CORRES. CONTROL
OUTGOING LTR-NO.

93RF 2628

DIST.	LTR	ENCL
BENEDETTI, R.L.		
BENJAMIN, A.		
BERMAN, H.S.		
BRANCH, D.B.		
CARNIVAL, G.J.		
DAVIS, J.G.		
FERRERA, D.W.		
HANNI, B.J.		
HARMAN, L.K.		
HEALY, T.J.		
HEDAHL, T.		
HILBIG, J.G.		
IDEKER, F.H.		
KIRBY, W.A.		
KUESTER, A.W.		
LEE, E.M.		
MANN, H.P.		
MARX, G.E.		
McDONALD, M.M.		
McKENNA, F.G.		
MONTROSE, J.K.		
MORGAN, R.V.		
POTTER, G.L.		
PIZZUTO, V.M.		
RILEY, J.H.		
SANDLIN, N.B.		
SHEPLER, R.I.		
STEWART, D.L.		
SULLIVAN, M.T.		
SWANSON, E.R.		
WILKINSON, R.B.		
WILLIAMS, S. (ORC)		
WILSON, J.M.		
ZANE, J.O.		
LONDON, K	X	X
RINGLE, D	X	X
FILE (2)	X	X
CORRES CONTROL	X	X
TRAFFIC		

CLASSIFICATION:

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CONFIDENTIAL		
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IN REPLY TO RFP CC NO:

ACTION ITEM STATUS
☐ OPEN ☐ CLOSED
☐ PARTIAL
LTR APPROVALS:

ORIG & TYPIST INITIALS

RF-46469 (Rev. 9'92)

EG&G ROCKY FLATS

000013758

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

April 1, 1993

93-RF-2628

Frazer R. Lockhart
Environmental Restoration Division
DOE, RFO

RESOLUTION OF COMMENTS ON BLDG. 910 HEALTH AND SAFETY PLAN (HASP) - EML-167-93

Attached are the responses to comments received from DOE "Transmittal of Final Comments on B910 HASP," February 23 and "HASP for B910," February 25. The responses are based on the joint DOE/EG&G Comment resolution Meeting of February 17, 1993 and subsequent meetings of our staffs. The revised document is completing signature in EG&G. Progress on obtaining signatures will be reported in the morning Building 910 Action Center meetings as appropriate, and a copy of the completed HASP will be provided directly to Steve Howard of your staff.

DOE's actions to provide draft comments and participate in several comment-resolution meetings have greatly facilitated the turn-around of these revisions. Our schedule assumes that no further comments will be received that require revisions to the HASP. If anything else comes up, please let us know as soon as possible. For further discussion of the HASP, please contact Don Ringle, extension 8603.

E. M. Lee

E. M. Lee
Program Manager
Solar Ponds Remediation

KCL:apt

Orig. & 1 cc - F. R. Lockhart

cc:
T. Grethel - RFO S&H Division

DOCUMENT CLASSIFICATION REVIEW WAIVER PER CLASSIFICATION OFFICE

ADMIN RECORD

A-OU04-000476

GENERAL COMMENT RESOLUTION

Several comments suggested that HASP note that the document would be updated as required by future reassessments or changing conditions. This change has been incorporated into the "Scope" section rather than individual sections, since it applies to the entire HASP.

§ 1.1, pg 8

Review of Radiation Control Area (RCA) and Radiological Management Area (RMA) requirements has shown that both Interceptor Trench water and pond water should be managed under the same criteria. Thus, both trench water and pond water can be accepted by Building 910 in routine operation. The distinction is no longer relevant, and the "emergency" reference to accepting pond water has been deleted.

§ 1.1, pg 9

A summary of the accident types and consequences has been inserted as follows:

Potential accidents at Building 910 and the Modular Tanks have been analyzed. In all cases, the potential radiological and toxic/hazardous chemical dose to workers and the public are well below the relevant DOE criteria, and the facility is rated as a low-hazard facility. The bounding events considered were: a natural gas leak and fire, with possible consequences of personnel injury and equipment damage; a leak of process liquid from a pressurized line failure, with no significant personnel exposure expected to result but recycle of the leaked liquid needed; a process solution spill from an overflow of a facility tank or a brine-truck tank, with no significant personnel exposure expected to result but recycle of the spilled liquid needed. An event beyond the design basis accident was also considered: a seismic event with both a spill and a natural gas fire. Both radiological and non-radiological exposure to on-site personnel and the public for this accident were calculated to be well below DOE criteria.

A detailed hazards and failures analysis of the facility is presented in the Building 910 Final Safety Analysis Report.

§ 1.1.2, pg 10

Figures X, X, and X showing floor plans with emergency exits and emergency equipment locations, and the location of the plant's medical facility have been added. The figures have been added to Section 8. The SAR writers also have a copy of the floor plan. Shower and eyewash locations have been reviewed by Health & Safety staff and are properly accessible to facility personnel.

The emergency shower and eye wash located outside near the nitric acid tanks has been examined with regard to freeze protection. The shower/eye wash conform to plant standards and includes a frost-free valve located below the freeze-line and a drain-back to prevent water from laying in the lines where the water could freeze and interfere with operation. The shower/eye wash is tested weekly per the plant's routine testing program, has been tested in cold weather, and is functional. No change to the HASP is required.

§ 1.1.3

The following has been added at the end of section 1.1.3:

The concentration of constituents in the Interceptor Trench System water and pond water have been extensively documented. The complete database may be accessed through the Environmental Restoration Database System (RFEDS). A summary of the constituent concentrations in B910 feed water is presented in Table ????.

A qualitative risk assessment of the B910 facility was prepared and approved by DOE, the EPA, and the CDH in the Interim Measure/Interim Remedial Action Decision Document for the Solar Evaporation Ponds Operable Unit No. 4, April, 1992. The risk assessment documented that operation of the B910 evaporator system will not introduce any additional risk to workers or the public.

Applicable standards are also documented in the IM/IRA. The B910 evaporator distillate is required to meet primary drinking water standards, except for turbidity and microbiological contamination and is permitted to be used as a substitute for commercially available raw water in the plant's existing utilities system. The brine from the B910 evaporators will be transferred to the existing B374 treatment facility. Depending on the total dissolved solids, the feed will typically be boiled down at a ratio between 50 and 200 to 1. Most constituent concentrations will be similarly concentrated by a factor of 50 to 200. Volatile organic constituents would concentrate in the distillate rather than the brine, but volatiles have been reported in the feed only sporadically. Tritium partitions proportionally with the water, so evaporation has no appreciable affect on tritium concentration.

TABLE XXX
CONCENTRATIONS OF SELECTED CONSTITUENTS

COMPOUND	AQUEOUS (mg/l or pCi/l)	Possible Anticipated brine concentration (mg/l or pCi/l)
Beryllium	not detected to 0.1	not detected to 0.5
Cadmium	0.07 to 0.15	not detected to 0.5
Chromium	13.7 to 16.7	30 to 2700
Iron	1.5 to 8.0	15 to 300
Nickel	1.9 to 2.0	5 to 400
Zinc	0.62 to 0.78	1.5 to 125
Carbon Tetrachloride	reported occasionally near detection	not detectable
Trichloroethylene	reported occasionally near detection	not detected
Pa-239	0 to 660	not detected to 1300
Am-241	not detected to 200	not detected to 400
Tritium	240 to 3200	6,400 to 48,000
U-234	40 to 20,000	8,000 to 40,000
U-238	25 to 28,000	5,000 to 56,000
total dissolved solids	1,500 to 127,000	approx. 250,000

§ 1.4, pg 13

The following has been added to the HASP:

§ 1.4.1 9. Be responsible and accountable for the safety of all facility personnel.

§ 1.4.2, pg 14

The redundant item, # 9, was deleted.

§ 1.4.8 Site Health and Safety Officer (SHSO)
The existing plant Health and Safety program provides primary and alternate contacts, known at Rocky Flats as Health and Safety Area Administrator. An Area Administrator will be assigned responsibility for B910 in conformance with the plant program. The name and phone

numbers of the Are Administrator will be posted in the B910 main office area.

§ 2.1, pg 19

Medical surveillance for the facility be provided by the existing plant program. The existing program provides for record-keeping, scheduling and notification of examinations, and tracking of personnel who miss examination appointments. No revision to the HASP is required. The term "qualification" does not appear in section 2.1, so no response to defining the term "qualification" has been included.

Personnel meeting the criteria listed are required to participate in the plant's medical surveillance program regardless of their job title, so a list of job titles was not added.

To clarify the wide application of this program, the following was added to item # 1: ..., including DOE, EG&G, and subcontractor personnel meeting these criteria;

The content of medical examinations may change in response to changing requirements and so were not listed in the HASP. The following was added at the end of the first sentence in section 2.1:

The Medical surveillance program is documented in the plant Health & Safety Practices manual, which further references requirements such as DOE Order 5840.8A.

With regard to special requirements for Building 910, the following was added at the end of the section, on (Rev 0) page 21:

No unique or exceptional conditions are anticipated in the facility. During the startup and early operation of the facility, Health and Safety staff will examine the operation, evaluate noise levels and other conditions observed, and revise facility requirements if necessary.

§ 2.2, pg 21

The existing plant Performance Based Training program will be used to provide training for this facility. The following has been added to the end of the section, (rev 0) page 22:

Training is provided, documented, and tracked by the plant's Performance Based Training (PBT) system, as described in the Training Users Manual (TUMs). Documentation, including delinquencies, is maintained by PBTs centralized computer database.

§ 3.1, pg 25

Procedures are prepared, reviewed, and approved through the plant Procedures

Preparation Process, as documented in a controlled Performance Assurance and Procedures Group (PAPG) manual. The process provides for review by various disciplines, including Subject Matter experts, Health and Safety, Quality Assurance, Operations, Engineering, Performance Assurance, and Verification personnel. operations managers may include reviewers from their staff, and the Building 910 procedures are being developed with review from operations staff. Through the PAPG process, safety is considered from many points of view and many areas of expertise. Plant programs, such as Lock Out/Tag Out and Confined Entry, are fully applicable and implemented in all plant facilities, including Building 910. Specific chemical hazards or other conditions specific to an operation are included as appropriate in procedure steps, notes, and warnings. For analysis of potential accidents and their consequences, see the Building 910 Final Safety Analysis Report.

§ 3.2.3.4, pg 29

Note that the Scope section has been revised to note that the HASP will be revised as conditions change.

Maintenance activities are controlled via procedure or the plant's Integrated Work Control Program (IWCP). Procedures and IWCP packages include review by various safety disciplines, and PPE is specified as needed. Building 910 maintenance will be controlled via these existing plant programs. No change to the HASP is needed.

The following has been inserted at the end of the section:

No exposure via inhalation or skin contact is expected during routine operation. The brine is fully contained in the process equipment. The Building 910 Final Safety Analysis Report has analyzed the consequences of a brine spill, and no significant worker exposure is expected in the event of a spill.

Existing plant programs for self-assessment and quality assurance will be applied to the Building 910 facility. Existing organizations with independent reporting to the plant's General Manager provide auditing and surveillance, establish the frequencies of such activities, identify deficiencies, and manage the Corrective Action program.

§ 4, pg 30

Documentation of specific work practices is accomplished through operating procedures and IWCP packages, which are separate, controlled documents. These documents are available to the facility staff. The plant's Performance Based Training program trains personnel to the controlled procedures. These document and functions are not, therefore, duplicated in the HASP.

The following has been inserted into section 4:

Copies of manuals, procedures, and controlled documents necessary to the facility operations are available to facility personnel at the main facility office area. Plant manuals are also available in or through the main office.

§ 4.3, pg 31

The following has been added to Section 4.3; pg 31:

Level D is the basic work uniform for facility staff. Level D provides no respiratory protection and minimal skin and eye protection. Visitors or observers may wear street clothes and are required to wear specific items of safety equipment required and indicated by posting in the facility. Specific items include work gloves, safety glasses, safety shoes, and ear plugs. Operators wear grey cotton coveralls plus specific items are required by procedures, IWCP packages, or posted requirements for the task the operator is engaged in.

Upgraded PPE may be required for maintenance or decontamination activities. Such upgraded PPE will be specified in the procedure or IWCP package applicable to the activity. Possible upgrades include equipment for Modified Level D (e.g. chemical resistant coveralls, outer latex boot covers, and eye-glass side shields) and Level C (e.g. respiratory protection). While further upgrades are not anticipated to become necessary, upgrades will be added as required by procedure, IWCP package, or the SSHO.

PPE is selected and specified for tasks by posting of areas at Health & Safety's direction and by inclusion in work-control documents. Existing plan programs govern PPE and employee training for proper care and use.

§ 5.1, pg 31

The following has been added:

Mitigation and control measures for the hazards discussed are incorporated into procedures and IWCP packages. Refer to the appropriate document in the facility main office area for specific guidance. Procedures are available on operations such as reagent addition, feed system operation, evaporator operation, alarm response measures, and decontamination.

§ 5.2.2, pg 33

The last sentence referring to detection is vague and redundant with the rest of the paragraph. The sentence was deleted.

§ 5.2.4, pg 34

The following has been inserted:

A decontamination procedure specific to Building 910 operations is under development. This facility decontamination procedure will be consistent with plant decontamination requirements, procedures, and equipment. Decontamination of personnel is controlled via a medical procedure, available in the Occupational Health Manual.

§ 5.5, pg 36

The following has been inserted:

No routine entry to confined spaces will be needed in the facility operations. Entry will be planned and controlled through facility supervision, the Plan Of The Day meetings, and existing plant procedures for entry into confined spaces. Personnel required to enter confined spaces are trained through Performance Based Training to these plant procedures. Confined spaces will be identified and posted by plant Industrial Hygiene staff prior to undertaking operations.

§ 5.6, pg 38

The following has been added:

Rocky Flats provides a plant training program that covers worker right-to-know at the required frequency, currently at two-year intervals. A job-specific information sheet is filled out jointly by the worker and supervision as part of the plant program. In addition, the documents listed above are available in the facility main office area.

§ 6, pg 38

The following has been added:

Baseline monitoring of the facility will be performed, and Health and Safety staff will establish any routine monitoring program necessary. When any routine monitoring program is identified, the program will be incorporated into this HASP.

§ 6.1, pg 39

The Building 910 facility is fairly small, and all personnel are within easy access of each other. A "buddy system" is not necessary; radio communications will be provided when personnel are outdoors and might, therefore, be out of the range of observation of other facility staff. The OSHA requirement statement has been retained, and the other references deleted. The following has been added:

The Building 910 facility is fairly small, which allows personnel to be within easy access of one another. As the operating procedures are developed, and specific tasks which would interfere with personnel interactions will be identified, and appropriate surveillance mitigations incorporated. Such mitigations could include providing radio communication to personnel who perform an outdoor activity after dark. Specific direction will be incorporated into the procedures for such tasks as those procedures are developed.

§ 7, pg 42

This comment was received verbally: Check "chemical hazards" in Table 7-1B for accuracy.

While various compounds are present in very low levels in the feed water to the evaporators, Table 7-1B calls out cadmium and chromium specifically. This creates a false impression that these two elements are present in large concentrations. To provide a more accurate identification of the chemical hazards, these two phrases were deleted and replaced by the following:

Chemicals of Concern in feed: Beryllium, cadmium, chromium, iron, nickel, and zinc have been reported at levels above background. Carbon tetrachloride, trichloroethylene, and phenols have occasionally been reported.

§ 7, pg 44

fax table to al hohl, get revision to match latest in SAR

§ 8, pg 48

Regarding the next to last sentence in section 8, while it is true that Industrial Hygiene and Radiological Engineering provide advise as indicated, their advice is provided through input to procedures and emergency response plans. The sentence leaves the false impression that they must develop the advise ad hoc for each response. The sentence has been removed.

The figures in section 8 have been revised to incorporate routes and equipment locations.

The following has been added:

Specific responses to facility conditions are being developed in the facility procedures, such as the Alarm Response Procedures. Existing plant responses for emergencies not specific to facility operations, such as personnel injury, and training in those responses will also be used.

§ 8.2, pg 49

Reporting requirements for emergencies in the facility are the same as reporting requirements plant-wide. The following has been added:

Existing plant reporting chains and procedures control emergency reporting.

In paragraph 2, line 4 and 5; "should be reported" has been changed to "shall be reported".

§ 8.3, pg 49

To provide consistency with revisions to section 6.1, the term "buddy" has been replaced with "other personnel".

§ 9, pg 52

Table 9-1 has been deleted. The following has been added:

EG&G policy provides for review of new technologies with the potential to reduce hazards and improve safety.

§ 10, pg 52

A new section has been added to address the Site Control Plan (and subsequent sections renumbered). The following has been added:

§ 10, pg 54

The "references" section has been renumbered to section 11.