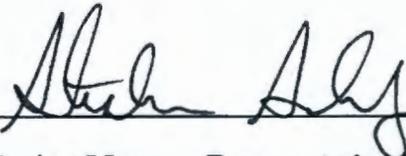
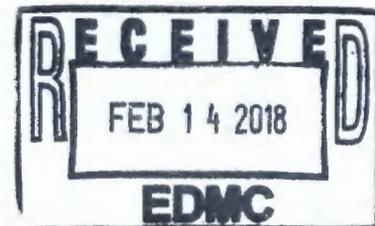


January 23, 2018, Meeting Minutes
Plutonium Finishing Plant (PFP)
Briefing to Ecology/EPA/WDOH on Responses to EPA/Ecology letter dated January 9, 2018 re:
PFP Stop Work
Building 2430/Room 199 3:30-4:30pm

 Date: 02/06/2018
Project Manager Representative, DOE-RL

 Date: 2/6/18
Project Manager Representative, Ecology

Administrative Record (M-83)	H6-08
S. G. Austin, CHPRC	A6-01
N. S. Cruz, CHPRC	A6-01
W. G. Cox, CHPRC	T5-60
L. J. Cusack, CHPRC	A6-01
D. R. Einan, EPA	A3-46
M. T. Hughey, CHPRC	T4-53
G. R. Konzek, RL	A6-38
E. Laija, EPA	A3-46
C. Mathey, WDOH	B1-42
S. N. Schleif, Ecology	H0-57
B. J. Stickney, RL	H5-30
T. K. Teynor, RL	A6-38
T. Vaughn, CHPRC	T4-52
K. A. Wooley, CHPRC	T5-60
A. K. Wright, RL	H5-30



1588851
11/2/2018

The purpose of this briefing was to discuss the information requested in the January 9, 2018 Ecology/EPA letter re: Creation of Danger Pursuant to Article XXXII Hanford Federal Facility Agreement and Consent Order (HHFACO) in advance of providing it on January 26, 2018. The letter is included as an attachment, as well as the meeting attendance roster.

Following introductions, Tom Teynor, DOE-RL, opened the briefing with a statement that there would be a series of open discussions/workshops to respond to this request; and provided an overall status that the causal analysis was not finalized, and that by the middle of next week (week of January 29, 2018), RL/CHPRC planned to release a communication of the bioassay results known to date. He noted that some of the data/information provided at this briefing should not be further communicated. David Einan, EPA, requested that any such data be explicitly identified when discussed.

The items listed below correspond to the requested information and the status provided. A draft response table was handed out to facilitate the discussion. The information under the DRAFT RL/CHPRC Response is what was provided in the table, followed by what was discussed at the briefing.

1. A description of the corrective actions that were developed as part of the causal analysis for these events and those that were implemented.

Interim RL/CHPRC Response: Corrective actions from the causal analysis will not be available until mid-March, 2018 at the earliest.

Causal Analysis Process and Steps to be completed:

- Implement the Causal Analysis (CA) Process
- Complete the CA report and Jacobs Engineering corporate review,
- Based on the final CA, develop corrective actions to prevent recurrence
- Have corrective actions reviewed by DOE expert panel, DOE-RL, and DOE-HQs.

Discussion: Kelly Wooley, CHPRC/PFP Closure Project Vice President, stated that a Root Cause Analysis is a formal investigation tool. CHPRC brought in Bill Leonard who has extensive demolition experience to assist with the analysis. Currently, the Jacobs Engineering Corporate Board is reviewing the causal analysis report. Board consists of: John Fulton, Bill Murphy; Jason Casper, Wes Long, and Steve McCracken.

CHPRC is moving forward with the following near-term recovery actions:

- Conducting an engineering evaluation for improvement of contamination controls.
- Boundary expansion and access control (e.g., requirement to check in with shift office prior to entry into the expanded work control zone).
- Communications improvement.

Tom Teynor showed an example of a communication that was sent from Connie Simiele, CHPRC PFP Recovery Team Lead, and added that all letters and communications are being posted on the PFP Recovery website. In addition to the PFP activities that were approved (e.g,

applying fixative), DOE may need to discuss other items with Ecology/EPA such as taking down a roofing shingle at 234-5Z that presents a danger, or when DOE gets corrective actions, or when the special handled items such as the gallery glovebox or placement of items in supersacks into waste containers needs to occur, or shipment of waste containers.

Dave Einan stated the Ecology/EPA January 9, 2018 letter should not be interpreted that work by other contractors in the expanded work control zone can't be done. Kelly Wooley, stated the intent is that contractors (i.e., groundwater personnel, or MSA) entering the expanded work control zone need to contact PFP and coordinate work with the shift office. However, after demolition resumes, the process for controlling adjacent work activities within the PFP Access Control Area may change and may only allow access for demolition workers while demolition related activities are ongoing.

Tom Teynor stated DOE has drafted an action plan, which contained 50 actions associated with PFP recovery and steps necessary to resume demolition. Currently, eight items have been completed; and four are nearing completion. The action plan includes convening a DOE Expert Panel. Their charter has been drafted, team selected, and first meeting scheduled for this Thursday, January 25, 2018. With one exception, the team is comprised of individuals outside of the DOE Environmental Management Program. Members are: Todd LaPointe (safety and field operations); Steve Fineberg (SPRU); Bill Miller (Enterprise Assessment); Matt Moury (Deputy Assistant Secretary for Health & Safety); Don Taproot (Nuclear Regulatory Commission); Andrew Wallo (Enterprise Assessment); Steve Wibaro (plutonium experience); Kathryn Higby (Oregon State University, participated on PUREX Tunnel Collapse panel); Steve Crone (Vanderbilt University); and Chip Langdon (AECOM, formerly with DOE). Observers will include: representatives from HAMTC and Building Trades unions, Ecology and EPA.

When finalized, the charter will be placed on the PFP Recovery website. While there is no set schedule, they are expected to complete by mid-March. The panel's product will not be a report, but observations on the contractors proposed corrective actions. Dave Einan commented that a review of the causal analysis should be added to their scope, and added that he had previously provided this feedback. Tom Teynor stated it was, and an action was taken to update the DRAFT response table, and verify the scope was included in the expert panel's charter. John Martell, WDOH, stated that Alex Smith, Ecology, forwarded an invite to WDOH, and he asked if WDOH could attend. Tom Teynor stated it should not be an issue, and took the action to check with Erik Olds to verify the location of the meeting had enough space.

2. A briefing summarizing these corrective actions.

Interim RL/CHPRC Response: A briefing will be provided at the same time as Item #1 to go over both the causal analysis and corrective actions.

Tom Teynor stated that he would like to hold status briefings bi-weekly (every two weeks) to go over the information after the regulators have had time to review. An action was taken to set up bi-weekly briefings.

3. Records of both the Continuous Air Monitoring stations (CAMs) and surveys taken from November 1, 2017, to January 5, 2018. This should include alarm set points and calibration dates for CAMs.

RL/CHPRC Response:

Requested data was showed and discussed as an example of what would be provided in the response. It was communicated that data would be provided in both hard copy and electronic formats, after clearance process, no later than January 26, 2018.

Discussion:

Kyle Maloy, CHPRC/PFP Radcon, provided a packet containing the following examples of data sheets and information that will be included in the response to Items 3, 4, and 6:

- Table (spreadsheet) showing instrument identification number for the continuous air monitors (CAM), air samplers (A/S), and cookie sheets; description, dated installed; DAC-hr set point; status; calibration due date; and notes.
- Map dated January 17, 2018 showing PFP A/S and CAM locations.
- Map dated January 17, 2018 showing PFP Cookie Sheet Locations.
- CHPRC Radiological Control Air Sample Analysis Record (Batch ID: CR-9624) dated November 15, 2018 – 3 day decay.
- CHPRC Radiological Control Air Sample Analysis Record (Batch ID: CR-9641) dated November 20, 2018 – 7 day decay.
- Radiological Control Lapel Air Sample (LAS) Analysis Record (RSR# L-Z-1704498-1), page 6 of 9, date counted December 9, 2017.
- Radiological Control Lapel Air Sample (LAS) Analysis Record (RSR# L-Z-1704498-1), page 9 of 9, date counted December 15, 2017.
- List of PFP Radcon Routine Task (shows Task Number and Task Description)
- CHPRC Radiological Control Scheduled Radiological Survey Task Description, Z-VAR010, Revision 5, Inspection and Sample Exchange of Air Monitoring Equipment.
- CHPRC Radiological Control Scheduled Radiological Survey Task Description, Z-VAR011, Revision 5, Radiological Surveillance of Demolition Area Boundaries.

Kyle discussed the packet content and pointed out:

- the alarm set points of 8 and 24 DAC-hr;
- column with the calibration due dates for the CAMs;

- Fourteen additional cookie sheets added in December 2018 (CS 78 through 92) and four in January 2018.
- Map showing locations of monitoring equipment.
- An example of a Radiological Survey Report (RSR).

All RSRs completed between November 1, 2017 and January 5, 2018 will be provided. These include shipments, clearance surveys, step-off pad surveys, and clearance of respirators. Additionally, the list of survey task instructions will be provided as reference to the number provided on the RSR form, and to provide a description of what is being performed. John Martell stated that in his interview with a Seattle news station earlier today that he was asked if he has seen the RSR, and he responded that the RSRs have been requested. They were interested in all the RSRs in order to be sure they have a good picture of what had been surveyed.

Stephanie inquired as to whether the point of contact (POC) on the DRAFT Response Table was who to contact. It was agreed that requests for information would go through Laura Cusack, CHPRC, with a copy to Tom Teynor.

4. Log books and/or Radiological Work Packages detailing contamination controls (i.e. water, fixative, and cover material) from November 1, 2017, to January 5, 2018.

RL/CHPRC Response: Requested data was showed and discussed as an example of what would be provided in the response. It was communicated that data would be provided in both hard copy and electronic formats, after clearance process, no later than January 26, 2018.

Kyle Maloy stated that work packages for 234-5Z and 236-Z Demolition will be provided. The work packages show, for example, contamination control, and fixatives specified. John Martell stated they were interested in dust suppression and when it was applied. Kelly Wooley, noted that daily log books are not maintained for dust suppression tasks (this is discussed further in the next item).

5. Location and usage logs of water foggers for contamination control from November 1, 2017, to January 5, 2018.

RL/CHPRC Response: CHPRC does not keep logs for the location and usage of foggers during demolition activities. Kelly Wooley also stated there are no specific location maps showing where the water cannons and foggers must be used. Positioning is skill of the craft, and decision on location of equipment is made between the Field Work Supervisor, craft personnel operating the equipment, and Radcon. For example, the Radiological Control Technicians operating the cameras have the capability to zoom in and tell when the water/fixative is not contacting the structure, etc., and request adjustment in real time. Information discussed and shared at the Jan 23, 2018 briefing included photographs of foggers in operation during the Plutonium Reclamation Facility and 234-5Z demolition activities.

Stephanie Schleif, Ecology, noted that the photos were not dated or labeled with regards to what facility was depicted. She requested that the photos, when provided, include the date and label information. An action was taken to include the date and facility information on the photos.

6. Lapel monitor readings from November 1, 2017, to January 5, 2018.

RL/CHPRC Response: Requested data was showed and discussed as an example of what would be provided in the response. It was communicated that data would be provided in both hard copy and electronic formats, after clearance process, no later than January 26, 2018.

Kyle Maloy discussed the Radiological Control Lapel Air Sample (LAS) Analysis Record in the packet. He stated they will find an initial, 3 day decay, and some will have a 7 day decay. If results are < 1 DAC-hr CHPRC does not investigate. On the completed form, results > 1 DAC-hr are underlined. Kyle Maloy noted there were some elevated lapel results during the timeframe requested and a review of the data will show this.

7. Bioassay Results to include:

7a. Dose, location, sample date, and result date.

7b. Dates that employees were offered bioassays.

7c. Any dose modeling done to account for delays from uptake to bioassay.

Interim RL/CHPRC Response: Information will be provided after final results have been received from the laboratory and discussed with affected individuals. This is estimated to be mid-March 2018.

7a: Terry Vaughn, CHPRC, stated that CHPRC utilizes the Hanford Site bioassay program which is administered by the Mission Support Alliance (MSA). As of January 22, 2018, the following information was known:

- For three companies, a total of 271 bioassays have been requested.
- All samples are shipped offsite for analysis.
- Results to-date have been communicated to workers.
- Information on results will be communicated externally in batches as part of a coordinated communication plan. The plan is to send out updates in a similar fashion as more results are received.

Tom Teynor added that the dose is a 50 year committed dose; and as in the past if additional employees are concerned they can still get bioassays. Tom Teynor asked John Martell if King 5 News inquired about dose and John stated the interview focused on the June 8, 2018 event. John Martell asked if an individual had an uptake whether it was possible to determine the location of the worker at the time of the uptake. Kelly Wooley stated they investigate where a worker may have been at the time of an event, but for a typical D4 worker you probably wouldn't know their exact location. Crystal Mathey, WDOH, refined John Martell's question by asking if it was possible to track whether a worker was inside or outside the PFP access boundary. Terry Vaughn stated it would be possible, however, they would not

inquire about a worker's location unless that worker had a positive bioassay result. Otherwise, worker locations, inside the PFP footprint, or external to the PFP footprint are unknown and not recorded.

Terry Vaughn noted that lessons learned from the June 8, 2018 event included issuance of a standardized letter to all site employees; and development of a 'Bioassay 101' training course to communicate to site employees.

7b: Terry Vaughn stated workers were offered bioassays on:

- December 8, 2017 after 2 high personal lapel results were identified. Seventy-one employees accepted.
- December 12, 2017, after high personal lapel results were identified from waste loadout activities. Seven workers accepted on December 14 and 15, 2017.
- December 17, 2017 through January 10, 2018 - Subsequent to the most recent contamination event. Approximately 200 employees across the site accepted.

Tom Teynor stated that if MSA or WRPS employee have positive results they are briefed by their own company.

For the December 17, 2017 event, Crystal Mathey inquired whether all employees in the PFP footprint received bioassays. Terry Vaughn confirmed that all CHPRC and other assigned contractor labor to the PFP project (e.g., approximately 80 MSA employees) within the footprint were required to do bioassays.

7c: Terry Vaughn stated that MSA dose modelers use the ICRP standard. If for some reason an employee's bioassay was not collected, for example 30 days after a potential uptake, dosimetry can still identify 5 mrem equivalent or greater dose if the employee had exposure at those levels. Terry Vaughn also stated another modeling approach used if no bioassay data was collected, would be to take air sample data and model/calculate dose based on where the worker was located.

John Martell stated he has been getting questions on bioassays. Tom Teynor offered to provide the regulators the 'Bioassay 101' training, and they indicated there was an interest. An action was taken to offer the training to the regulators.

Terry Vaughn discussed how the members of NIOSH had recently reviewed the bioassay program. Their feedback was positive with one comment to improve the communication of the program. No report was issued by NIOSH.

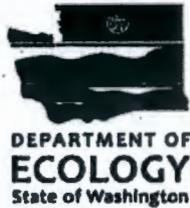
Meeting Summary: Information that is available now and discussed will be cleared and provided in a document request form by Friday, January 26, 2018. Meeting minutes will be issued to document the briefing and discussions held. Meeting minutes and information request will be placed in the Administrative Record (M-83). Copies need to go to both Ecology and EPA.

Action Items (Action item/POC/due date):

1. Provide Items 1 & 2 (corrective actions/causal analysis and briefing) – Brian Stickney/Tom Teynor (mid-March 2018)
2. Provide completed Item 7 (Bioassay Information) – Terry Vaughn (mid-March 2018)
3. Schedule bi-weekly discussions with EPA/Ecology/WDOH – Allison Wright (**Completed January 24, 2017, outlook sent for February 6, 20, and March 6**).
4. Clear Photos and add dates and labels to those shown with Item 5 discussion (locations of foggers/water usage) – Laura Cusack
5. Offer Bioassay 101 Training to regulators – Terry Vaughn
6. Provide feedback from Alex Smith on not all information being provided by January 26, 2018 requested date – Stephanie Schleif (**Completed January 25, 2018. Alex Smith provided an email to Doug Shoop restating the three items that would not be provided by the January 26, 2018 date; and stated that Ecology would like the corrective actions and briefing as soon as they are developed, and weekly or bi-weekly updates on the bioassay results. In addition, Ecology requested to be notified when updated bioassay results are going to be posted to the Hanford.gov website in lieu of being provided updated bioassay hard-copy information as requested in the January 9th letter**).
7. Change third bullet on DRAFT Information Request Table for Item 1 to read “Have Causal Analysis and corresponding corrective actions reviewed by DOE expert panel, DOE-RL and DOE-HQ.” - Update table Laura Cusack (**Completed**)
8. Prepare meeting minutes and distribute for comment and finalization – Allison Wright
9. Provide cleared information to Ecology/EPA by January 26 – Laura Cusack/Tom Teynor (support from Allison Wright)
10. Confirm WDOH can observe expert panel – Tom Teynor (**Completed – Earl Fordham will be attending**).

Attachments:

- Ecology/EPA letter dated January 9, 2018.
- Attendance Roster



January 9, 2018

Mr. Doug S. Shoop, Manager
Richland Operations Office
United States Department of Energy
PO Box 550, MSIN: H5-20
Richland, Washington 99352

Re: Creation of Danger Pursuant to Article XXXII Hanford Federal Facility Agreement and Consent Order (HFFACO)

Reference: "Plutonium Finishing Plant (PFP) Timeline of Contamination Spreads, Surveying of Areas and Workers, and Safety Controls", Issued by CH2M HILL Plateau Remediation Company and Department of Energy Richland Operations Office, December 20, 2017

Dear Mr. Shoop:

This letter notifies the United States Department of Energy - Richland Operations Office (USDOE-RL) that the Washington State Department of Ecology (Ecology) and the United States Environmental Protection Agency (EPA) have determined that the recent contamination events at the Plutonium Finishing Plant (PFP) on the Hanford site are creating a danger to the health or welfare of the people on the Hanford Site and to the environment.

Ecology and EPA are aware that USDOE-RL has stopped work at the PFP site at this time. However, given our determination, we hereby invoke Hanford Federal Facility and Consent Order (HFFACO) Article XXXII ("Creation of Danger") and order all work at PFP to stop until Ecology and EPA determine that USDOE-RL has taken actions sufficient to allow the remaining work at PFP to continue and informs USDOE-RL that work may resume.

As provided by Article XXXII, any dispute on this stop work shall be immediately referred to the Interagency Management Integration Team level of the appropriate HFFACO dispute resolution process.

Summary of Events:

Ecology and EPA were notified on December 14, 2017, of a decision to stop work as a result of elevated radiation levels detected by air samplers worn by workers conducting PFP demolition activities (reference). These workers were not in areas where respiratory protection is required.

Mr. Doug S. Shoop
January 9, 2018
Page 2 of 4

Elevated readings on these personnel air monitors were detected on December 8, 9, and 12. The stop work directive based on these elevated radiation levels was lifted on Thursday, December 14, after additional surveys of trailers and vehicles resulted in no additional detections and the control area was extended.

On Friday, December 15, demolition of the Plutonium Reclamation Facility (PRF) resumed. On swing shift, worker surveys following demolition of PRF found contamination at a stationary, passive monitoring point located northwest and outside established control areas. Subsequent monitoring found contamination on the hood of one vehicle, on a jersey barrier, on the stairs of an office trailer, on a dumpster near an office trailer, and near mobile office trailers.

No work occurred on Saturday, December 16. When work resumed on Sunday, December 17, CH2M HILL Plateau Remediation Company issued a stop work directive after notification of the contamination discovered on December 15. Additional surveys were taken, and no additional contamination was found outside the contamination area. The PRF demolition debris was covered with soil for stabilization and a fixative was applied.

On Monday, December 18, a second layer of soil and fixative was placed on the PRF debris. Surveys on Monday found contamination on the hoods of cars and around and between mobile trailers at PFP. Ecology and EPA were notified on December 18 that contaminated personal vehicles had been driven home over the weekend.

By Tuesday, December 19, a total of seven contaminated personal vehicles that had been driven home were identified. Contamination surveys were conducted at the seven homes. No contamination was found.

As of January 3, 2018, Ecology and EPA understand that contamination is still being detected at passive monitoring points at PFP within control areas, indicating that the contamination has not yet been controlled.

Determination:

Ecology and EPA agree that the events described above have created a danger to the health or welfare of the people on the Hanford Site and to the environment within the meaning of Article XXXII of the HFFACO.

Because of these circumstances, Ecology and EPA want to ensure the circumstances that created the danger are corrected before work at PFP resumes. To that end, the two agencies request the following information from USDOE-RL no later than January 26, 2018:

1. A description of the corrective actions that were developed as part of the causal analysis for these events and those that were implemented.
2. A briefing summarizing these corrective actions.

Mr. Doug S. Shoop
January 9, 2018
Page 3 of 4

3. Records of both the Continuous Air Monitoring stations (CAMs) and surveys taken from November 1, 2017, to January 5, 2018. This should include alarm set points and calibration dates for CAMs.
4. Log books and/or Radiological Work Packages detailing contamination controls (i.e. water, fixative, and cover material) from November 1, 2017, to January 5, 2018.
5. Location and usage logs of water foggers for contamination control from November 1, 2017, to January 5, 2018.
6. Lapel monitor readings from November 1, 2017, to January 5, 2018.
7. Bioassay Results to include:
 - a. Dose, location, sample date, and result date.
 - b. Dates that employees were offered bioassays.
 - c. Any dose modeling done to account for delays from uptake to bioassay.

Once Ecology and EPA have a chance to review the requested documents, we will make an additional determination on whether these actions are sufficient to allow the remaining work at PFP to continue. Ecology and EPA's priority is for the remaining work at PFP to be completed in a manner that protects both workers and the environment.

If you have questions regarding this determination please contact Emy Lajja, Remedial Project Manager for EPA, at (202) 564-2724 or lajja.emerald@epa.gov or Stephanie Schleif, Facility Transition Project Manager for Ecology, at (509) 372-7929 or stephanie.schleif@ecy.wa.gov.

Sincerely,



Alexandra K. Smith
Program Manager
Nuclear Waste Program
Washington State Department of Ecology



Laura Buelow
Acting Manager
Hanford Project
United States Environmental Protection Agency

Hand delivered
cc: See Page 4

Mr. Doug S. Shoop
January 9, 2018
Page 4 of 4

cc electronic:

Dave Bartus, EPA
Sheryl Bilbrey, EPA
Jack Boller, EPA
Craig Cameron, EPA
Lucy Edmondson, EPA
Dave Einan, EPA
Emy Laija, EPA
Mark Macintyre, EPA
Kim Ogle, EPA
Kevin Schanilec, EPA
Cheryl Williams, EPA
Cliff Clark, USDOE
Glenn Konzek, USDOE
Tom Teynor, USDOE
Allison Wright, USDOE
Tom Bratvold, CHPRC
Bill Cox, CHPRC
Moses Jaraysi, CHPRC
Jon Perry, MSA
Rose Ferri, YN
Jean Vanni, YN
Ken Niles, ODOE
Caroline Cress, AGO
Andy Fitz, AGO
Koa Kaulukukui-Barbee, AGO
Shawna Berven, DOH
John Martell, DOH
Crystal Mathey, DOH
Randy Bradbury, Ecology
Edward Holbrook, Ecology
Jared Mathey, Ecology
John Price, Ecology
Darin Rice, Ecology
Stephanie Schleif, Ecology
Ron Skinnarland, Ecology
Brigitte Weese, Ecology
Cheryl Whalen, Ecology
CHPRC Correspondence Control
Environmental Portal
Hanford Facility Operating Record
MSA Correspondence Control
USDOE-RL Correspondence Control

cc: Matt Johnson, CTUIR
Jack Bell, NPT
Rose Longoria, YN
Susan Leckband, HAB
Administrative Record
NWP Central File

ATTENDANCE ROSTER

Informational Briefing on Ecology / EPA January 9, 2018 request for information on PFP stop work.

DATE OF Meeting: January 23, 2018

Location: 2430 Stevens Blvd, Room 199

Please Print

Name	Position	Company/Organization	Phone Number
Allison Wright	Environmental	DOE/RL/ESA	539-3839
Eric Faust	Environmental	DOE/RL/ESA	376-9607
Kelley Wooten	PM	CHPRC	308-9861
IGREY VAUGHAN	VP H&S	CHPRC	376-5408
Kyle Maloy	Lead Engineer	CHPRC	373-3317
Annie McLain	HP	DOH	943-6505
P. DAN MARTELL	RHP4	DOH	941-3798
Crystal Madhew	RHP3	DOH	993-5216
Stephanie Schief	Ecology PM	ECY	372-7929
Wes Boyd	DOE HP	DOE	376-9267
Tom Teyner	DOE FPD	DOE	376-6363
Dave Einar	EPA	EMPA	376-7883
Brian O'Mahla	FP M&M	CHPRC	373-2707
LAUREA CURET	CHPRC ENV	CHPRC	376-1597
Glen Konzell	PFP Proj.	DOE-RL/PCD	376-8399 (last 2)

