NOTICE

All drawings located at the end of the document.

8382

EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC.
ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

October 18, 1991

91-RF-6769

Robert M. Nelson, Jr.
Manager
DOE, RFO

Attn: F. R. Lockhart

RESPONSES TO EPA COMMENTS ON TECHNICAL MEMORANDA 1 and 2, AND OTHER OPERABLE UNIT NO. 1 (OU 1) REMEDIAL INVESTIGATION (RI) ISSUES - JEE-0325-91

Refs: (a) M. Hestmark ltr to F. R. Lockhart, OU 1 Technical Memorandum 1

(b) M. Hestmark ltr to F. R. Lockhart, OU 1 Technical Memorandum 2, September 3, 1991

Attached is Technical Memorandum 1, the Chemical Analysis Plan, which has been implemented following Environmental Protection Agency (EPA) and Colorado Department of Health (CDH) modifications. The revised Figure 1 incorporating the EPA and CDH modifications has been attached for your reference. This clearly outlines the program currently underway on the 881 Hillside.

On September 3, 1991, EPA responded to Technical Memorandum 2, Department of Energy (DOE) Response to August 1, 1991 EPA comments. This EPA letter is attached for your reference. In this September 3, 1991 response, EPA requested clarification on two points. The first point is EPA's request for non-aqueous phase liquids (NAPL) sampling. As described in Technical Memorandum 2, NAPL sampling will be conducted using the bailers specifically designed for this work. In conjunction with the NAPL sampling, the EPA letter of September 3, 1991 requests a table listing sample sites with detections of elevated chlorinated solvents. Table 2-20 of the Final Phase III RCRA Facilities Investigation/Remedial Investigation (RFI/RI) Work Plan lists all detections of volatile organic compounds from fourth quarter 1986 through first quarter 1990. The chlorinated solvents are included in this table. Additionally, trichloroethene and tetrachloroethene concentrations are shown plotted on Figures 2-11 and 2-12, respectively, of the same document.

Based on the Phase I and II data, and the data generated from all other 881 Hillside work (i.e., french drain, RCRA), the wells which have shown detectable levels of chlorinated solvents and are currently scheduled for NAPL sampling include 4387, 0974, 1074 and 0487. The NAPL sampling program will be re-evaluated after this initial sampling, and expanded if results deem it appropriate.

The second point pertains to the air monitoring program for OU 1. The EPA remarks focused on concern that an adequate evaluation of the air pathway was being developed to support the baseline risk assessment. The OU 1 baseline risk assessment is not employing direct measurement of air concentrations as the primary means of estimating exposure to humans. Instead, the airborne exposure pathway will be assessed using air-dispersion modeling techniques. Data derived from existing air measurement systems (i.e., the Radionuclide Ambient Air Monitoring Program [RAAMP]) will be used to guide model development and calibration, as will air quality data developed during RFI/RI field activities. RAAMP measurements include Plutonium 238 and 239, which are also major contaminants of concern in surface soils. RFI/RI air quality data include real time volatile organic

carbon (VOC) and total suspended particulate (TSP) measurements, as well as 881 Hillside high volume air sampler measurements that are taken as part of our worker health and safety, Interim Plan for Prevention of Contaminant Dispersion (IPPCD) and construction compliance monitoring activities.

Modeling will be employed as the primary means of estimating air pathway exposures because the air pathway is not regarded as a major contributor to public exposure and subsequent risk for OU1. This is based on the consideration that:

1) Surface contamination is the main source for the air pathway. Such contamination is generally regarded as being present at low concentrations relative to concentrations associated with appreciable human health concerns. Plutonium 238 and 239 are major contaminants of concern in surface soils and are routinely measured by the RAAMP.

2) Wind-produced resuspension and resuspension from periodic vehicular traffic are the pertinent air pathway release mechanisms. Characteristic heavy vegetation at the 881 Hillside is effective at minimizing wind-related resuspension, and the small amount of significant dust-producing vehicular traffic suggests that such releases are not appreciable.

3) The nearest potentially exposed individual along the principal westerly and northwesterly wind vectors is nearly two miles away. The associated dispersion of particulates as they travel along this pathway is expected to produce significant attenuation of the relatively minor releases discussed above.

Modeling techniques will be discussed with EPA and CDH in upcoming Risk Assessment Technical Working Group Meetings. Additionally, under the Interagency Agreement (IAG), DOE must submit to, and obtain concurrence from, EPA and CDH on a Technical Memorandum that describes exposure assessment modeling techniques. The Technical Memorandum will address DOE's selected air pathway release and dispersion modeling approach.

The other OU 1 issues to be relayed at this time concern the field activities. A few of the drilling locations proposed for this Phase III field program fall within the limits of the french drain excavation, which is expected to begin this month. BH01/MW01 and BH02, located to provide characterization of IHSS 102, are in conflict with the french drain excavation. The suggested solution is to continue with the boreholes (quickly) to gather some characterization data, but cancel the monitor well installation as the well would need to be abandoned within one month of installation. EPA and CDH concurrence on this solution is requested.

An additional repercussion of the french drain excavation is that several existing sampling stations providing data to the OU 1 RI will be destroyed or abandoned. The list of these sites is as follows: SW-45,SW-46, SW-126, MW3-87, MW 59-86R, MW 8-87, SW-125, SED-125, SED-126, MW 59-86 and MW2-87. The only solution to this situation is to continue to accumulate as much data as possible from these sites before excavation begins.

Some adjustments to the work plan have been precipitated by implementation of the field program. The primary adjustments have been that a few proposed monitor wells were drilled and had to be

abandoned due to site geologic conditions. Alluvial wells were proposed but could not be installed because the shallow depth to bedrock did not allow the proper footage required for well installation. For example, MW 33 encountered bedrock at 5.1 feet. The Standard Operating Procedure (SOP) requires a 3-foot bentonite seal and a 2-foot filter (sand) pack as minimums above the screen. Even with a 2-foot screen, this well could not be installed within these guidelines. The list of proposed wells that have been abandoned to date under this scenario includes: MW33, MW32, MW31, MW28, MW27 and MW25.

Another field adjustment is that some of the proposed sites were not accessible by a drill rig. Most of these sites required minor (10 feet) relocation but are still able to meet the objectives of the proposed location. One proposed borehole, BH 15, could not be relocated due to accessibility. This proposed location just south of the 881 Building is extremely steep and every potential access is blocked by security fences, power lines or overhead process lines. Relocation of more than a few feet placed this hole within a few feet of another boring, since tight coverage in this area was already proposed.

As this program progresses, DOE/RFO will continue to keep EPA and CDH updated on any further field adjustments. These situations have been, and will continue to be, pointed out to EPA and CDH field oversight crews when they are out, as well.

Please call C. B. Gee of Remediation Programs at extension 5910 with any comments or questions.

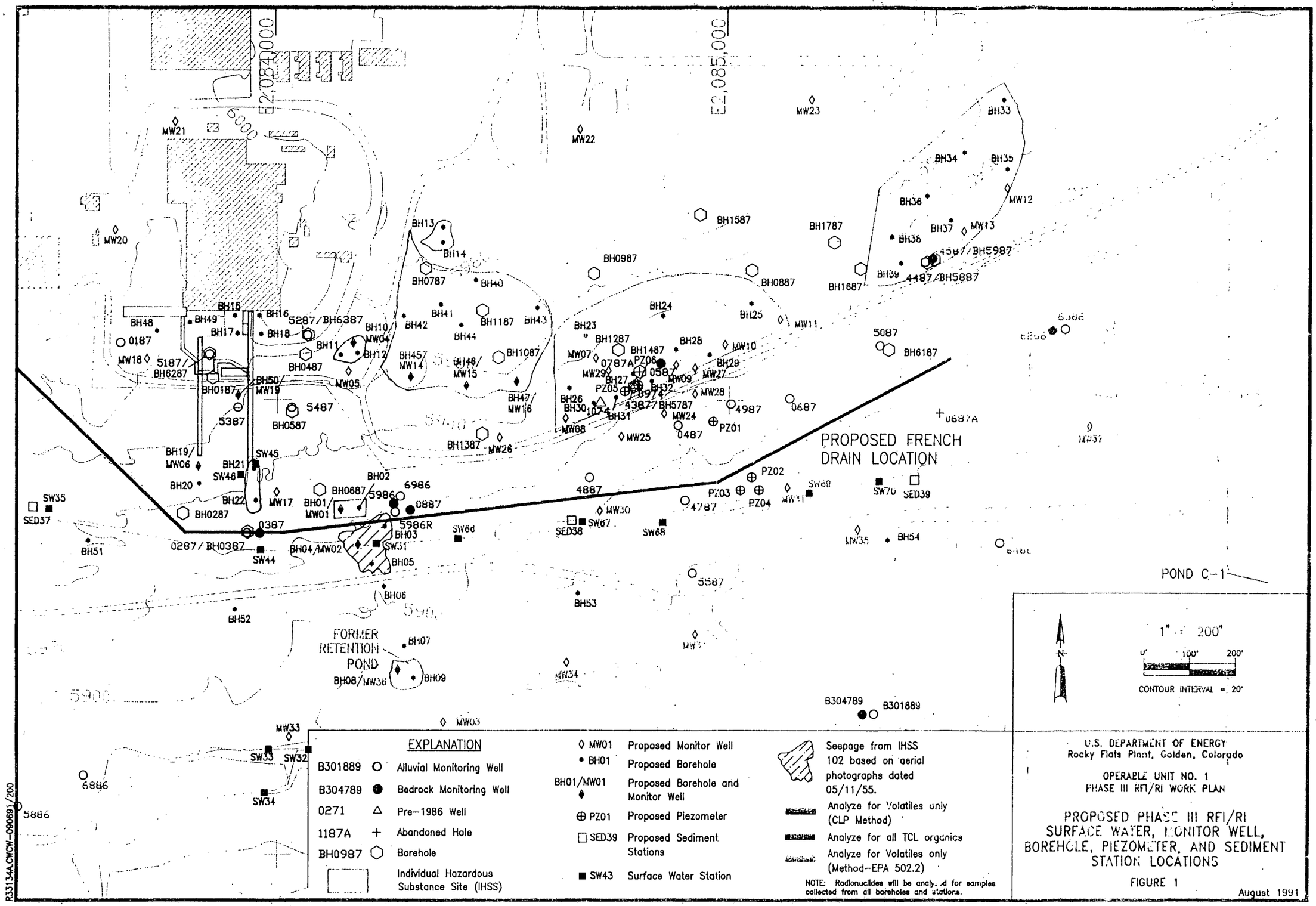
J. E. Evered, Director
Environmental Management
EG&G Rocky Flats, Inc.

CBG:dmf

Orig. and 3 cc - R. M. Nelson, Jr.

Attachments:
As Stated (3)

cc:
T. T. Olsen - DOE, RFO


E2,084,000
E2,085,000
PROPOSED FRENCH DRAIN LOCATION
POND C-1
FORMER RETENTION POND
EXPLANATION
B301889 Alluvial Monitoring Well
B304789 Bedrock Monitoring Well
0271 Pre-1986 Well
1187A Abandoned Hole
BH0987 Borehole
Individual Hazardous Substance Site (IHSS)
MW01 Proposed Monitor Well
BH01 Proposed Borehole
BH01/MW01 Proposed Borehole and Monitor Well
PZ01 Proposed Piezometer
SED39 Proposed Sediment Stations
SW43 Surface Water Station
Seepage from IHSS 102 based on aerial photographs dated 05/11/55.
Analyze for Volatiles only (CLP Method)
Analyze for all TCL organics
Analyze for Volatiles only (Method-EPA 502.2)
NOTE: Radionuclides will be analyzed for samples collected from all boreholes and stations.
1" = 200'
0' 100' 200'
CONTOUR INTERVAL = 20'
U.S. DEPARTMENT OF ENERGY
Rocky Flats Plant, Golden, Colorado
OPERABLE UNIT NO. 1
PHASE III RFI/RI WORK PLAN
PROPOSED PHASE III RFI/RI SURFACE WATER, MONITOR WELL, BOREHOLE, PIEZOMETER, AND SEDIMENT STATION LOCATIONS
FIGURE 1
August 1991
R33134A.CWCW-090691/200