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ENGINEERING DATA TRANSMITTAL

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1	1	Facility Safety/C.L. Bennett	<i>C.L. Bennett</i>	7/16/94	X0-44	B.S. Carlisle			X3-71	4	
1	1	Safety/J.C. Hamerick	<i>J.C. Hamerick</i>	7/16/94	I4-18	J.P. Schmidt	<i>J.P. Schmidt</i>	7/15/94	X3-73	1	1
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1	1	Fac. Compliance/D.J. Watson	<i>D.J. Watson</i>	7/16/94	X0-41	J.E. Truax			X3-71	3	
1	1	C.J. Alderman	<i>C.J. Alderman</i>	7/26/94	W1-21	M.J. Wiemers			R3-86	3	
4	1	G.M. Davis	<i>G.M. Davis</i>	8/9/94	X1-80	J.C. Womack			R3-86	3	
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Release Date: October 14, 1994

* * * * *

This document was reviewed following the
procedures described in WHC-CM-3-4 and is:

APPROVED FOR PUBLIC RELEASE

* * * * *

WHC Information Release Administration Specialist:

Kara Broz

(Signature)

10-14-94
(Date)

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**APPROVED FOR
PUBLIC RELEASE**

6. Author

Name: J. B. Crystal

J. B. Crystal
Signature

Organization/Charge Code 2C110/KK545

7. Abstract

A. Laughery For C. W. Wingham 10-14-94

This document develops the basis for relocation of the 105-KE Basin Pilot Testing activities from the discharge chute to the Tech View Pit.

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DATE OCT 14 1994

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105-KE BASIN PILOT RUN RELOCATION

JUNE 1994

MASTER

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105-K BASIN RUN PROCESS LOCATION

1.0 INTRODUCTION

1.1 DOCUMENT PURPOSE

The purpose of this document is to present the bases for selecting the exact in-facility location for installation of process equipment to support pilot testing activities in the 105-KE Basin at the United States Department of Energy (U.S. DOE) Hanford Site, in south eastern Washington State.

1.2 BACKGROUND

The 105-KE Basin was constructed during the early 1950s, as an integral component of the 105-K East reactor building. Similar basins were provided in all Hanford weapons production reactor buildings to receive fuel elements discharged from the reactors and stage them for rail transport to 200 Area fuel reprocessing plants. The 105-KE reactor began operation in 1955. It was shut down in 1971. However, the 105-KE Basin was reactivated several years later to store spent fuel from the N-Reactor basin and permit its continued operation during outages at the Plutonium Uranium Extraction (PUREX) plant in the 200E Area.

1.2.1 Physical Description

The 105-K Basin is an unlined concrete, 5,000 m³ water pool, 38 meters long, by 20 meters wide, by 6 meters deep. The basin is provided with an asphaltic membrane lined leakage collection sump under most of its footprint. However, there are several structures which extend past the collection sump, including the construction joint which connects the basin to the main reactor portion of the building in the discharge chute area of the basin. This joint is assumed to be the cause of two incidents during which water is known to have leaked from the basin (see section 1.2.2 below).

1.2.2 Current Status

The 105-KE Basin contains over 1100 Metric Tons of spent fuel. The bulk of this inventory consists of over 50,000 Zircaloy clad, uranium metal fuel elements stored in over 3600 open top canister assemblies (or "canisters"). Each canister contains up to 7 fuel elements in each of its two storage cylinders (i.e., up to 14 fuel elements per canister).

1.2.2.1 105-KE Basin Pilot Run. The 105-KE Basin Pilot Run is a testing and characterization activity designed to support evaluation and development of various processes (and/or process alternatives) required for safe storage and disposition of the spent fuel materials currently stored within the basin. The functions of the Pilot Run are to: (1) evaluate equipment and procedures developed for the current baseline encapsulation process, with particular emphasis on evaluating efforts to maintain radiation worker exposure as low as reasonably achievable (ALARA); (2) familiarize operators with the encapsulation equipment and procedures, and with fuel handling operations in general; and (3) support evaluation and/or development of other process alternatives by characterizing the present status of the fuel materials and storage canisters. The Pilot Run equipment is currently installed in the reactor discharge chute area of the basin.

1.2.2.2 Construction Joint Unresolved Safety Question. Recent structural and seismic analyses of the construction joint (see section 1.2.1 above) have resulted in declaration of an Unresolved Safety Question (USQ). A barrier is being designed to isolate the construction joint from the main basin pool, in order to prevent loss of fuel storage cover water from the basin following a design basis earthquake (DBE). The barrier will also prevent loss of radiologically contaminated basin water to the environment.

1.2.2.3 Impact of USQ on Pilot Run. Isolation of the construction joint will require relocation of the Pilot Run equipment from its present location in the reactor discharge chute area to some other area of the basin.

2.0 RELOCATION OF PILOT RUN

2.1 RELOCATION CRITERIA

A meeting was held on May 4, 1994, to establish top level criteria for relocation of Pilot Run equipment and activities (see Attachment 1 of this document). The resulting criteria are summarized below:

- The new location must provide for an equipment footprint equivalent to that of the current encapsulation process.
- The dose rates in the new location must be comparable to those in the old location.
- The impact on schedule must be minimized.
- The impact on the basin water treatment system must be minimized.
- The new location must be compatible with resolution of the USQ.
- The new location and equipment must be compatible with the current Pilot Run requirements.

- The selection process for the new location and equipment must be compatible with WHC's Systems Engineering requirements.

2.2 SELECTION OF ALTERNATIVE LOCATIONS

A follow-up meeting was held on May 9, 1994, to present the finalized relocation criteria and select alternative locations for evaluation against those criteria (see attachment 2 of this document). Three locations were identified that provided adequate space for equipment relocation. These locations were: (1) the Dummy Elevator and Weasel Pits (see Figure 1, below); (2) the area just outside the Reactor Discharge Chute entrances, where only open canisters are stored; and (3) the south west corner of the basin, near the South Loadout Pit.

2.2.1 Additional Issues

Several additional issues were identified during the May 9, 1994, follow-up meeting.

2.2.1.1 Seismic Analysis. If the pilot equipment were located in the basin (where empty canisters are now stored), the equipment would have to be seismically qualified to prevent compromising the safety class 1 function of the fuel storage grid in preventing criticality. The need for equipment redesign and seismic analysis would have significant manpower and schedule impacts.

2.2.1.2 Dose Rate Mitigation. If the Dummy Elevator/Weasel Pit areas were used, the dose rates would have to be reduced in order to make operations feasible in those locations. Furthermore, based on past experience, there were questions as to how effective decontamination operations would be on the Dummy Elevator Pit.

2.3 SELECTION OF FINAL LOCATION

2.3.1 Elimination of South West Corner

During the May 9, 1994, follow-up meeting, experienced Operational Readiness Review (ORR) personnel indicated that no fuel movement was going to be possible without completing an ORR. This precluded the use of the southwest corner of the basin, since that area would require relocation of fuel canisters prior to installation of equipment.

2.3.2 Elimination of Other Main Basin Areas

2.3.2.1 Resolution of Seismic Issue. To address the seismic issue (see section 2.2.1.1 above), the seismic analysts (WHC Structural Analysis, Facility Stress Analysis group) that recently evaluated the K-Basin structures were consulted. From those discussions, it became apparent that the scope of work involved in overcoming the seismic issues associated with locating the pilot equipment in the basin outweighed the amount of work to decontaminate/shield the Dummy Elevator and Weasel Pits. Based on the potential for long delays that might result during resolution of seismic issues, all main basin locations were ruled out as impractical if schedule impacts were to be kept at a minimum.

2.3.2.2 Additional Problems with Main Basin Area. The following additional problems were identified for location anywhere within the main basin area:

- Turbidity control is more difficult in the basin itself than in a tightly contained pit.
- Decontaminating the walls of the basin to reduce the dose rate prior to start up of the pilot run would push the schedule out an additional three months, where-as decontaminating the Dummy Elevator Pit and/or Weasel Pit could be accelerated, based on their small surface areas.

2.3.3 Elimination of Dummy Elevator Pit

With the location apparently narrowed down to the Dummy Elevator Pit and Weasel Pit, engineering produced equipment layout drawings to determine process flow. It appeared that the equipment could be more effectively placed in the Weasel Pit, with minimal impact on the monorail/hoist system, and with very little equipment redesign. The Health Physics technicians at K-basins also pointed out that the dose rates are lower in and around the Weasel Pit than in the Dummy Elevator Pit. This is due, in part, to the better condition of the concrete in the Weasel Pit, compared to that in the Dummy Elevator Pit.

2.3.4 Presentation of Weasel Pit Proposal

A meeting was held on 5/18/94 to present the case for utilization of the Weasel Pit (see attachment 3 of this document). During that meeting the initial draft of this document was distributed for review and discussion. At that time, the draft document advocated selection of the Weasel Pit as the best alternative, while recognizing its current sludge storage function as a key disadvantage. This sludge would have to be cleaned up and moved to another location prior to the installation of equipment in the Weasel Pit. On the other hand, the debris and old equipment strewn about the Dummy Elevator Pit floor were considered to present an even greater clean up challenge, based on the higher dose rates around the Dummy Elevator Pit. Consequently, the

initial draft of this document concluded that the Weasel Pit would be the most suitable of the known available alternatives for location of the Pilot Run.

2.3.5 Addition of Viewing Pit Alternative

During the discussion which followed presentation of the proposal for selection of the Weasel Pit as the best available alternative (see section 2.3.4 above), the north and south entry channels of the Tech View Pit (see Figure 1, below) were proposed as an additional alternative location for the fuel dump and packaging tables. If the dump table and the packaging table were to be placed side by side, they would fit into the north entry channel, while the encapsulation station (lid conveyer/canister closure/cover gas injection/etc.) and can cleaner station would fit into the south entry channel. And because the Tech View Pit contains very little sludge, its selection would eliminate the need to establish a new location for the sludge currently within the Weasel Pit. Attachment 3 of this document provides additional detail.

2.3.6 Elimination of Weasel Pit Alternative

Following the suggestion to consider the tech View Pit as an alternative Pilot Run location, an additional issue was raised concerning the Weasel Pit. The door that separates the front area of the Weasel Pit from the back area is currently stuck open at a 75 degree angle. In the event that it could not be moved, the door would severely limit the area available for process equipment. This uncertainty, combined with the known problems associated with relocating the one foot thick layer of basin sludge currently stored within the weasel pit, resulted in elimination of the weasel pit.

2.3.7 Selection of the Tech View Pit

At the conclusion of the 5/18/94 meeting discussions (see Attachment 3, of this document), it was determined that: (1) equipment layout drawings should be produced for final evaluation of relocation to the Tech View Pit area; and (2) that relocation to the Tech View Pit area should be evaluated against the effort to revisit the seismic issue associated with relocation to the main basin area. However, upon completing their review of the resulting equipment layout drawings, cognizant K Basins operations and engineering personnel concurred that relocation of the Pilot Run to the Tech View Pit area provided the simplest solution, with minimum equipment redesign and facility modifications, and that nothing would be gained by continuing to pursue other alternatives (e.g., relocation to the main basin area, etc.) Figure 2, below, depicts the proposed equipment layout.

FIGURE 1

FIGURE 2

ATTACHMENT 1: MAY 4 MEETING MINUTES

MEETING MINUTES

Subject: Pilot Run Relocation

TO: Distribution

BUILDING: 1718/100K Area

FROM: J. B. Crystal

CHAIRMAN: M. J. Wiemers

Dept-Operation-Component	Area	Shift	Meeting Date	Number Attending
Process Systems Engineering	400		5/4/94	9

Attendees:

J. B. Crystal M. J. Wiemers
J. R. Frederickson R. P. Omberg

Minutes

The USQ resulting from the seismic analysis of the load-out chute has the potential to seriously impact the pilot run. Installing coffer dams to isolate the load-out area is one of the solutions being considered and this could preclude the use of that area for either the pilot run or any subsequent full-scale fuel mitigation operation. As a result, it is possible that the process equipment for the pilot run will have to be relocated and perhaps modified.

This meeting was held to review this situation, to produce a set of top level requirements for any equipment relocation, and to develop an initial plan of action. Top level requirements and recommended near-term activities are described below.

The initial assessment indicates that the USQ has the potential to seriously impact the pilot run schedule but the extent of this impact is difficult to quantify at this time. To accurately quantify the impact, it is necessary to gather additional information on the magnitude of the effort required to satisfactorily relocate the process and support systems. Early definition of these impacts is considered important because:

- information to be obtained from the pilot run is essential to developing a technical baseline for encapsulation, assuming encapsulation is to be pursued

- if an alternative is to be pursued, the same information will allow alternatives to be compared against a well-characterized baseline, which will improve the soundness of the decision process.

Top Level Requirements

A list of top level requirements were developed for relocating the pilot run equipment and the following were considered to be the most important:

- **The New Footprint Should Be Equivalent To That Required For The Current Process:** Several locations in the basin have sufficient space for the process equipment and so are candidates for relocation. Among these are dummy elevator pit and the area opposite the load-out chute. The load-out chute itself cannot be entirely precluded, although it will definitely be more difficult to work in this area in the future. The difficulty associated with transferring a canister to that area with coffer dams in place, the need to minimize interference between coffer dam installation work and pilot run work are at least two items which must be considered. Another is a possible need to minimize fuel handling and any associated radionuclide concentrations in the load-out chute. Taken together, these make continued use of this area for processing less likely, although not necessarily impossible.
- **Dose Rates Associated With The New Area Should Be Comparable To Those In The Old Area:** This requirement is based upon ALARA principles. Since all the candidate areas listed above have higher dose rates, dose reduction becomes an important factor in design and implementation. This could take the form of additional shielding or operating innovations to reduce number of personnel or the amount of time required to operate the encapsulation equipment.
- **The Impact Of Relocation On The Schedule Should Be Minimized:** Initiation of the pilot run is an important milestone and information gained from it is significant to subsequent steps for reducing SNF vulnerabilities identified in recent DoE studies. As such, it is important to complete this milestone as soon as possible. This requirement favors, but does not necessarily mandate, the use of existing fuel canister retrieval equipment and techniques. Using existing equipment and techniques has the obvious benefit of minimizing redesign and any associated impact upon the ORR.
- **The Impact Of Relocation On Current Basin Water Treatment System Should Be Minimized:** This system is used to reduce the fission product concentrations in the basin water and so is essential to reducing personnel exposure and meeting ALARA requirements. Effective operation of this system could become more important rather than less when other locations are considered.

- **The New Location Should Be Compatible With The USQ Resolution:** Activities and equipment associated with relocating the pilot run process equipment should not interfere with efforts to resolve the USQ. This interaction with the USQ affects the timing of both decisions and activities. As an example, it may not be possible to relocate the pilot run equipment while the coffer dams are being installed. This may require an early decision on removing pilot run equipment from the load-out chute, possibly prior to any final decision with respect to a new location. By implication, the pilot run equipment may have to be staged, that is stored in an intermediate location, pending the decision on the final location for the pilot run itself.
- **The New Location And Equipment Must Be Compatible With Current Characterization And Test Run Requirements:** Obtaining fuel characterization information and assessing the effectiveness of the pilot run equipment is one of the principal objectives of the pilot run. As such, it is important that the new location does not seriously compromise these objectives.
- **The Selection Process For The New Location And Equipment Must Be Computable Systems Engineering Requirements:** The logic relating the objectives and goals of the pilot run to the larger site systems engineering effort is under active development. This tie establishes consistency between the pilot run itself and the overall cleanup strategy for the site and it is imperative that this logical relationship be maintained.

Recommended Near-Term Activities

A top level list of essential near term activities were developed and the following were deemed most important:

- **Assemble A Team To Address Relocation Of The Processing Area:** The pilot run team will have to be expanded in order to adequately address issues associated with relocation of the process area. As a case in point, relocating the process equipment may require modifications to facility systems which support the process equipment. This has the potential to expand the scope associated with the pilot run along with the potential to expand the scope of the ORR. At present, most K-Basin engineering, operations and craft resources are involved in supporting normal operation or resolution activities associated with the USQ. To maintain a schedule comparable with the current pilot run schedule, additional resources are essential.
- **Develop Second-Level Selection Requirements And Criteria:** To proceed with the design effort in a systemic manner, a supporting set of second-level requirements and criteria is necessary. This is a

near-term priority because it is essential to any further definition of the new area and processing system.

- **Select New Location And Process In A Formal Manner:** A conceptual layout for the equipment in the new location, and any changes to the process and the support systems, will be developed and formally approved with a review.
- **Identify Differences Associated With The Relocation:** Any anticipated changes in procedures, data, ORR, etc. by moving the process location will be identified and documented.
- **Address Differences or Variances:** Any differences in equipment, procedures, or personnel exposure represent variances which have the potential to raise issues or concerns. It will be necessary to address these issues or concerns in either the design stage or the ORR, or possibly in both. To minimize the impact of differences or variances on cost, scope, and schedule, qualitative and quantitative variances between the historical process and its location and the new process and its location will be identified and the resolution documented.
- **Provide Engineering Documentation:** Functions and requirements, assessments, PFD changes, and design concepts will be developed to provide cost, scope and schedule information.

Conclusion

Given the potential impact of the USQ, the above activities should be initiated as early as possible in order to develop a defensible cost, scope, and schedule for the pilot run.

ATTACHMENT 2: MAY 9 MEETING MINUTES
MEETING MINUTES

Subject: Pilot Run Relocation

TO: Distribution

BUILDING: 1718/100K Area

FROM: J. B. Crystal

CHAIRMAN: J. R. Frederickson

Dept-Operation-Component	Area	Shift	Meeting Date	Number Attending
Process Systems Engineering	400		5/9/94	9

Attendees:

J. B. Crystal	T. J. Ruane
T. G. VanReenen	J. A. Conley
D. E. Anderson	R. J. Pyzel
R. G. Cowan	J. R. Frederickson
L. Oslund	R. P. Omberg
J. E. Kurtz	C. J. Alderman
J. D. Mathews	E. Campos

Minutes

Jeremy Crystal drew a schematic of the 105-KE basin on the board and pointed out the three areas that had been recommended to be used as alternate areas for the Pilot Run other than the dump chute. These areas were (1) the dummy elevator pit, (2) the southwest corner of the basins by the south loadout pit, (3) the area opposite the dump chute in the basin. It was noted by several that it appeared that no fuel could be moved without completing some type of ORR activity. This would preclude the use of any area where fuel would have to be moved to allow room for the process equipment. Jim Mathews then pointed out two areas in the basin where only empty canisters were stored. These areas are located at the two openings to the dump chute and any activity there would have to wait until the coffer dams are installed as part of the USQ resolution. These areas will be refereed to as the dump chute entrances. Each area was then reviewed against the below requirements.

TOP LEVEL REQUIREMENTS	COMMENTS
<p>New Footprint Should Be Equivalent to that Required for the Current Process:</p> <p>Several locations in the basin have sufficient space for the process equipment and so are candidates for relocation. Among these are dummy elevator pit and the area opposite the load-out chute. The load-out chute itself cannot be entirely precluded, although it will definitely be more difficult to work in this area in the future. The difficulty associated with transferring a canister to that area with coffer dams in place, the need to minimize interference between coffer dam installation work and pilot run work are at least two items which must be considered. Another is a possible need to minimize fuel handling and any associated radionuclide concentrations in the load-out chute. Taken together, these make continued use of the area for processing less likely, although not necessarily impossible.</p>	<p>All of the areas could accommodate most of the process equipment although only the dummy elevator pit and the dump chute entrances would not require the movement of fuel. Some equipment redesign would most likely have to be done to fit the equipment into the dummy elevator pit.</p>
<p>Dose Rates Associated with the New Area Should Be Comparable to those in the Old Area:</p> <p>This requirement is based upon ALARA principles. Since all the candidate areas listed above have higher dose rates, dose reduction becomes an important factor in design and implementation. This could take the form of additional shielding or operating innovations to reduce number of personnel or the amount of time required to operate the encapsulation equipment.</p>	<p>Some shielding and/or decon work would be required for any area outside the dump chute to achieve comparable dose rates. However, there were serious concerns about the ability to decon the dummy elevator pits based on prior attempt to decon using high pressure wash and scrubbing on the extremely rough surface of the concrete in the pit.</p>

TOP LEVEL REQUIREMENTS	COMMENTS
<p>Impact of Relocation on the Schedule Should Be Minimized:</p> <p>Initiation of the pilot run is an important milestone and information gained from it is significant to subsequent steps for reducing SNF vulnerabilities identified in recent DOE studies. As such, it is important to complete this milestone as soon as possible. This requirement favors, but does not necessarily mandate, the use of existing fuel canister retrieval equipment and techniques. Using existing equipment and techniques has the obvious benefit of minimizing redesign and any associated impact upon the ORR.</p>	<p>Any relocation will impact the schedule; however, those areas where fuel would have to be moved would push the schedule out because of the need to complete the ORR first. Major impacts on schedule for using the dummy elevator pit would be in deconing the pit. Major impacts for using the entrances to the dump chute would be evaluation of seismic issues related with locating the process equipment on the fuel storage grid and in modifying the floor grating.</p>
<p>Impact of Relocation on Current Basin Water Treatment System Should Be Minimized:</p> <p>This system is used to reduce the fission product concentrations in the basin water and so is essential to reducing personnel exposure and meeting ALARA requirements. Effective operation of this system would become more important rather than less when other locations are considered.</p>	<p>The impact on the basin water treatment system will be minimal at any of the alternative locations.</p>
<p>New Location Should Be Compatible with the USQ Resolution:</p> <p>Activities and equipment associated with relocating the pilot run process equipment should not interfere with efforts to resolve the USQ. this interaction with the USQ affects the timing of both decisions and activities. As an example, it may not be possible to relocate the pilot run equipment while the coffer dams are being installed. This may require an early decision on removing pilot run equipment from the load-out chute, possibly prior to any final decision with respect to a new location. By implication, the pilot run equipment may have to be staged, that is stored in an intermediate location, pending the decision on the final location for the pilot run itself.</p>	<p>All of the proposed alternate locations would be compatible with the USQ resolution; although, there could be no facility work that would interfere in the USQ work. The USQ issue was the driving force in selecting an alternative Pilot Run location. The two main reasons for not using the dump chute once the coffer dams were installed was to keep the area clear for possible future leak repair and to minimize the collection of radioactive material in the dump chute area.</p>

TOP LEVEL REQUIREMENTS	COMMENTS
<p>New Location and Equipment Must Be Compatible with Current Characterization and Test Run Requirements:</p> <p>Obtaining fuel characterization information and assessing the effectiveness of the pilot run equipment is one of the principal objectives of the pilot run. As such, it is important that the new location does not seriously compromise these objectives.</p>	<p>All of the alternative locations were compatible with characterization requirements. However, it was noted that the south loadout pit could not be occupied by process equipment if fuel samples were expected to be removed from the basin.</p>
<p>Selection Process for the New Location and Equipment Must Be Compatible with Systems Engineering Requirements:</p> <p>The logic relating the objectives and goals of the pilot run to the larger site systems engineering effort is under active development. This tie establishes consistency between the pilot run itself and the overall cleanup strategy for the site and it is imperative that this logical relationship be maintained.</p>	<p>All of the alternatives still fulfill the systems engineering requirements.</p>

Bob Pyzel commented that a significant effort was expended to try to decon the dum elevator chute when it was originally chosen to do encapsulation. The decon efforts wer unsuccessful. The concrete is very rough and porous and in generally poor condition.

Southwest Corner:

Minimal impact on Facility Modifications, close to MCC. Not much operator access Biggest issue is moving the fuel prior to having an ORR complete.

Dummy Elevator pit:

Equipment redesign probable, might have to split process to different areas which could increase op dose. A lot of work to clean out debris. Serious decon and dose rate concerns. Furthest distance form MCC, highest background radiation dose above grating. High dose rates around the pit. Biggest issue is the clean up. The area allows for eas operator access and better control of water turbidity. Another advantage is that no fue movement is needed to use the area.

Areas without Fuel in the Basin, Dump Chute Entrances:

The advantage of these areas is no fuel movement. Operations would have to be ove the grating and all process equipment would have to be seismically qualified. The bigge issue is the seismic qualification of equipment. The area available is approximately 14 22' by each end of the dump chute.

Area Opposite Dump Chute:

Not a clear process path, there is an "I" beam in the way. Would have to work ove the grating. Not considered a viable option because of the need to move fuel.

Jim Frederickson suggested that we review some concepts for the various locations. The two probable locations are the dump chute entrances and the dummy elevator pit. The issues are seismic qualification in one location and clean up in the other. Tom Ruane will supply a copy of the fuel inventory map.

ATTACHMENT 3: MAY 18 MEETING MINUTES

MEETING MINUTES

Subject: Pilot Run Relocation

TO: Distribution

BUILDING: 1718/100K Area

FROM: J. B. Crystal

CHAIRMAN: J. R. Frederickson

Dept-Operation-Component	Area	Shift	Meeting Date	Number Attending
Process Systems Engineering	400		5/18/94	16

Attendees:

John Schmidt	Vic Hoefer
Bruce L. Debban	Ray Menard
Shaunna Slinn	Tom Gronewald
Jerry Kurtz	Paul Bolan
Bob Kuhta	Jim D. Mathews
Dean Medford	Jim Frederickson
Carol J. Alderman	Micheal J. Wiemers
Jeremy B. Crystal	Ken Davis
Graham, Don	

Minutes

The meeting began with J. Crystal reviewing the Pilot run location selection process to date. He distributed a draft supporting document (SD) which detailed the meetings and logic of choosing the new Pilot run location. The conclusion that had been reached was that the weasel pit was the best candidate location based on the information gathered. Layout drawings were displayed which showed possible equipment layouts that helped to support this conclusion. Since the weasel pit has been the sludge dumping ground for other sludge clean-up activities around the basin the biggest obstacle in locating the equipment in the weasel pit would be finding a new place to put the sludge. Crystal asked for review and comments on the above SD. The meeting was then opened to discuss issues that may not have been addressed yet or other alternatives that may have been overlooked.

Other issues not addressed:

Vic Hoefer noted that there is a pit next to the weasel pit that does not have sludge called the tech view pit that the equipment could possibly be fit into. The suggestion was made by Vic Hoefer to put the dump table and packaging table side by side which would allow for better operator repackaging.

J. Crystal asked the question, what would be the monorail redesign to do this? There is a monorail down the center of each pit, some modification might be necessary, a walkdown of the facility will be done to confirm monorail access.

John Schmidt pointed out the state has to be involved in moving sludge from a regulatory standpoint. Dave Watson has been the coordinator of these activities. Crystal will work with Schmidt and Watson to get the process started.

In the process of discussing the tech view pit options it was pointed out that in using the tech view pit we could eliminate the issue of moving a large amount of sludge. This could eliminate the need to find a place to put the sludge. There is some fuel in the entrance of the tech view pit that may have to be relocated.

J. Schmidt didn't want to rule out the use of the basin where the empty canisters are located. Revisit the seismic issues. He felt that clean-up activities in the weasel pit could be a comparable problem to doing a seismic analysis.

J. Crystal will follow up with Kaiser who did the storage rack analysis, to determine the scope of further evaluation and design. Unless they indicate it would be relatively simple to do, the location will remain the tech view/weasel pit.

Hoefer said the dummy elevator pit will have to be cleaned out to remove clean canisters from the basin. The hoist for doing so is right over the end of the dummy elevator pit. A lot of equipment/debris would have to be moved clean out the pit. Other can removal locations will be considered.

Kuhta indicated that the packaging table and dump table will be moved out of the discharge chute prior to installation of the coffer dams. But with the problems (size, regulatory, getting greenhouses in place, etc.) of moving the seal conveyor they are going to leave it. The pilot run can be performed without it. If they get it moved in time then they will move it, but it does not have to be a priority.

Kuhta indicated also that shielding design was going to be significant, and necessary.

Crystal then took the action to produce some layout drawings for the equipment in the tech view pits. If it will fit, the SD will be revised to include this meetings minutes. In general it was agreed that unless the seismic issue proves to be more simple, the tech view/weasel pits will be used for the equipment.

Jim Frederickson then distributed and went over the Pilot run schedule. He requested that the managers present names of people who will be responsible for their respective tasks on the schedule so that we could get a good idea of the resources available or that will have to be acquired to meet the schedule.

It was noted that the roof repairs being conducted presently could be a scheduling conflict. K-Basin engineering will provide Process Engineering a schedule of the roofing project.

Bob Kuhta will provide Process Engineering a schedule of the USQ resolution so that we avoid resource conflicts.

The next schedule status meetings will be conducted Thur. 5/19/94, 9:00-10:00 am. A regular status meeting will then be held each Monday. Place and time will be announced.

Schmidt requested input from Bobby Eschenbaum on what criteria the ORR will require to determine what previous work does or doesn't have to be repeated.

Summary of Action Items

Interested parties are to review the pilot location SD and provide comments to J. Crystal.

Crystal will walk-down the KW-Basin to see what monorail modifications will be required.

Crystal and Schmidt will work with Watson to determine the permitting process.

Crystal will talk to Kaiser seismic analysts about the fuel storage rack seismic issue.

Crystal will produce some equipment layout drawings in the tech view pits.

K-Basin engineering (Bill Fryer) will provide the roof repair schedule to Process Engineering (Frederickson).

Khuta will provide the USQ coffer dam installation schedule to Process Engineering.

Eschenbaum will provide input as to ORR requirements so that the ORR process can proceed with minimal rework.

All managers present were requested to provide names for their respective activities on the schedule.