RESPONSIVENESS SUMMARY

OU10 PROPOSED ACTION MEMORANDUM FOR THE BUILDING 443 UNDERGROUND FUEL OIL TANKS #3 AND #4 ACCELERATED RESPONSE ACTION

Prepared for:

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SECTION 1.0 INTRODUCTION

On October 27, 1994, the Department of Energy (DOE) submitted the Draft OU10 Proposed Action Memorandum (PAM) for the Building 443 Tanks #3 and #4 Accelerated Response Action dated October 1994, to the Environmental Protection Agency (EPA) Region VIII, the Colorado Department of Public Health and the Environment (CDPHE), and the public for review and comment This document presents the responses to comments received during the 30-day comment period Although no comments were received from the public or the EPA, comments were received from the CDPHE These comments and the DOE's responses are presented in Section 2 0 of this document Based upon these comments and additional scope refinement, the PAM has been revised and issued as the Final Draft PAM for the Building 443 Tanks #3 and #4 Accelerated Response Action, dated December 1994

This PAM includes the removal of two underground fuel oil tanks (Tanks #3 and #4) located adjacent to Building 443 The proposed action includes (1) subsurface soil sampling to better define the extent of contamination, (2) removal of both tanks, piping, fixtures, metal straps, and ancillary equipment, (3) containerization of encountered water and oil-phase liquid (if present), decontamination (decon) water, and the tanks' contents, (4) excavation, temporary staging, and relocation of all excavated soil (except for soil saturated with oil-phase liquid), (5) decontamination and packaging of the tanks, piping, fixtures, metal straps, and ancillary equipment; and (6) final disposition of the tanks, piping, metal straps, ancillary equipment, tanks' contents, encountered oil-phase liquid, and water associated with this project The shoring supports and concrete saddles will remain in place All soil saturated with oil-phase liquid will be containerized and disposed of off-site at an approved facility Efforts will be made to return all excavated soil (except that saturated with oil-phase liquid) to its original location to be remediated, if necessary, under the final Record of Decision (ROD) for Operable Unit (OU) 10

This PAM is being initiated pursuant to the Interagency Agreement (IAG) as a process to streamline the implementation of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) --specifically under The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 Code of Federal Regulations

[CFR] 300 415)-- while being consistent with the Resource Conservation and Recovery Act (RCRA)/Colorado Hazardous Waste Act (CHWA) This action is being conducted as an accelerated response action pursuant to a letter dated June 23, 1994 from Steven W Slaten, IAG Project Coordinator for the DOE to Martin Hestmark of the EPA, and Gary Baughman of the CDPHE The accelerated response action does not constitute a final remedy This action is being proposed because the chemicals of concern inside the tanks (both are suspected to be breached) may include hazardous constituents and pose a potential threat to human health and the environment as contaminant sources

SECTION 2.0 RESPONSES TO THE CDPHE'S COMMENTS

CDPHE Introductory Comment

Per the agreed upon language in the proposed modification to the IAG regarding Proposed Action Memorandums (PAMs), prior to implementation, both agreement between the parties that the proposed action is necessary and appropriate and approval by the Division and EPA is required The Division has stated from the beginning of discussions on this issue, and at every meeting since, that we do not agree that the proposed action is appropriate or well conceived and would not approve it. The reasons for this are as follows

DOE Response to the CDPHE Introductory Comment

The DOE disagrees with the CDPHE comment and would like to provide its own opinion Representatives of the CDPHE came to four PAM meetings (August 22, 1994, August 31, 1994, September 14, 1994, and October 7, 1994) and provided input on the PAM scope The DOE stated from the first meeting that this PAM was a source removal and that it was not a final remedy The CDPHE did not indicate that the removal action was ill-conceived and, on the other hand, provided comments/suggestions on versions of the PAM and indicated that the CDPHE supported the removal In an October 7, 1994 meeting, the concept of returning the excavated soil back to the excavation was presented During this meeting the CDPHE indicated that they did not agree with the concept and may not approve the PAM

CDPHE Comment #1

As proposed, the action would violate several RCRA/CHWA regulations including, one or more of the following

- *a) failure to make a hazardous waste determination on the excavated soils, ground water, and decontamination water,*
- *b) conducting RCRA/CHWA closure without an approved closure plan,*

c) *failure to meet closure performance standards,*

d) *unauthorized treatment of hazardous waste, and*

e) *if the soils contain hazardous wastes, improper disposal of hazardous waste and possible violation of land disposal restrictions*

This is unacceptable

DOE Response to Comment #1

The DOE has reviewed the RCRA/CHWA regulations and believes that this accelerated response action will not violate RCRA/CHWA regulations The DOE rationale for this opinion is described below for the issues commented on by the CDPHE

a A hazardous waste determination will be made on the water entering the excavation and the decon water prior to disposal in order to make sure that the waste streams meet the acceptance criteria of the Building 374 Evaporator The water entering the excavation and the decon water will be treated using an oil/water separator (skimmer), an absorbent filter system, and a mobile granular activated carbon (GAC) system on-site A mobile GAC system will be purchased for this project Afterwards, the water will be disposed of at the Building 374 Evaporator Since this accelerated response action is being conducted under the CERCLA and treatment will occur on-site, the DOE claims an exemption (pursuant to 40 CFR 300 400) from all federal, state, or local permitting requirements applicable to this accelerated response action

The subsurface soil within the area of the excavation will be evaluated for hazardous constituents during the subsurface soil sampling program, the excavation process using field monitoring equipment, and the post-excavation soil sampling program The subsurface soil sampling will evaluate the hydrogeologic conditions and the extent of contamination The field monitoring equipment, although utilized for worker safety, will also give an indication of volatile constituents in the excavated material The post-excavation sampling will provide data on possible constituents on the perimeter of the excavated area

b This PAM is being initiated pursuant to the IAG as a process to streamline the implementation of the CERCLA, specifically under the NCP, while being consistent with the RCRA/CHWA This action also constitutes an accelerated response action pursuant to a letter dated June 23, 1994 from Steven W Slaten, IAG Project Coordinator for the DOE to Martin Hestmark of the EPA and Gary Baughman of the CDPHE

This accelerated response action does not constitute the final closure or remedy for the two tanks Subsequent to this accelerated response action, the RCRA Facility Investigation (RFI)/Remedial Investigation (RI) and Corrective Measures Study (CMS)/Feasibility Study (FS) process conducted pursuant to the RCRA/CHWA and CERCLA will determine the need for further remedial action to address potential soil and ground water contamination Future documentation developed to support the selection of a final remedy, application of that remedy to RCRA closure performance standards, and any Operation and Maintenance (O&M) activities will be considered an equivalent submittal to satisfy any other applicable closure requirements

c This accelerated response action does not constitute the final closure of or remedy for the two tanks Future documentation developed to support the selection of a final remedy, application of that remedy to RCRA closure performance standards, and any O&M activities will satisfy any other applicable closure requirements

d The sludge, oil-phase contents of the tanks, and oil-phase liquid encountered in the excavation will be sent off-site for recycling or disposal, if recycling is not feasible The water-phase contents of the tanks, the water encountered in the excavation, and decon water will be treated by an oil/water separator, an absorbent filter system, and a mobile GAC system on-site A mobile GAC system will be purchased for this project Afterwards, the water will be disposed of at the Building 374 Evaporator Since this accelerated response action is being conducted under the CERCLA and treatment will occur on-site, the DOE claims an exemption from all federal, state, or local permitting requirements applicable to this accelerated response action

Subsequent to decontamination, the tanks and metal straps will be packaged and sent off-site for recycling (which is not likely) or disposal The miscellaneous piping, asbestos, ancillary equipment, containerized soil, and other construction waste will be packaged appropriately for off-site disposal at an approved facility Prior to disposal or recycling, all waste streams will be managed in accordance with all applicable hazardous waste management requirements Pursuant to CERCLA response action authority, the DOE claims an exemption from all federal, state, and local permitting requirements applicable to this accelerated response action

- Treatment of the soil and land disposal restrictions will not be triggered because the soil will remain within the area of contamination (AOC) as defined by Superfund Guidance #5, Determination of when Land Disposal Restrictions (LDRs) are Applicable to CERCLA Response Actions In addition, soil saturated with oil-phase liquid will be containerized and disposed of off-site at an approved facility

CDPHE Comment #2

The proposed action does not achieve risk reduction Only part of the "source" would be removed (the tanks, which currently contain only sludge and ground water) and the part remaining (contaminated soil and ground water) would be disturbed to such a degree that exacerbation of the contamination would probably occur, thereby potentially increasing risk This is unacceptable

DOE Response to Comment #2

The DOE does not agree with or understand the CDPHE's contention that risk reduction is not achieved The DOE believes that the removal of Tanks #3 and #4, the source of contamination, will achieve risk reduction

Based upon the results of the 1988 soil sampling, the concentration of the constituents inside the tanks are several orders of magnitude higher than those which have been detected from

the soil borings taken around Tank #4 (Tables 2-1 [page 19] and 2-2 [page 21] of the Draft Final PAM, dated December 1994) In fact, except for lead, which is not believed to have originated from the tanks, the soil is not a RCRA characteristic waste The results of the November 9, 1994 sampling of the tanks' contents confirm that lead did not originate from the tanks

During the excavation, encountered soil which is saturated with oil-phase liquid will be containerized for off-site disposal at an approved facility Prior to disposal, the soil will be managed in accordance with applicable hazardous waste management requirements All water entering and oil-phase liquid encountered in the excavation will be removed (as discussed above in the DOE's response to CDPHE Comment 1 a) In addition, vertical profiles of the soil will be generated, and efforts will be made to returned the soil to its original location Abandonment of the shoring supports surrounding the excavation and leaving the concrete pads in place will aid in the containment of any remaining constituents and mitigate the spread of contamination, thus not increasing or exacerbating the risk or spread of contamination

CDPHE Comment #3

Past activity and data from the IHSS 129 vicinity suggest that free product is probably present In addition, ground water is shallow in the area and DOE acknowledges that significant water influx into the excavation is expected However, any free product in the vicinity would also flow into the excavation This is not accounted for in DOE's plan Excavating and pumping would mix the water and free product to such a degree that additional soil and water would unavoidably become contaminated This is unacceptable

DOE Response to Comment #3

The DOE agrees with the CDPHE comment that the oil-phase liquid encountered in the excavation must be acknowledged in the PAM, but disagrees with the statement that

excavating and pumping would mix the water and free product to such a degree that additional soil and water would become contaminated during the removal of the tanks

The oil-phase liquid encountered in the excavation will be collected for recycling or disposal at an approved off-site facility, if recycling is not feasible Excavating and pumping will not mix the water and oil-phase liquid since a suction pump will remove any oil-phase liquid as soon as it is observed and since soil saturated with oil-phase liquid will be removed, containerized, and disposed of at an approved off-site facility As such, no additional soil and water will become contaminated.

CDPHE Comment #4

Even though DOE proposes to collect additional sub-surface samples before implementation of this action, recharacterization of this IHSS after implementation of this action would be necessary Construction activities and replacement of contaminated soils performed in this action will change the hydrologic environment and contamination extent and mobility at IHSS 129 This is unacceptable and would be wasteful of additional money

DOE Response to Comment #4

The CDPHE raises valid concerns which the DOE believes are mitigated by the proposed approach, however, the only way to totally address this concern is to delay any action until the final remedy for the IHSS and surrounding OU is selected

Since such extensive sampling of such a small area will be conducted as part of this PAM, minimal additional recharacterization would be required during future remedial evaluations The details of the extensive sampling programs are discussed above in the DOE's response to the CDPHE Comment #1 a In addition, abandoning the shore supports and leaving the concrete saddles in place will aid in the containment of potential constituents and decrease the mobility of these constituents in the environment

CDPHE Comment #5

The PAM proposes to treat the water phase contents of the tanks and the tank/pipe decon water with an oil/water separator and GAC At this point in time, no oil/water separator is permitted or otherwise authorized for the treatment of hazardous waste at RFETS and it is unclear to which GAC treatment unit the text refers The PAM process does not meet the permit modification requirements As we have stated since the IAG PAM language was developed, if implementation of an action necessitates expansion of existing permitted treatment or storage or requires that new treatment or storage be permitted, the removal and treatment or storage action must be accomplished using the existing IM/IRA or ROD/CAD processes These are the only vehicles available to simultaneously permit treatment, storage, and/or disposal and present a decision regarding corrective action Therefore, if additional treatment or storage of hazardous waste is necessary to implement this action, it must be implemented as an IM/IRA, and the hazardous waste permit must be modified

DOE Response to Comment #5

The DOE disagrees with the CDPHE comment and believes that this PAM utilizes the RCRA/CHWA and existing permit provisions to facilitate the accelerated response action, rather than utilizing an Interim Measure/Interim Remedial Action (IM/IRA) process which will delay implementation

The water-phase contents of the tank, the water entering the excavation, and the decon water will be treated by an oil/water separator (skimmer), an absorbent filter system, and a mobile GAC system on-site A mobile GAC system will be purchased for this project Afterwards, the water will be disposed of at the Building 374 Evaporator Since this accelerated response action is being conducted under the CERCLA and treatment will occur on-site, the DOE claims an exemption (pursuant to 40 CFR 300 400) from all federal, state, or local permitting requirements applicable to the accelerated response action

CDPHE Comment #6

One of the agreed upon criteria for actions covered by PAMs was an ability to implement the action within six months after receiving regulatory approval However, the schedule in this PAM indicates that the tanks would not be removed until August 4, 1995, over seven months after PAM approval

DOE Response to Comment #6

Implementation of an accelerated response action within six months requires that the action be initiated and under way but does not require that it be completed within six months The first activity of this accelerated response action, the Notice to Proceed, will commence within six months of PAM approval

CDPHE Comment #7

In summary, a technically sound and regulatorily compliant accelerated cleanup action can be accomplished at IHSS 129, but may need to be implemented through an IM/IRA We believe that this would include, but not necessarily be limited to

- *a) a complete subsurface investigation of the four-tank vicinity including a determination of the extent of contamination for both subsurface soil and ground water,*
- *b) removal and appropriate treatment of contents of all four tanks,*
- *c) LNAPL removal from the four-tanks vicinity, if necessary,*
- *d) dewatering the four-tank vicinity to levels below the tanks and appropriate treatment of this water,*
- *e) removal of all contaminated soils from the four-tank vicinity, and appropriate treatment, storage, or disposal of the soil,*
- *f) removal of at least Tanks #3 and #4, and their ancillary equipment with appropriate decontamination and disposal,*
- *g) investigation and inspection of Tanks #1 and #2 and removal, if necessary,*

including ancillary equipment with appropriate decontamination and disposal,

h) placement of new tanks, as necessary,

i) backfilling with clean or treated soil, and

j) ongoing removal and treatment of contaminated ground water

DOE Response to Comment 7

The DOE disagrees with the CDPHE that this work is inappropriate for an accelerated action The DOE believes that this PAM represents a technically sound and regulatorily-compliant accelerated response action which includes IHSS 129 The scope of the PAM includes the following features

a The DOE disagrees with the comment A complete investigation of the entire vicinity of Tanks #1, #2, #3, and #4 for soil and ground water media will be accomplished under the IAG This PAM is an accelerated response action which is, by definition, limited in scope The subsurface soil sampling program will be limited to Tanks #3 and #4 since Tanks #1 and #2 actively support the Building 443 Steam Plant and data suggest that their integrity is sound

b The DOE agrees with the CDPHE regarding the removal and treatment of the contents of Tanks #3 and #4 Work related to Tanks #1 and #2 are outside the scope of this accelerated response action, and Tanks #1 and #2 are still functional and required to meet site operations This PAM includes the removal of the contents of Tanks #3 and #4 for off-site recycling or disposal at an approved facility, if recycling is not feasible

c The DOE agrees with the CDPHE Any oil-phase liquid (which may include light non-aqueous phase liquid [LNAPL]) encountered in the excavation will be removed for off-site recycling or disposal at an approved facility, if recycling is not feasible In addition, during the excavation of the tanks, any soil saturated oil-phase liquid will be containerized for off-site disposal Prior to off-site disposal, all waste streams will be managed in accordance with all applicable hazardous waste management requirements

d. The DOE agrees with the CDPHE that dewatering in the vicinity of two tanks (Tanks #1 and #2 will not be addressed for the reasons provided in the DOE response the CDPHE Comment #7 a) is necessary The excavation will be dewatered in the vicinity of Tanks #3 and #4 to a level below the tanks The water encountered in the excavation will be treated by an oil/water separator, absorbent filter system, and mobile GAC system on-site and be disposed of at the Building 374 Evaporator Extensive ground water treatment will only occur after the RFI/RI and CMS/FS and is beyond the scope of this accelerated action

e The DOE only agrees with the CDPHE on the soil saturated with oil-phase liquid All excavated soil (except that saturated with oil-phase liquid) will be temporarily staged within the AOC and returned to its original location Encountered soil that is saturated with oil-phase liquid will be containerized and disposed of off-site at an approved facility Prior to off-site disposal, the soil will be managed in accordance with all applicable hazardous waste management requirements

f The DOE agrees with the CDPHE Tanks #3 and #4, along with their associated piping and ancillary equipment will be decontaminated, packaged, and recycled (believed to be unlikely) or disposed of at an approved off-site facility

g The DOE disagrees with the CDPHE regarding the inspection and removal of Tanks #1 and #2 Tanks #1 and #2 actively support the Building 443 Steam Plant and data suggest that their integrity is sound Removal of these tanks is outside the scope of this PAM

h The DOE disagrees with the CDPHE No new tanks are needed because Tanks #3 and #4 are out of service and are no longer required to support the Building 443 Steam Plant

i The DOE agrees with the CDPHE about the soil saturated with oil-phase liquid Addressing the other soil at this time is not warranted or consistent with an accelerated action The excavated soil that is not saturated with oil-phase liquid will

be returned to its original location In order to bring the excavation to grade, additional clean fill will cover the backfilled soil

The DOE disagrees with the CDPHE regarding removal and treatment of contaminated ground water On-going ground water treatment is a post RFI/RI activity under the IAG and is significantly beyond the scope of an accelerated action Characterization of the suspected ground water contaminant plume will be evaluated as part of the OU10 RFI/RI and ROD In addition, the CDPHE has stated (in a contact record between the CDPHE and EG&G, dated November 10, 1994) that the ground water does not have to be addressed in the PAM because it will be addressed plantwide

In conclusion, the DOE believes that this accelerated response action can be implemented in a technically-sound and regulatory-compliant manner which will benefit all parties involved