OFFICE OF RIVER PROTECTION
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

APR 01 2019

19-TPD-0003

Mr. Jack Bell, Director
Environmental Restoration and Waste Management
Nez Perce Tribe
P.O. Box 365
Lapwai, Idaho 83540-0365

Mr. Bell:

THE U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION RESPONSE TO YOUR MAY 30, 2018 LETTER

Reference: Nez Perce letter from J. Bell to A. Smith, Ecology, and B.T. Vance, ORP, "Re: Data Quality Objective for Vadose Zone Characteristics at Waste Management Area A-AX, RPP-RPT-60227, Revision 0," dated May 30, 2018.

The purpose of the letter is to acknowledge the input provided in the referenced letter (Reference). One recommendation provided in the referenced letter is, "before the A-AX DQO is approved and the subsequent work plan is implemented, DOE should improve the characterization and modeling used at WMA C." Please note that the referenced revision (Revision 0) of the Data Quality Objectives (DQO) reflects the characterization details for the Focus Area, which is around Tanks A-104 and A-105. It is anticipated that there will be additional focus areas that will allow for further characterization. The *Sampling and Analysis Plan for WMA A-AX Focus Area 1 (Tanks 241-A-104 and 241-A-105)*, RPP-PLAN-62041, states that a *Resource Conservation and Recovery Act of 1976* Facility Investigation (RFI) corrective measures study work plan will be developed after the boundary of Waste Management Area (WMA) A-AX is defined, all focus areas are identified, and all sampling locations pertaining to WMA A-AX characterization are agreed upon,. The DQO does not provide modeling information. Modeling efforts for WMA A-AX are documented through the performance assessment.

The following three recommendations were also provided in the referenced letter:

1. The proposed pushes are located to evaluate the lateral migration of tank waste in the vadose zone in addition to aiding in verifying the current A-104 and A-105 tank leak estimates in RPP-ENV-37956, Rev. 2. Our email on September 5, 2017 to Jan Bovier, DOE/ORP and Ecology staff, detail our proposed push locations.

2. Soil samples are collected as each additional length of pipe is added to the drill string when using the direct-push method. We understand that this interval is approximately every four feet.
3. The influence of stratigraphy upon the subsurface distribution of radionuclides in *Hanford's subsurface should be acknowledged and incorporated into the proposed* characterization.

The following responses correspond to each of the three recommendations, respectively:

Response 1: A reply email sent to you on October 24, 2017, responds to your email sent on September 5, 2017 (Attachment 1).

Response 2: The effort, time, and cost to collect samples at an interval of every four feet would be immense due to the various constraints of sampling within tank farms. It would take three years and three million dollars (for field effort, alone) to collect the samples of the five pushes associated with Focus Area 1. The data that could be yielded from this effort would not be worth the cost or the time.

Response 3: Stratigraphic units are acknowledged and considered during the characterization process. For example, stratigraphic units are identified based on geophyical logging information. This information is used to help determine optimal sample depths in meetings with the Washington State Department of Ecology (Ecology).

The responses contained herein were drafted to also reflect discussions with the Ecology project lead involved with the WMA A-AX DQO.

If you have any questions, please contact me, or your staff may contact, Vanessa Turner, Federal Project Director, Tank Farms Project, (509) 376-5503.

Brian a. Hakins for
Robert G. Hastings, Assistant Manager
Tank Farms Project

TPD:JJB

Attachments

cc: See page 3

cc w/attachs:
J.J. Lyons, Ecology
D.R. Einan, EPA
Environmental Portal
TPA Administrative Record
WRPS Correspondence

cc w/out attachs:
M. Barnes, Ecology
M.P. Bergeron, WRPS
B.A. Hiergesell, WRPS
P.L. Rutland, WRPS

Attachment 1
19-TPD-0003

THE U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION RESPONSE TO NEZ PERCE LETTER

Caulfield, Laura M

From: Stan Sobczyk <stans@nezperce.org>
Sent: Tuesday, September 5, 2017 3:07 PM
To: Bovier, Jan B; Caggiano, Joseph; Lyon, Jeffery; Barnes, Michael; Rochette, Beth
Cc: Bergeron, Marcel P; Conrad, Jill A; Field, Jim G; Olander, Alan R; Sydnor, Harold A; Tabor, Cynthia L; Jack Bell; Alex Nazarali (AlexNazarali@ctuir.org); Jean Vanni (JVanni@ynerwm.com); Dale Engstrom (Dale.Engstrom@oregon.gov); Dave Rowland
Subject: Data Quality Objectives for the Waste Management Area A-AX

All,

The Data Quality Objectives for the Waste Management Area A-AX meeting notes for July 24 recommended five locations for push holes. Location #1 northwest of Tank A-104 is 45 degree angle push to the southeast and appears to be reasonably placed to evaluate the A-104 tank leak since it should land in the Upper Hanford H2 underneath the tank. The slant push from Location #4 appears well justified in the meeting notes.

Instead of the meeting notes' pushes at Locations #2 and #3 (Figures 1, 2, and 3), I recommend a 45 degree slant push to the southeast that starts northwest of Tank A-105 and to the north of Tank A-104 (Figures 1, 2, and 3). This recommended slant push would evaluate the temperature anomaly encountered at C9383 and eliminate the need for location #2 as described in the meeting notes. The recommended slant push would evaluate the extent of Cs-137 in the Hanford H1 near the 14-05-02 lateral, which would aid in verifying the current A-105 tank leak estimate in RPP-ENV-37956, Rev. 2. This recommended slant push would evaluate the possibility of lateral migration of A-105 tank waste in the Hanford H2. None of the slant pushes indicated in the meeting notes are positioned to evaluate the potential for lateral migration of tank wastes from the A-105 tank leak. The recommended slant push eliminates the need for the slant push from Location #3 in the meeting notes by passing near the corrosion zone of corrosion observed in the 10-05-10 drywell. According to the meeting notes, one of the justifications for the push from Location #3 is to evaluate a "higher SGE conductivity area." At WMA C, higher SGE conductivity areas were identified under tanks C-101 and C-104. These "anomalies" were tested by slant push holes. None of the slant push holes detected significant contamination. Based on the experience at WMA C, it seems unreasonable to continue the use of SGE survey results to determine sample locations within tank farms.

Figure 1. Top view of the proposed (recommended) slant push in the subsurface underneath tank A-105 and the meeting notes' vertical push Location #2 and slant push Location #3.

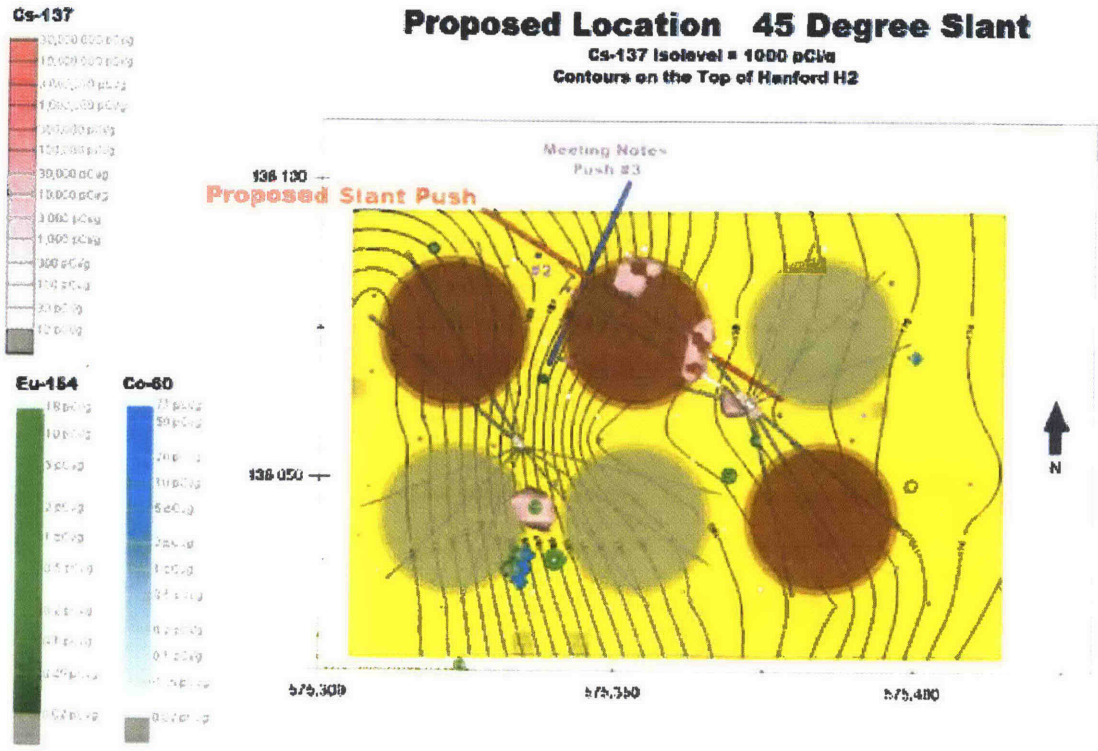
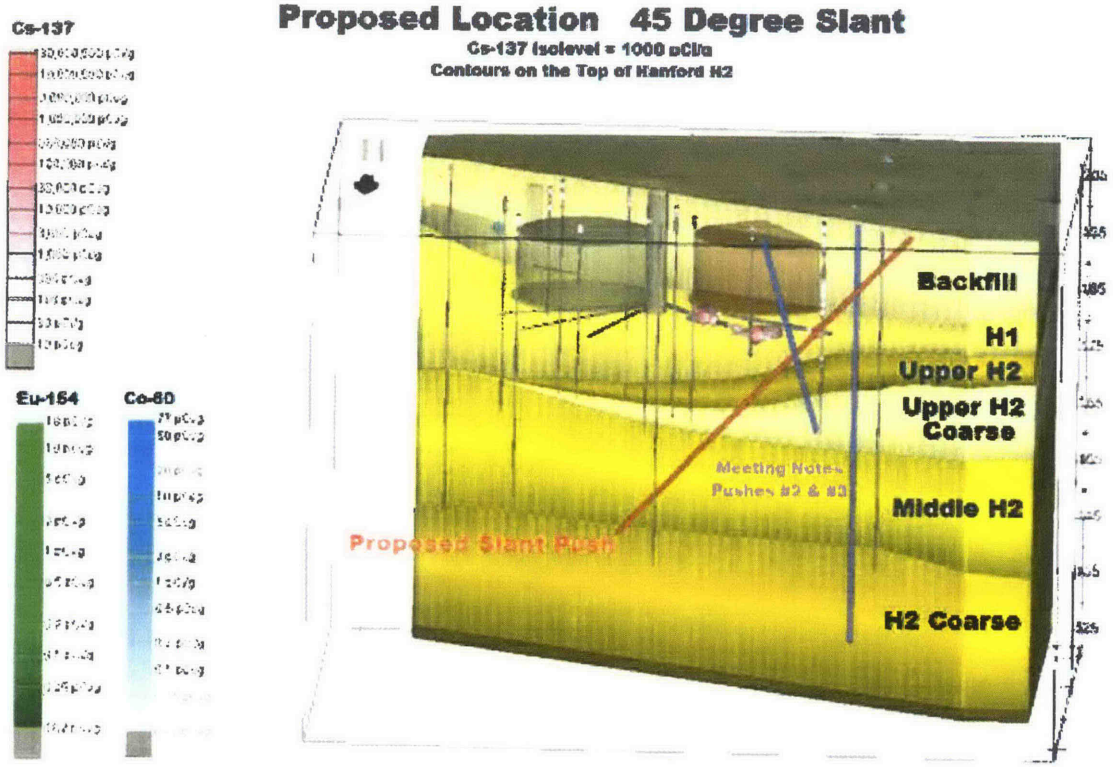


Figure 2. Visualization showing the location of the proposed (recommended) slant push in the subsurface underneath tank A-105 and its proximity to the vertical push at Location #2 in the meeting notes. The slant push from Location #3 in the meeting notes will be in the Upper H2 coarse unit when it is underneath the sidewall of tank A-105 and poorly

placed to evaluate the migration of contaminants from the A-105 tank leak if there is lateral migration of contaminants in the Upper H2.



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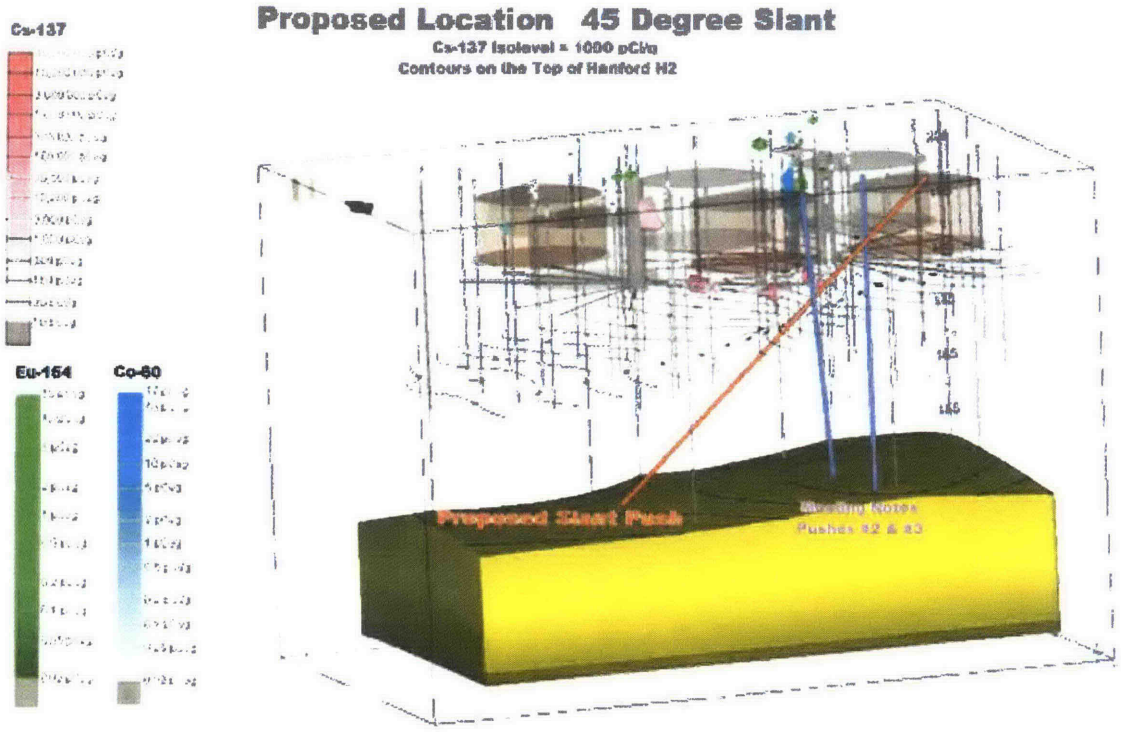

I appreciate your consideration of these recommendations. Please contact me, at (208) 621-3751, or stans@nezperce.org with any questions on these recommendations. I look forward to an inclusive open decision-making process and close coordination to expedite the work needed to monitor and remediate WMA A-AX with the goal of protecting the Nez Perce Tribe's retained treaty rights while completing cleanup goals at the Hanford Site in an efficient and collaborative manner.

Thanks,

Stan

Attachment 2
19-TPD-0003

THE U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION RESPONSE TO NEZ PERCE LETTER

Caulfield, Laura M

From:	Bovier, Jan B
Sent:	Tuesday, October 24, 2017 10:51 AM
To:	'Stan Sobczyk'
Cc:	Tabor, Cynthia L; Rutland, Paul L
Subject:	RE: Data Quality Objectives for the Waste Management Area A-AX

Stan

We reviewed your recommendation for direct push locations (eliminating Locations 2 and 3 and including your proposed location). First, we need to identify that there are issues with your proposed location (subsurface infrastructure identified via ground penetrating radar [GPR] and retrieval project obstructions). There was much information, coordination, and discussion on the selected direct push locations and all the corresponding material was not included in the meeting notes (e.g., GPR and retrieval figures).

At this point, we are planning to move forward with the locations selected. We are targeting the silt zone in the Cold Creek Unit at approximately 285 ft bgs and want to maintain Location 2, the only vertical location, as it has the best chance of contacting the silt zone. Note that the longest pipe run for an angle push, to-date, is around 260 feet with a vertical depth of ~ 180 feet. These planned direct pushes have pipe runs greater than these lengths - up to 295 feet with vertical depths of 285 feet. Regarding Location 3, it was selected for more reasons than surface geophysical exploration (e.g., possible leak location area, higher drywell readings and corrosion).

Ultimately, there are several objectives that we are trying to achieve with these pushes and many factors that limit the selection process. We believe that the planned locations will best meet the objectives based on the various constraints. We anticipate that the locations will be refined some as more GPR information is obtained and coordination with retrieval projects continues.

Thank you

VR

Jan B. Bovier, P.E.
Tank Closure Program Manager
Tank Farms Programs Division
Department of Energy – Office of River Protection (DOE-ORP)
Phone # 509-376-9630
Cell # 315-767-8886
Email: Jan_B_Bovier@orp.doe.gov

From: Stan Sobczyk [mailto:stans@nezperce.org]
Sent: Tuesday, September 19, 2017 3:04 PM
To: Bovier, Jan B
Subject: RE: Data Quality Objectives for the Waste Management Area A-AX

Jan,

Depending on the results from the other locations, Location #5 may be justified.

Thanks,

Stan

From: Bovier, Jan B [mailto:Jan_B_Bovier@orp.doe.gov]
Sent: Thursday, September 14, 2017 3:25 PM
To: Stan Sobczyk ; Caggiano, Joseph ; Lyon, Jeffery ; Barnes, Michael ; Rochette, Beth
Cc: Bergeron, Marcel P ; Conrad, Jill A ; Field, Jim G ; Olander, Alan R ; Sydnor, Harold A ; Tabor, Cynthia L ; Jack Bell ; Alex Nazarali (AlexNazarali@ctuir.org) ; Jean Vanni (JVanni@ynerwm.com) ; Dale Engstrom (Dale.Engstrom@oregon.gov) ; Dave Rowland
Subject: RE: Data Quality Objectives for the Waste Management Area A-AX

Stan

I wanted to follow-up with you on your email. There are 5 locations (as you noted below), but I do not see mention of Location #5. Do you have input on this location? We will be working through a response on your input in the below email. Thank you in advance.

VR

Jan B. Bovier, P.E.
Tank Closure Program Manager
Tank Farms Programs Division
Department of Energy – Office of River Protection (DOE-ORP)
Phone # 509-376-9630
Cell # 315-767-8886
Email: Jan_B_Bovier@orp.doe.gov

From: Stan Sobczyk [mailto:stans@nezperce.org]
Sent: Tuesday, September 05, 2017 3:07 PM
To: Bovier, Jan B <Jan_B_Bovier@orp.doe.gov>; Caggiano, Joseph <jcag461@ecy.wa.gov>; Lyon, Jeffery <jlyo461@ecy.wa.gov>; Barnes, Michael <Miba461@ecy.wa.gov>; Rochette, Beth <broc461@ecy.wa.gov>

Cc: Bergeron, Marcel P <Marcel_P_Bergeron@rl.gov>; Conrad, Jill A <jill.conrad@rl.doe.gov>; Field, Jim G <Jim_G_Field@rl.gov>; Olander, Alan R <Alan_R_Olander@rl.gov>; Sydnor, Harold A <Harold_A_Sydnor@rl.gov>; Tabor, Cynthia L <Cynthia_L_Tabor@rl.gov>; Jack Bell <jackb@nezperce.org>; Alex Nazarali (AlexNazarali@ctuir.org) <AlexNazarali@ctuir.org>; Jean Vanni (JVanni@ynerwm.com) <JVanni@ynerwm.com>; Dale Engstrom (Dale.Engstrom@oregon.gov) <Dale.Engstrom@oregon.gov>; Dave Rowland <dave.rowland@charter.net>
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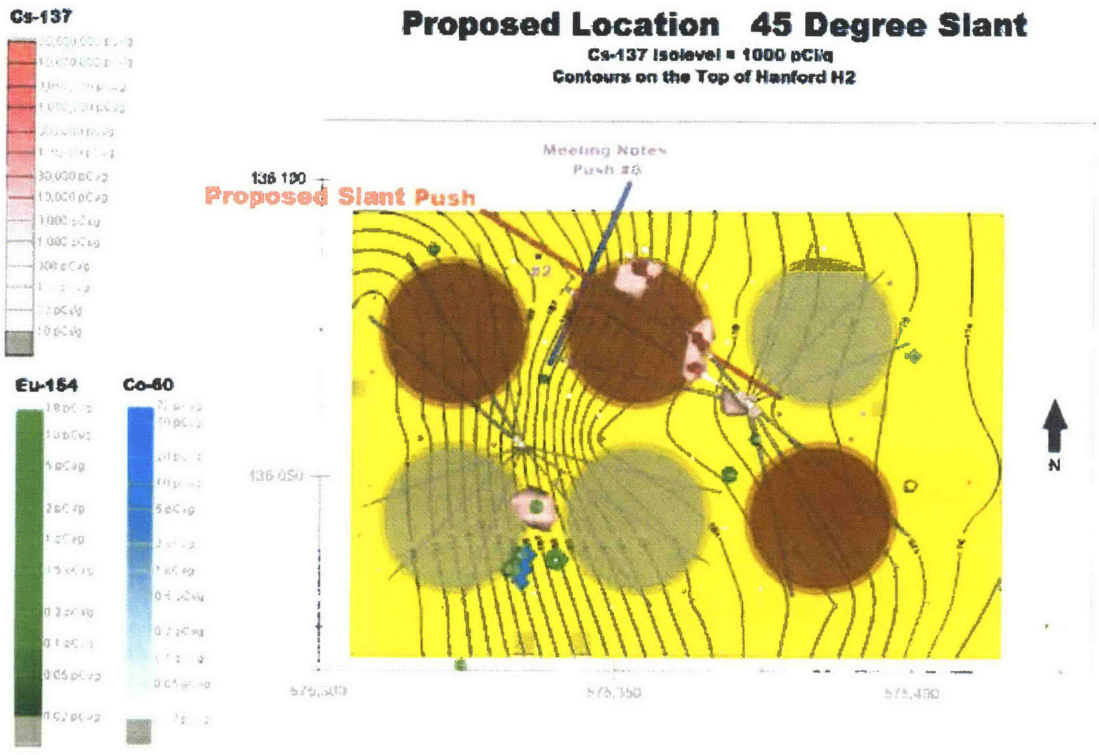

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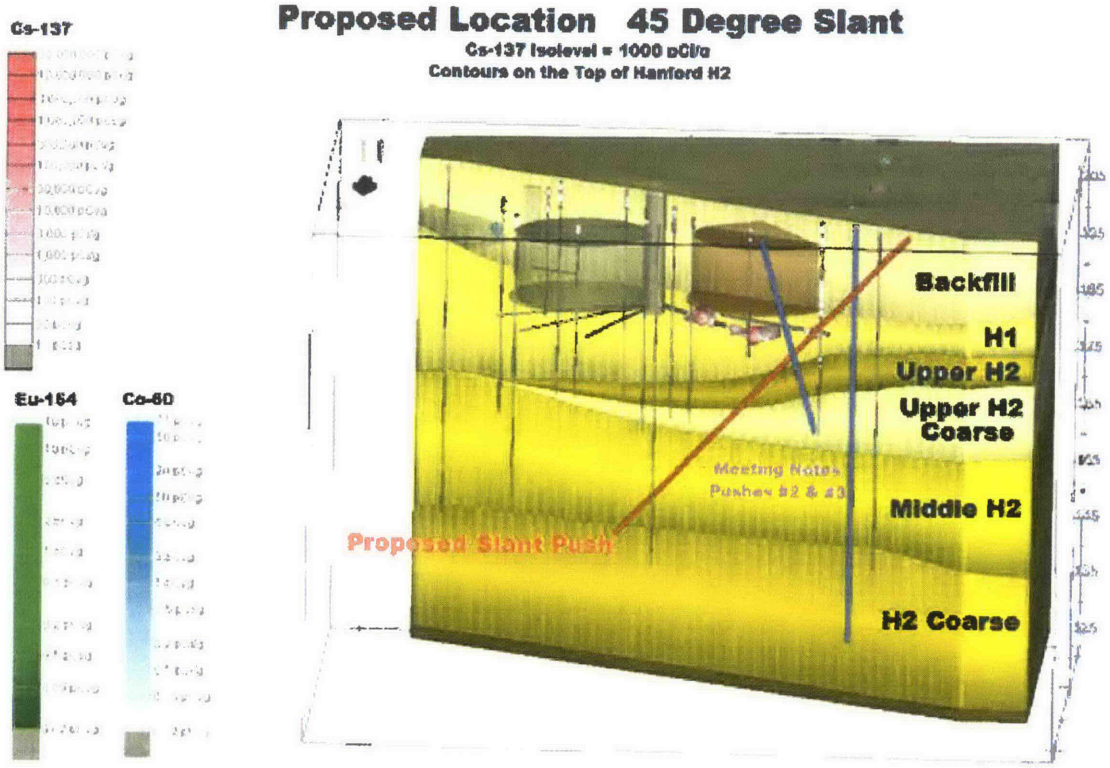

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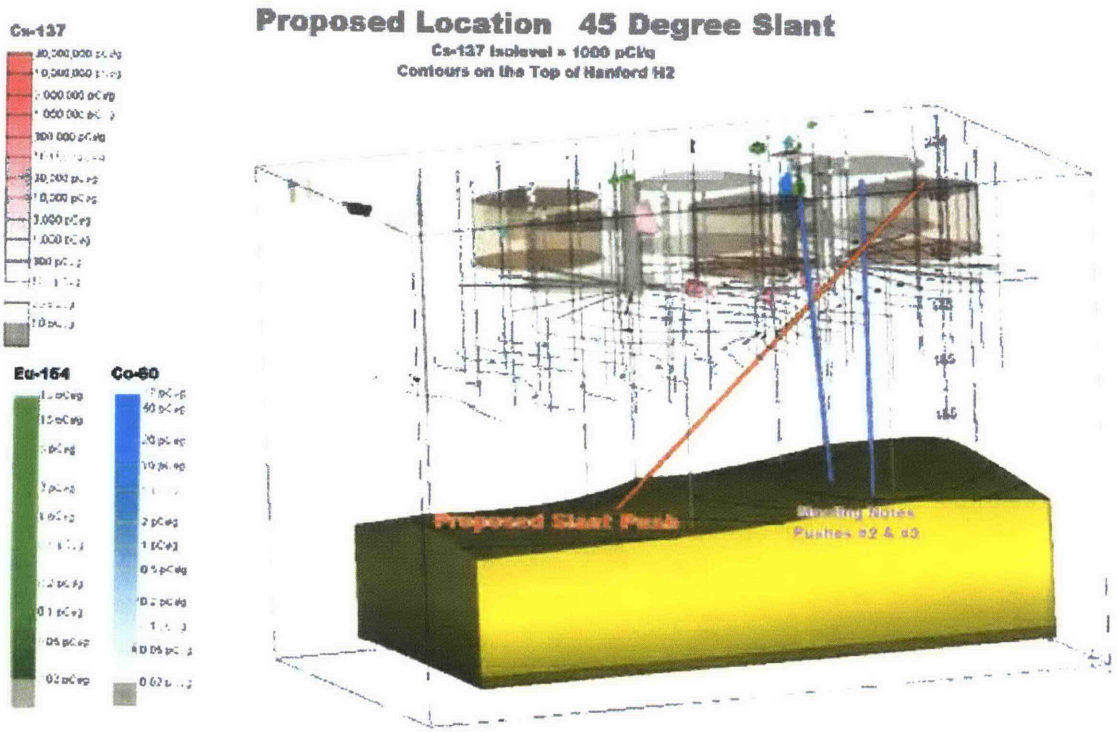

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