

00004768 (A)

EG&G ROCKY FLATS

100394-15

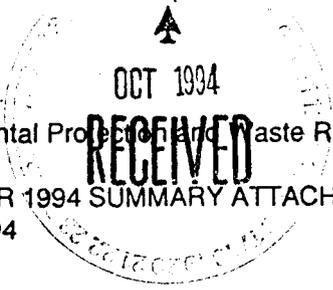
INTEROFFICE CORRESPONDENCE

DATE: September 27, 1994

TO: Distribution

FROM: H. L. Goe, Environmental Protection and Waste Reporting, B-59030, X3832

SUBJECT: REVIEW OF MID-YEAR 1994 SUMMARY ATTACHMENT TO 1993 SITE ENVIRONMENTAL REPORT - HLG-063-94



11000	Stiger
11100	
11200	
11300	
11400	
11500	
11600	
11700	

Each year the Site Environmental Report (SER) is published and distributed with a transmittal memorandum from DOE/RFEO and an attachment summarizing any additional significant environmental compliance issues, events, or noteworthy practices that have emerged during the first half of the calendar year prior to the actual publication of the SER (November).

The attached summary has been gleaned from Divisional Highlights, CPAF Assessments, and articles from *The Horizon* and the *Up-Front*. Selection of information was based on whether it (1) fit the DOE Guidelines' criteria given above; (2) occurred between January 1 and June 30, 1994; (3) would be of interest to the general public; and (4) would convey some sense of accomplishment to RFETS employees and the public.

We are requesting that your Division verify the accuracy of the summary within the area of your responsibility. Space is limited; should you wish to include a more important issue or event, please delete a less vital one in exchange.

Please indicate your review of this material by returning the attached form (and redlined copy, if applicable) to Joan Novy, EPR, T893B (extension 8336), by Tuesday, October 11, 1994. Thank you for your help.

JBN:pfj

Attachments:
As Stated

Distribution:

- S. A. Anderson
- K. Bentzen
- C. Burns
- J. A. Ciucci
- D. B. Costain
- J. A. Detamore
- W. A. Franz
- P. A. Lee
- S. A. Marshall
- S. M. Nesta
- R. C. Nininger
- J. B. Novy
- G. L. Potter
- C. D. Reno
- J. I. Reynolds
- A. L. Schubert
- G. H. Setlock
- S. H. Singer

- cc:
- T. G. Hedahl with attachments
 - S. G. Stiger with attachments

ADMIN RECORD
SW-A-003759

REVIEW OF MID-YEAR 1994 SUMMARY
ATTACHMENT TO 1993, SITE ENVIRONMENTAL REPORT

We have reviewed the attached material that is applicable to our Division
and made any recommendations for changes or revisions as shown.

<hr/> Name	<hr/> Division	<hr/> Date
------------	----------------	------------

Please return by October 11, 1994 (with redlined copy, if applicable) to:

Joan Novy
EPR
T893B

Rocky Flats Environmental Technology Site

1994 MID-YEAR ENVIRONMENTAL SUMMARY

(NOTE: In July of 1994, Rocky Flats Plant was renamed Rocky Flats Environmental Technology Site and the Colorado Department of Health also changed its name to the Colorado Department of Public Health and Environment. Most of the events and issues noted in this summary occurred prior to those name changes and therefore, prior names have been retained for this report.)

Significant Compliance Issues

Operable Unit 16

The public comment period for RFP Operable Unit 16: Low Priority Sites was held from November 8, 1993 through February 7, 1994. A remedy of "No Action" is proposed for five of the seven areas in OU 16, while two areas will be incorporated into more appropriate operable units for further investigation.

Update on Boundary Wells

First-quarter data for the boundary (Indiana St.) wells were retrieved on June 20, 1994. There were no detected Volatile Organic Compounds (VOCs) in samples collected during that period. Of those metals having an EPA primary drinking water standard (DWS), only the single value for selenium exceeded the standards. None of the results for dissolved radionuclides were above the value of the background mean plus two standard deviations. Both plutonium and americium activities were less than 0.05 pCi/L for all boundary wells.

Four new wells are currently being installed in the Walnut Creek drainage upgradient of Well 41691. Surface casing has been installed for the two offsite wells downgradient of 41691. Data from these wells are expected to verify that RFP is not adversely impacting residential groundwater drinking water. Monitoring data from old wells in this drainage area were inconclusive. Therefore a more conservative approach was taken in the past in assessing the radiation dose to the public in the drinking water pathway. That approach assumed that the drinking water source for CY1993 was Pond C-2 and was very conservative. When more reliable data are available from the new boundary wells, the prior conservative approach will no longer be applied.

New Sanitary Landfill

The Finding of No Significant Impact (FONSI) for the New Sanitary Landfill was received in February 1994.

Pond Water Management

Region VIII of EPA formally notified DOE, RFFO that a request for a 60-day delay to allow the DOE, RFFO manager to examine issues relating to the Pond Water Management Interim Measures/Interim Remedial Action (IM/IRA) was denied. Under the Interagency Agreement (IAG), DOE can invoke dispute resolution, but unlike previous disputes, EPA is holding DOE to the milestones assigned by EPA on January 10, 1994, claiming stipulated penalties will accrue during the dispute period. Surface Water (SW) personnel are assisting DOE, RFFO program personnel in developing response alternatives for review.

DOE has informally denied SW's request to pursue the South Interceptor Ditch Reconstruction Title II Design while awaiting completion of the NEPA Environmental Assessment. This will result in an approximate 9 month project completion extension and may mean that the use of sandbags to prevent ditch overflow will be required in 1994 and 1995.

Sierra Club v. DOE

RFP provided extensive support to CDH and DOE during the final negotiations for a new permitting schedule for U. S. District Court in Sierra Club v. DOE. Judge Babcock signed into effect the new permitting schedule for mixed residue containers. The schedule required submittal of revised drawings and submittal of proposed permit conditions between February and August 1994.

Solar Pond Sludge Removal

Upon approvals by both CDH and DOE, work began on sludge removal from Solar Pond B-South as the first step in remediation and final closure of the ponds under RCRA and CERCLA regulations. The sludge was sucked from the pond using a vacuum truck and transported for placement in 10,000 gallon polyethylene tanks for temporary onsite storage. Seventy tanks are located in tents at a permitted storage area in the 750 area. The emptying of 200,000 gallons of

Compliance Issues

sludge was completed the first week in May; the sludge filled 27 of the 70 storage tanks. Emptying of 500,000 gallons of sludge from Pond C is scheduled to follow. Eventually, the sludge may be transported to Nevada Test Site for disposal. Final removal of all sludges is scheduled to be completed by the January 20, 1995 Interagency Agreement milestone.

IAG To Become RFCA

DOE, EPA, and CDH are renegotiating the current Interagency Agreement (IAG) in an effort to conduct cleanup better, faster, and more cost-effectively. The 1991 IAG milestones were based on available field conditions, time frames, and estimated budget requirements thought at that time to be achievable. The agreement established fixed schedules for a work scope that at that time was not well known or well defined, and is, in fact, still evolving. In February 1994, the regulatory agencies formally announced their consideration of the Rocky Flats Cleanup Agreement (RFCA) to replace the IAG and followed with public involvement in the spring of 1994 on the issues being proposed for negotiation. A draft of the RFCA may be available by the fall of 1994.

Cleanup Deadlines

RFP missed several cleanup deadlines, forcing the plant in July 1994 to pay \$2.8 million in fines to state and federal environmental regulators.

ALARA Control Level

In July 1994, the RFP ALARA Oversight Committee lowered the site whole-body Administrative Control Level (ACL) from 1 rem to .75 rem per year (750 mrem). The change was based on a negative trend in site radiation dose data for the past two years. The ACL was lowered in September 1993 from 1.8 rem to 1 rem per year. ACL is synonymous with Administrative Dose Guide (ADG), and is a numerical dose constraint established at a level below the regulatory limits to administratively control and help reduce individual and collective doses. The whole-body ACL does not include dose equivalents from internal exposure which occurred in previous years. It is established to control whole-body radiation doses below the federal limit of 5 rem per year and the DOE ACL limit of 2 rem per year. The ACL is reviewed annually and may be raised or lowered depending on prevailing dose data.

FFCA Compliance

A milestone under the Land Disposal Restriction (LDR) Federal Facility Compliance Agreement (FFCA) was completed a month ahead of schedule. Two hundred backlog drums were dispositioned, surpassing the interim commitment of 191 drums by May 2, 1994.

Solution Stabilization

Seven batches of toxic characteristic metal wastes and 18 neutralized D002 drums had been processed by June 1994 through the Building 774 Bottle Box in support of Phase I Solution Stabilization.

Chemical Consolidation

A total of 598 excess chemicals were dispositioned from nine different buildings on plantsite through the excess chemical consolidation effort. During the fall of 1993, approximately 14,000 chemicals were identified as excess and characterized as either waste or product. The chemical consolidation effort then focused on packaging and moving waste chemicals out of buildings.

Colorado Water Quality Control Commission

At the South Platte River triennial rule-making hearing of April 4, 1994, RFP requested and was granted an extension of the temporary modifications of site specific radionuclide standards until December 31, 1996. A decision on the RFP petition to remove the aquatic life classification for Segments 4 and 5 of Big Dry Creek was deferred until May 1995.

Residue Elimination Project Conceptual Design Report (CDR)

The final CDR was published on May 17, 1994 and represents a baseline for the Residue Management Program. The CDR describes a method to treat residues for shipment and disposal using a comprehensive facility. The CDR responds to the requirements of the Compliance Order and was submitted to request approval of new start, in accordance with DOE Order 4700.1.

CDH Inspection

CDH inspected the 750/904 pads on April 14, 1994 and identified no concerns over the pad runoff water quality; as a result, no changes in monitoring are required.

Rocky Flats Environmental Technology Site
1994 Mid-Year Environmental Summary

Compliance Issues

Categorical Exclusion (CX)

The CX for the 1994 Well Abandonment and Replacement Program was approved on April 15, 1994. In May, a CX for Background Soils Characterization was approved by DOE.

Residues Meet Judicial Order

All requirements identified in the February 1994 judicial order issued by federal judge Lewis T. Babcock regarding the ongoing Sierra Club lawsuit on mixed residues have been delivered to DOE, RFFO and the Colorado Department of Health. The judicial order required revised drawings of rooms to be permitted for storage of mixed residues, smoke-test results and air-flow patterns for five vaults, a proposal for relabeling containers, a proposal for a 180-day schedule for closure of container storage units and a quarterly progress report discussing the status of these requirements. A follow-up judicial order is expected later in 1994.

Tank Management Program

The Tank Management Program is on track and will be completed by the end of September. Based on inventory work to date, the current estimate of the number of tanks at RFP is 3,483 of which approximately one half had been inventoried by the end of March.

Characterization of Electrorefining Salts

In response to Defense Board concerns about residue characterization, program action plans were developed for the characterization of electrorefining salts and other residues. Results, when available, will confirm or refute current concerns regarding residue safety and/or characterization. The analytical work was completed in February 1994, and the initial draft of a test report was prepared in March 1994.

Soil Vapor Extraction Project

When the pilot project for testing soil vapor extraction in the East Trenches of Operable Unit (OU) 2 ended on June 6, 1994, a total of 260 pounds of volatile organic compounds had been removed from the soils and treated. Begun on February 6, 1994, the technique removes air containing volatile organic compounds from unsaturated soil. The process includes injecting fresh air or creating a vacuum in the subsurface so the vapor-laden air can be withdrawn from the recovery or extraction wells, thereby reducing public and worker exposure. The project cost is \$5.3 million in Fiscal Year

1994 and includes test site 1 capital equipment procurement; soil vapor extraction operations and reporting; test site 2 design and capital equipment; and planning of the test site 3 work.

Teacher Research Associates (TRAC) Program

Two high school teachers were sent to RFP under DOE's Teacher Research Associates Program during the summer of 1994 and were assigned to the Ecology and NEPA Division to work on general research topics in their fields of expertise.

Small Mammal Trapping

The spring small mammal live-trapping exercise under the Ecological Monitoring Program (EcMP) was conducted at four sites representing riparian, mesic, xeric, and reclaimed communities. One hundred traps were baited and set at each site for three consecutive nights.

Preliminary results showed the predominance of the deer mouse at most sites. Small mammals are often used as evaluation tools because of their close association with contaminants (especially soil contaminants) and because of their importance as a food source for other mammals, reptiles, and birds.

During the spring mammal trapping exercise at a xeric grassland site, the EcMP team captured a new mouse species for RFP, the plains pocket mouse.

Building 779 Chiller Problem

A chiller in Building 779 lost approximately 1,200 pounds of Freon-11, possibly due to manual purging of contaminants from the system. The loss did not meet the designation of catastrophic, nor was the chiller required to be registered with the Health Department until January 25, 1995. The Air Quality Division and Building 779 management personnel avoided possible adverse regulatory action by promptly and thoroughly addressing the loss of the entire refrigerant charge in number 006 chiller. An action plan to help prevent similar leaks was developed, and measures were taken to prevent reoccurrence.

Compliance Issues

AHEAD OF SCHEDULE AND/OR UNDER BUDGET

The scoping of the saltcrete characterization project to achieve RCRA and Land Disposal Restriction compliance was completed at least one year ahead of schedule.

Construction of the Centralized Waste Storage Facility is one month ahead of schedule.

Title I design of Sewage Treatment Plan Upgrades Phase II was performed and completed during this rating period. The final costs for this portion of the project were \$94,600 under budget.

The Kansas City Equipment Relocation project returned \$333,000 to management reserves by eliminating the need for construction management and by using simplified engineering package technology.

Emergency Preparedness (EP) returned \$185,000 to the Plant Change Control Board management reserve fund as a result of improvements in the building emergency plan development process. In addition, EP eliminated the Emergency Supplies Trailer and Emergency Control Station Trailer resulting in a cost savings of approximately \$42,000.

Two thousand gallons of diesel fuel from Building 771 were shipped in support of the effort to empty the underground storage tanks for remediation. By shipping bulk, approximately \$25,000 was saved.

Performance Improvement Team efforts on Plant Procedures resulted in a savings of \$33,229 for Fire Protection work packages.

About 14,000 pounds of uranium-contaminated scrap metal was decontaminated over a two-year old pilot program. Surveys showed that the treated material was clean enough to be sold to private scrap metal vendors after being decontaminated by means of carbon dioxide pellet blasting.

The Building 374 Waste System Evaporator project was rescoped to be in line with the changing plant mission. The new scope of the project is estimated to cost \$18.4 million, a \$3 million dollar reduction from the original total project cost.

Environmental and NEPA Division ecologists saved over \$100,000 in construction costs by determining that a liner for the South Interceptor Ditch, and subsequent wetland mitigation were not needed. The seep flow below the South Interceptor Ditch was determined to be groundwater and not surface water discharge from the ditch.

A demonstration of the use of electrochemical chlorination to destroy Cadmium Cyanide solution in plating bath waste was completed in May 1994. The study was completed under budget and demonstrated successful destruction of LLM waste.

Cost Productivity savings of \$3.8 million dollars were realized in the Building 371 Stabilization program. These funds were returned through the change control process.

Rocky Flats Environmental Technology Site
1994 Mid-Year Environmental Summary

Significant Events

January 18

RFP received written approval from the Nevada Test Site (NTS) to ship and dispose of low-level waste (LLW) generated throughout the plantsite. Efforts are currently underway to certify, load, and ship 104 drums of LLW to NTS.

February 14

Building 664 Operations completed a shipment of 104 low-level waste (LLW) containers to the Nevada Test Site, marking the beginning of increased shipments of LLW to Nevada. A second shipment was completed on March 28, 1994.

In response to Defense Nuclear Facilities Safety Board concerns about residue characterization, program action plans were developed for the characterization of electrorefining salts and other residues. Results, when available, will confirm or refute current concerns regarding residue safety and/or characterization. The analytical work was completed in February 1994, and the initial draft of a test report was prepared in March 1994.

March 1

RFP submitted the EPCRA Tier II Report to state and local emergency planning agencies, listing hazardous and extremely hazardous substances stored above certain reporting thresholds.

March 17

The City of Boulder gave permission for soil samples to be taken from 26 sites around RFP, mostly east and southeast of the plant, for testing of possible plutonium and americium contamination. The Citizens Environmental Sampling Committee is able to choose sample sites, methods, and analyses independently from DOE, CDH, or other agencies involved in health studies at RFP.

March 17

Excessive plutonium levels were found in well samples along the eastern edge of RFP. Monitoring indicated levels of the radioactive element and americium which may exceed standards for the site. DOE, EPA, and CDH agreed to have additional data collected. Officials believed the contamination to be in the sediment rather than in the groundwater.

March 24 - 25

Secretary of Energy, Hazel O'Leary visited RFP for two days. Her agenda included discussion of declassification of secret information, cleanup of the RFP site, and change of the mission of the plant from weapons production to environmental restoration. Discussions held with plant employees brought out concerns over jobs, benefits, and health issues.

March 31

Approximately 35 gallons of decanted (no sludge) pond water was released to the asphalt during transport from the 750 Pad to the 231 tanks. This water was reported to have 1150 picocuries per liter alpha radiation and a PH level of 10 when the sample was evaluated on March 30, 1994. A radiation survey was made at the spill locations along the route of the tanker truck and on the surface of the truck. All surveyed areas were found to be below background level. The National Response Center was notified, a contingency plan was implemented, and all tanker operations from this area were temporarily curtailed. No adverse effects to the health and safety of the public, RFP personnel, equipment, facilities or the environment occurred.

March 5

A temporary shutdown of the sulfonator portion of the autochlor/dechlor system occurred at the Wastewater Treatment Plant (WWTP) on March 5th. This shutdown lasted approximately 30-35 minutes, during which time the Total Residual Chlorine (TRC) measurements were too high to measure. The WWTP Operator's Log showed that the system was back in operation at 10:35, and TRC results were within normal ranges. No unusual or noncompliant TRC measurements were observed at Pond B-3, which has an effluent limitation of 0.5 mg/L as a daily maximum.

March 22

A grass fire occurred in the northeast portion of the Rocky Flats Buffer Zone, three quarters of a mile west of Indiana Street and Highway 128 intersection. The fire consumed approximately 75 acres and could be seen from 15 miles away. The probable cause was discarded material (such as a cigarette butt). The grass fire was the largest in the last 17 years at RFP. Firefighters had to chase it for about three-quarters of a mile before it was stopped on the south side by a firebreak road. The boundaries of the fire did not encroach on any identified cleanup areas on the RFP site. The area is not

Significant Events

downwind from any of the historical air releases from RFP that have resulted in soil contamination. Sampling of the area found no above-background radioactive contamination.

Spring Pond Discharges

During March, there was continuous discharge from Pond B-3 and the Wastewater Treatment Plant (WWTP). Pond A-4 began continuous discharge on March 23rd, and continued through March 31. Pond B-5 began continuous discharge on March 23rd, and continued until March 24th, at which time direct discharge was halted and transfer to Pond A-4 commenced through March 31st.

There were no discharges from Pond A-3 or Pond C-2 during the month of March. On March 22nd, the WWTP effluent was diverted from its normal route to Pond B-3 to Pond B-1 to prevent Pond B-1 sediments from becoming exposed due to low water levels.

In May the Surface Water group completed transfer of water from Ponds A-3 and B-5 to Pond A-4, and completed the discharge of Pond A-4 to Walnut Creek. In all, 20.2 million gallons were transferred and 8.6 million gallons of water were discharged to the Broomfield Diversion Canal.

April 12

A large snowmelt runoff event provided an excellent opportunity to make discharge measurements for rating flow control structures in the RFP stormwater monitoring network. Surface Water Division personnel read staff gages, flow meters, and crest stage indicators and also collected suspended sediment samples. Data from this field trip were faxed to the United States Geological Society (USGS). The RFP stream gaging and stormwater monitoring network is 95% operational.

April 28 and 29 and May 6

RFP's first-ever *Bring Your Daughter to Work Day* brought 1,300 children to see the activities of their parents first-hand.

July

Seven Russian scientists and technicians visited RFP in July 1994 under DOE's Openness Initiative in what U.S. officials hope will be the first of many between Russia and the U.S. to facilities that contain nuclear weapons materials. The ultimate goal is to make sure

the reduction of nuclear weapons by the two countries is irreversible. In early August, the U.S. sent a 12-member inspection team to Tomsk-7, a Russian plutonium storage facility about 1,000 miles east of Moscow. The team included Bill Rask from RFP. The Russians will return to RFP in September 1994 for further testing and verification of SNM inside of drums.

July 23

A 1,000-gallon water leak was discovered in Building 881 which houses a central computer facility, general laboratories and offices on the south side of RFP. The leak activated the emergency operations center but was contained onsite. Tests of the water found no radioactivity above background levels.

Los Alamos Lab Agreement

DOE officials announced that the Los Alamos National Laboratory has been hired to develop unique technical approaches to environmental cleanup and restoration activities at RFP. Valued at \$30 - \$50 million, the work will begin October 1, 1994. Near-term projects include timely stabilization of hazardous plutonium-containing solutions and disposition of highly enriched uranium.

On-going projects include attaining effective treatment and disposition of all plutonium-containing residue; providing analytical chemistry support; establishing plutonium storage criteria; and achieving environmental remediation and decontamination and decommissioning of facilities. Environmental remediation technology and plutonium residue treatment processes will be jointly developed at Los Alamos by Los Alamos and Rocky Flats employees. The technology and processes will then be transferred to Rocky Flats.