STATUS:

The Draft Final Phase I RFI/RI Work Plan for OU 14 was delivered to the regulatory agencies on June 26, 1992, the revised IAG milestone date.

#### PLANNED WORK FOR JULY:

EPA, CDH and the DOE Trustees will begin their review of the RFI/RI Work Plan.

### 3.15 OU 15 - INSIDE BUILDING CLOSURES

#### DESCRIPTION:

OU 15 is composed of six IHSSs including: Building 881 Drum Storage Area; Building 865 Drum Storage Area; Building 883 Drum Storage Area; Unit 45, Original Uranium Chip Roaster; Unit 26, Building 881 Drum Storage; and Unit 32, Building 881 - Cyanide Bench Scale Treatment. OU 15 will undergo RCRA closure of all IHSSs. The six IHSSs are currently listed as RCRA interim status units. Closure Plans for the facilities were submitted to CDH in 1988 and again in 1989. The major activity proposed is characterization and decontamination, if applicable, of the concrete floors at the indoor facilities. Drums and dumpsters containing solids and liquids were stored at these facilities. Types of waste included oils, coolants and solvents containing chlorinated hydrocarbons (RCRA F001 and F002 wastes) and waste paints and waste metals contaminated with solvents. Hazardous constituents include chlorinated solvents, beryllium, and uranium.

During April 1992, IHSS 215, Unit 55.13-Tank T-40, was deleted from OU 15 and added to OU 9 as part of a IHSS realignment pursuant to Part 32, Paragraph 191 (Additional Work or Modification to Work) of the IAG. This change was recommended by DOE in the now-approved OU 9 Phase I RFI/RI Work Plan and approved by CDH and EPA in April 1992.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Phase I RFI/RI Work Plan	01 Jun 92
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#### JUNE WORK ACTIVITY STATUS:

The OU 15 Draft Phase I RFI/RI Work Plan was delivered to EPA and CDH on May 27, 1992, five days before the IAG milestone date of June 1, 1992. EPA and CDH are reviewing the work plan.

#### PLANNED WORK FOR JULY:

EPA and CDH comments on the work plan are expected in August 1992.

PROBLEMS: None

### 3.16 OU 16 - LOW PRIORITY SITES

#### DESCRIPTION:

This assessment activity consists of preparing a "No Further Action Justification Document" for 7 IHSSs, including: Solvent Spill, Antifreeze Discharge, Steam Condensate Leaks, Nickel Carbonyl Disposal, Water Treatment Plant Backwash Pond, and Scrap Metal Sites. In addition, the draft document must be reviewed, comments resolved, and the draft finalized. EPA will then review the final draft "No Further Action Justification Document".

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft No Further Action Justification Document 04 Mar 92

#### JUNE WORK ACTIVITY STATUS:

A meeting was held among EPA, CDH, DOE and EG&G on June 1, 1992 at EPA regarding comments on the draft Final No Further Action Justification Document. The next milestone date is July 30, 1992 to submit the Final No Further Action Justification Document to the regulatory agencies.

#### PLANNED WORK FOR JULY:

EPA and CDH comments will be incorporated into the Final No Further Action Justification Document. The document will be delivered to EPA and CDH on July 30, 1992, the IAG milestone date.

PROBLEMS: None

OPEN ITEMS: None

### 3.17 SITEWIDE ACTIVITIES

#### DESCRIPTION:

Sitewide activities include several tasks that encompass a wide variety of plans, procedures, reports, studies, and other activities required by the IAG and that apply to RFP environmental restoration activities in general. The activities include, but are not limited to, the Health and Safety Plan, a Sampling and Analysis Plan, a Plan for Prevention of Contaminant Dispersion, the Community Relations Plan, the Discharge Limits for Radionuclides Work Plan, Treatability Study deliverables, the Background Study Plan, Administrative Record, State Response (support for CDH oversight), Historical Release Report, Operations Management, Decontamination Facilities, Contractor yard support, ER Waste handling facilities, geologic characterization, hydrogeologic characterization, and ground water monitoring.

SCOPE OF WORK CHANGES THIS REPORTING PERIOD: None

TECHNICAL APPROACH CHANGES THIS REPORTING PERIOD: None

#### IAG MILESTONE ACCOMPLISHMENTS:

Submit Draft Background Study Report (Water)	15 Dec 89
Submit Draft Background Study Report (Soils)	15 Dec 89
Submit Draft Community Survey Plan	23 Jan 90
Submit Final Community Survey Plan	22 Mar 90
Submit Draft Health and Safety Plan	15 Aug 90
Submit Draft Quality Assurance Project Plan	29 Aug 90
Submit Draft Standard Operating Procedures	29 Aug 90
Submit Draft Plan for Prevention of Contaminant Dispersion	19 Sep 90
Submit Draft Treatability Study Plan	21 Sep 90
Submit Draft Community Relations Plan	01 Nov 90
Submit Final Health and Safety Plan	12 Nov 90
Submit Revised Background Study Report	21 Dec 90
Submit Final Community Relations Plan	22 Jan 91
Submit Final Quality Assurance Project Plan	01 Mar 91
Submit Final Standard Operating Procedures	01 Mar 91
Submit Draft Radionuclides Discharge Limits Plan	05 Apr 91
Submit Community Relations Plan Responsiveness Summary	21 Jun 91
Submit Final Treatability Study Plan	03 Jun 91
Submit Final Plan for Prevention of Contaminant Dispersion	22 Jul 91
Submit Final Plan Discharge Limits Radionuclides	16 Sep 91
Submit Final PPCD and Responsiveness Summary	25 Nov 91
Submit Draft Historical Release Report	08 Jan 92
Submit Responsiveness Summary for DLRP	31 Jan 92
Submit Final Historical Release Report	03 Jun 92

**JUNE WORK ACTIVITY STATUS:**

**Historical Release Report**

The Final Historical Release Report was submitted on May 29, 1992, three days ahead of the IAG milestone date. The quarterly update to the Historical Release Report is scheduled to start September 30, 1992, pending budget approval.

**Administrative Record**

The quarterly update of the Administrative Record (AR) File was delivered to EPA and CDH on June 3, 1992. An update of the microfiche and Index for Operable Unit No. 4 and the Sitewide File was delivered to the four repositories, Rocky Flats, Reading Room, Rocky Flats Environmental Monitoring Council, CDH and EPA on June 3, 1992.

Verbal approval by EPA was given to extend the public comment period on the Proposed Subsurface Interim Measures/Interim Remedial Action Plan Environmental Assessment and Decision Document for Operable Unit No. 2 (OU 2) - 903 Pad, Mound and East Trenches from June 9, 1992 until July 9, 1992. OU 2 AR files were placed in the four repositories on June 8, 1992 so that the AR file would be available at the beginning of this extended comment period.

Approval from EPA and CDH is needed to place all 16 OU AR files in the repositories for public review. As of June 12, 1992, OUs 2 and 4, and the Sitewide Files are the only AR files the public can view.

**PLANNED WORK FOR JULY:**

Work will continue on development of the Protected Area/ Interim Remedial Action Plan/ Environmental Assessment (PA/IRAP/EA).

Work will continue on planning the PA decontamination facilities in order to facilitate remediation efforts inside the PA.

**PROBLEMS:**       None

**OPEN ITEMS:**    None

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#### 4.0 ROUTINE ENVIRONMENTAL MONITORING

The following generalized sampling schedule for Routine Environmental Monitoring is provided as requested in Section 210 of the IAG. Detailed quarterly monitoring schedules are prepared in advance and are available to EPA and CDH upon request from the Environmental Management Department and EG&G Rocky Flats, Inc. The schedules are lengthy; therefore, they are not reproduced here. An EPA- or State-authorized representative may make arrangements to observe fieldwork and to obtain split or duplicate samples.

##### SURFACE WATER AND SEDIMENTS:

Each of the Surface Water Stations (approximately 30 stations) are sampled quarterly.

Each of the Sediment Stations (approximately 10 stations) are sampled quarterly.

Each surface water and sediment sample is analyzed for the following parameters:

CLP TCL VOAs	Major Anions
CLP TAL Metals	Radionuclides
plus Cesium	Field Parameters
Lithium	pH
Molybdenum	Temperature
Strontium	Specific Conductivity
Tin	Dissolved Oxygen (DO)
	Turbidity

##### SOILS:

Each of the Soil Stations (located at 1- and 2-mile radii from the plant center) are sampled annually.

Each soil sample is analyzed for plutonium and americium.

##### GROUND WATER:

A total of 259 of the 371 total Ground water Stations are sampled quarterly; this includes alluvial wells, bedrock wells, and pre-1986 wells. Approximately one third of the wells are monitored monthly for water levels.

Each ground water sample is analyzed for CLP, TCL, VOAs, CLP, TAL, Metals, as well as the following parameters:

<u>Radiochemical Parameters</u>	<u>Inorganic Parameters</u>	<u>Field Parameters</u>
Gross Alpha	Tritium	Nitrate/Nitrite
Gross Beta	Lithium	Total Phosphorous
Plutonium	Uranium	Ortho-Phosphate
Americium	Cesium	Ammonia
Strontium	Tin	
Molybdenum		

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### 5.0 CONTRACTOR/SUBCONTRACTOR IDENTIFICATION

Contractors and subcontractors being used on the Rocky Flats Plant Environmental Restoration Program and the work they are performing are identified on the following list as required by paragraph 13 of the IAG.

OU	PROJECT	SUBCONTRACTOR	SUB-SUBCONTRACTOR	WORK DESCRIPTION	START DATE
1	Assessment	Ebasco	Dames & Moore Stoller Corp.	OU1 RF/RI fieldwork (drilling, well development/ completion, sampling) and RI report	Apr-91
1	Remediation	Advance Tanks		Fabricate/Install effluent storage tanks for OU1 IRA	Oct-91
1	Remediation	Bruner		OU1 IRA ion exchange system	Feb-91
1	Remediation	E.T. LaFore		Installation of Phase II-A treatment system equipment for OU1 IRA	Jun-91
1	Remediation	Eng Sciences		Design Phase II-B French drain for OU1 881 Hillside IRA	Sep-90
1	Remediation	Jennison		Construct Phase II-B French drain at OU1 IRA	Aug-91
1	Remediation	P.S.I.		UV bench scale testing for volatile organics	Aug-91
2	Assessment	Woodward-Clyde		OU2 RF/RI Work Plan (alluvial & bedrock) and RI fieldwork (drilling, well completion/development)	Sep-90
2	Assessment	Weston		OU2 RF/RI Alluvial Work Plan	Nov-90
2	Remediation	Riedel Env. Svcs.		Fabricate/Install/operate GAC/FTU system for South Walnut Creek Phase of OU2 IRA.	Apr-91
2	Remediation	Stearns Rogers		Performance Specification for chemical precipitation/ membrane/filtration system for South Walnut Creek Phase of OU2 IRA	Jun-91
2	Remediation	Weston		IRAP, EA, Risk Assessment, and Historical Assessment for Women Creek	Jun-91
2	Remediation	Woodward-Clyde		Conduct bench-scale tests on surface water	May-91
2	Remediation	TBD		Mfg/Install chemical precipitation/filtration unit for South Walnut Creek Phase of OU 2 IRA	Dec-91
3	Assessment	IT Corporation	CH2M Hill	OU3 RI Work Plan	Mar-91
3	Assessment	IT Corporation	CH2M Hill	Revegetate offsite lands	Jun-91
4	Assessment	IT Corporation	Applied Environ.	OU4 RF/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Sep-91
4	Remediation	IT Corporation		Prepare OU4 IMIRA Action Plan	Jul-90
5	Assessment	Woodward-Clyde		OU5 RF/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Feb-90
6	Assessment	Woodward-Clyde		OU6 RF/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Feb-90

OU	PROJECT	SUBCONTRACTOR	SUB-SUBCONTRACTOR	WORK DESCRIPTION	START DATE
7	Assessment	IT Corporation	Stoller Corp.	OU7 RF/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Apr-90
9	Assessment	IT Corporation		OU9 RF/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Mar-90
10	Assessment	Ebasco		OU10 RF/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Jun-90
11	Assessment	IT Corporation		OU11 RF/RI Work Plan including Environmental Evaluation Plan and Quality Assurance Addendum	Oct-91
SW	Hist. Rel. Rep.	IT Corporation	Doty & Assoc.	Prepare Historical Release Report	Feb-91
SW	PCB Assess.	Ebasco	Stoller Corp.	Prepare PCB Assessment Report	Jan-92
SW	Adm. Record	QuantaLex		Maintain IAG Administrative Record	Oct-90
SW	Geolog. Char.	ASI		Geologic Characterization, Data Base, and graphics	Feb-90
SW	Monitoring	Ebasco		Analytical Services for groundwater, surface water, and sediment	Dec-90
SW	Monitoring	IT Corporation		Analytical Services for groundwater, surface water, and sediment	Jul-90
SW	Fid. Oversight	Ebasco	Stoller Corp.	ER field operations oversight	Oct-90
SW	Treatability	Ebasco		Sitewide treatability studies - Pu contaminated soils	Apr-90
SW	Treatability	Woodward-Clyde		Technical evaluation of sitewide treatability studies	Jul-90
SW	PPCD	Ebasco		Plan for Prevention of Contaminant Dispersion	Jun-90
SW	QA	Ebasco	SAIC	Develop and implement quality assurance program and field operations oversight	Dec-90
PM	Support	Ebasco	Stoller Corp.	Program Management Support	Feb-90