

RES CONTROL
GOING LTR NO

74720
RF



Rocky Flats Plant
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Contractor to U.S. Department of Energy

DEC 11 1987

87-RF-4720

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Area Manager
DOE, RFAO

**MODIFICATIONS TO THE HAZARDOUS AND LOW LEVEL MIXED WASTE
PART B PERMIT APPLICATION**

The Part B Permit Application has been modified in response to the Notice Of Deficiency (NOD) issued to Rocky Flats by the Colorado Department of Health (CDH) and the U.S. Environmental Protection Agency (EPA) on September 29, 1987.

The Section E (Ground Water Protection) is not included with this modification of the permit application. The revised Section E, along with, the revised Post Closure Care Permit Application, will be submitted to the CDH and the EPA 60 days after receipt of the Notice Of Deficiency for these documents. This second NOD has not yet been received by Rocky Flats.

Attached are the responses to the specific comments which made up the NOD. Also attached is a copy of the record of amendments for Sections B, D, F, H, I and Appendix 1. The record of amendments for these sections, as well as for Sections A, C, and G, will be submitted to the CDH and EPA on December 15, 1987, when these agencies also receive the revised permit application and the response to the N.O.D.

The Sections A, B, H, I and Appendix 1 did not undergo major modifications and there are no issues involved with their modification.

An overview of the remaining sections is given below:

Section C (Waste Analysis Plan):

This section has been rewritten according to an outline received by CDH. This revised plan now includes a Generator Waste Analysis Plan which builds on the original waste analyses performed on all hazardous and low level mixed waste streams generated at Rocky Flats. This Generator Plan answers concerns the regulators have that a "one-time" grab sample does not take into account the variability in individual waste streams.

| DIST. | LINK | ENCL |
|---------------|------|------|
| HINI, D.J. | XX | |
| R.C.P. | | |
| BELL, G.W. | | |
| S.R.C. | | |
| ER, J.E. | | |
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| RS, G.W. | | |
| NON, W.M. | | |
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| NER, C.W. | | |
| ON, W.F. | XX | |
| ON, G.L. | | |
| WAK, B.D. | | |
| G, E.R. | | |
| HER, D.H. | | |
| HVAL, G.J. | | |
| HAN, L.K. | | |
| RT, J.L. | | |
| J.B. | | |
| MAN, R.B. | | |
| S, D.M. | | |
| B.W. | | |
| BENBURG, G.E. | | |
| MON, E.R. | XX | |
| BY, R.L. | | |
| CKER, J.H. | | |
| SQUEZ, R.N. | | |
| INLEY, K.B. | XX | |
| HA, F.J. | XX | |
| TEKE, C.D. | XX | |
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| KLIN, A.C. | XX | |
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| DEW, J.A. | XX | |
| LEG, L. | XX | |
| BACHER, D.D. | XX | |
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ADMIN RECORD

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A. E. Whiteman
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The revised Section C also includes a Waste Analysis Plan for each permitted treatment or storage unit. These plans were modeled after a waste analysis plan for the Fluidized Bed Incinerator which the CDH and EPA reviewed and verbally approved on October 5, 1987.

This section also includes a new QA/QC plan for laboratory sampling and analysis and a waste analysis plan for spills, decontamination, closure, etc.

Section D (Process Description):

This section has been revised to show compliance with the new tank regulations, especially with regard to secondary containment and overflow control and alarm systems.

Rocky Flats is presenting to the agencies an interpretation of the regulations which states sumps with a volume of 55 gallons or less and a waste residence time of less than 24 hours not be considered tanks, but regulated as ancillary equipment instead.

The trial burn plan for the Fluidized Bed Incinerator will not be included with Section D at this time, but will be submitted separately in late March, 1988.

Section F (Hazard Prevention) and Section G (Contingency Plan):

The inspection of over 13,000 pond crete and salt crete boxes on the required weekly basis would be extremely labor intensive. An inspection of 0.25% of the boxes per week is being proposed to the CDH and EPA in Section F.

The procedure for notification to the CDH and EPA in the event the Contingency Plan is activated will be submitted to the agencies by January 8, 1988 for later inclusion in Section G.

Other Considerations:

There are four units (including the Building 444 Chip Roasters) which were removed from the permit application and are being "closed" under Interim Status. These units will not be included in the Post Closure Care Permit Application.

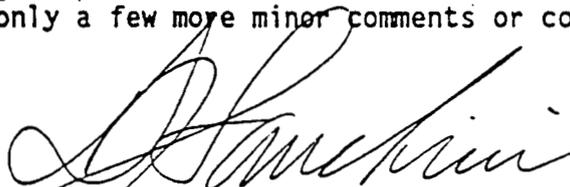
The RCRA closure of the chip roasters is based on a program of solvent elimination in uranium chip machining areas. Verification that this program is successful will be through a Waste Analysis Plan which is Attachment II of the response to the N.O.D.

Alternative treatment by melting for any chips contaminated with solvent will have to be permitted under a Research Development and Demonstration Permit unless the uranium is recycled. An application will be submitted to the agencies in early 1988.

The final version of the Hazardous Materials Response Program will be submitted to the agencies by February 1988 for inclusion in Section G. A draft copy, so marked, is being submitted on December 15, 1987.

The Sewage Treatment Plant has been removed from the RCRA Permit Application because it is an NUDES permitted facility. The process waste treatment facility, Building 374, will remain a RCRA treatment facility to provide Rocky Flats the capability to treat aqueous waste generated as a result of site cleanup and water from the Solar Pond interceptor trenches.

In general, Rocky Flats has responded in a positive way to the agencies concerns expressed in the N.O.D. comments. In our opinion, we are in a good position to receive a Notice Of Completeness with a possibility of only a few more minor comments or concerns on the part of the agencies.



Dominick J. Sanchini
President

Orig. and 1 cc - A. E. Whiteman
Enc.

RESPONSE TO CDH COMMENTS

SECTION A (GENERAL FACILITY DESCRIPTION)
(6 CCR 1007-3, SECTION 100.40 AND 100.41(a)(1))

COMMENTS & RESOLUTIONS

Comment:

1. General Facility Description: The general facility description should include a listing of the number of units to be permitted and an estimate of the annual waste volume.

Resolution:

The general facility description will include a list of the permitted units and an estimate of the annual waste volume.

Comment:

2. Waste Facility Locations: The applicant must identify on a drawing the location of all past, present, and future TSD facilities. The map must identify each separate tank or container storage area.

Resolution:

The facility map has been modified to include all past, present, and future TSD facilities, including each tank and container storage area.

RESPONSE TO CDH COMMENTS
SECTION B (SITE SPECIFIC INFORMATION)

COMMENTS & RESOLUTIONS

Comment:

1. Traffic Information: The applicant must provide the following additional information regarding the transportation of hazardous wastes on plant:
 - a. The applicant must describe access road surfacing and load bearing capacity.
 - b. The applicant must identify traffic control signal location.
 - c. The applicant must identify the types and number of vehicles.

Resolution:

A map showing the paved road surfaces are on Plate B-5. Traffic signs and all outside loading and unloading areas, satellite areas, 90 day, permitted storage and outside treatment (pond crete) is now in Section B, Plate B-6. A drawing of the hazardous waste collection points (loading docks) are marked on the Plate B-3. Virtually every route on plantsite can be and is used for transport of hazardous wastes. Public use of these roadways is restricted to plant employees and delivery vehicles. The number and types of vehicles are given in Section B-4b(1).

Comment:

2. Topographic Map: The site topographic map must include the following additional information:
 - a. an identification of any recreational areas;
 - b. locations of injection or withdrawal wells;
 - c. locations of sanitary sewer transfer systems;
 - d. locations of loading and unloading areas; and
 - e. locations of fire protection facilities.

Resolution:

- a. The identification of the recreational areas is on Figure B-5.

- b. The locations of injection or withdrawal wells are shown in Plate B-6.
- c. The sanitary sewer lines are shown on Plate B-4.
- d. The locations of the docks shown in Plate B-3. Each of these docks is a loading and an unloading area.
- e. The fire department and fire hydrant locations are shown in Plate G-5.

Comment:

- 3. Site Specific Information: The applicant must provide an estimate of the 100-year, 24-hour, rainfall amount.

Resolution:

This amount, estimated to be 4 inches in six hours, is provided in Section B-3b.

RESPONSE TO CDH COMMENTS
SECTION C (WASTE ANALYSIS)
(6 CCR 1007-3, Sections 264.13, 100.41(a)(2), and 100.41(a)(3))

COMMENTS & RESOLUTIONS

Comment:

1. Treatment, Storage, and Disposal (TSD) Waste Analysis Plan: The application does not include a waste analysis plan specific to the treatment and storage activities. The applicant has supplied a detailed generator analysis of the waste, but this waste identification analysis does not satisfy all the requirements applicable to a treatment, storage, or disposal facility. The owner or operator of a TSD facility must establish a plan to analyze all waste streams to the extent necessary to treat, store, or dispose of the wastes in accordance with the regulations. Logically, the applicant should first identify all of the regulated units, and then work backwards to characterize all the waste streams which the units can accept. The generator identification analysis may supplement the TSD waste analysis, but the applicant must still develop a more extensive TSD waste analysis plan. The applicant must identify waste analysis parameters specific to each of the waste treatment and storage activities. These parameters must be sufficient to insure all wastes can be safely treated or stored, based on the design and operating limits set for each unit. For example, to operate an incinerator safely in accordance with the regulations, factors such as waste composition, ash content, heat of combustion, chlorine content, solids content, and other waste parameters should be determined.

Once the waste analysis parameters for each regulated unit are identified, the rationale, the sampling method, the analytical method, the sampling point, and the frequency of sampling must be determined. Again, these factors must be based on the needs of the treatment or storage activity, and not just the generator needs.

Resolution:

Following the "Typical Waste Analysis Plan Format" received from CDH, a specific waste analysis plan for each treatment and storage unit is now in Section C-3. Each of the unit specific waste analysis plans in Section C-3 identifies the specific analysis parameters to insure all wastes can be safely treated or stored in the specified unit.

The rationale, sampling and analytical methods, sampling point and frequency of sampling are found in each sampling plan in Section C-3.

Comment:

2. Incompatible Wastes: The applicant must describe how incompatible wastes are determined. What test method is used to determine incompatibility? When knowledge of the waste is used in place of testing, the applicant must explain the criteria used to identify incompatible wastes.

Resolution:

Fingerprint analyses are used to determine the compatibility of the waste being stored or treated in a particular unit. The waste analysis plans for each unit describe the fingerprint analysis to be used to assure compatibility with that unit and with other wastes entering that unit. Only the waste streams identified in each waste analysis plan will be treated or stored in that unit. Each of these waste streams has been analyzed and these analyses received for compatibility. The criteria for compatibility is explained in each waste analysis plan in Section C-3.

Comment:

3. Sampling Point: The sampling point must clearly be identified for each unit to be permitted. Currently the application describes the procedure for obtaining tank, container, and in-line samples but does not describe the intended sample locations. For example, where will the liquid incinerator waste feed be sampled, at the 3000 gallon feed tanks, at the 10,000 gallon storage tanks, or prior to the storage tanks?

The applicant should identify all waste streams which will go into an individual unit. Flow diagrams illustrating waste flow into each unit would be helpful.

Resolution:

The sampling points, a list of each waste stream by number and description and a flow diagram is provided in the unit specific waste analysis plans in Section C-3.

Comment:

4. Frequency of Sampling: The applicant proposes biennial full characterization of composite points. The applicant must also propose a frequency for characterization (or certification where applicable) at generator points, a frequency of analysis for additional sampling conducted for treatment and storage units, and a frequency of analysis for each fingerprint check.

Resolution:

The sampling of the composite points and generator points for characterization (or certification) is discussed in Section C-2. The sampling for the treatment and storage units, including fingerprint checks, is included in Section C-3.

5. Representative Sampling: The waste analysis conducted as part of the site Waste Stream Identification and Characterization assumes that the waste streams sampled follow a normal distribution. However, the applicant provides no justification or verification that the waste streams follow normal distributions. When developing the frequency of sampling and sampling locations for the TSD waste analysis plan, the applicant must evaluate the waste streams to determine whether they vary significantly with time or location. This evaluation should include a review of the results from the Waste Stream Identification and Characterization work verifying normal distribution. Where the applicant identifies waste streams for which random sampling is not representative, the applicant must propose increased sampling or additional locations to insure that wastes are adequately characterized.

Resolution:

The analysis summary of each waste stream is being reviewed to assure completeness of the original characterization effort. A schedule for additional sampling and analysis indicating sampling locations, is attached in Table I. The rationale for the frequency and location of samples is discussed as part of the Waste Analysis Plan in Section C-2.

Comment:

6. Waste Analysis Parameters and Rationale: As previously explained, the applicant must identify waste analysis parameters specific to each of the waste treatment and storage activities. Table C-14 provides only a partial list of the necessary parameters.

Resolution:

The waste analysis parameters and rationale are provided for each permitted storage and treatment unit in Section C-3.

Comment:

7. Fingerprint Parameters and Rationale: The application does not clearly explain when and for what purpose fingerprint parameters will be used. The application must state on a unit specific basis what fingerprint parameters will be used to indicate whether or not waste streams are changing. The applicant must then provide a rationale for each fingerprint parameter. The rationale must explain what each fingerprint parameter will indicate and what criteria will be used to identify that a discrepancy has occurred.

Resolution:

The fingerprint parameters for each permitted unit are to assure compatibility of the waste stream with the unit and with other waste streams entering the unit. The particular fingerprint parameters for each unit and the rationale and action criteria based on results of the fingerprint testing are given for each unit in Section C-3.

Comment:

8. Test Methods: The application must include test methods for all parameters. Currently the application lacks test methods for the following parameters: solid content, ash content, viscosity, heat of combustion, heat capacity, thermogravimetric analysis differential, thermal analysis, specific ion analysis, elemental analysis, total organic halogens, incompatibility, and cyanides. The applicant must also specify test methods for any parameters added through revisions.

Resolution:

The test methods are explained in Section C-5 and listed with each analysis parameter given in the unit specific waste analysis plans in Section C-3.

RESPONSE TO CDH COMMENTS
SECTION D (6 ccr 1007-3, section 100.41(B),
AND PART 264 SUBPART I, J AND O)

COMMENTS & RESOLUTIONS

Comment:

Container Storage: Free Liquids

Unit 1: Explain the reason for the proposed capacity. Identify location of container storage area.

Resolution:

Section D-1a(2)(a) revised so that the area is limited to 16 cargo containers. Location shown in Figure D-3A.

Comment:

Unit 2: Provide a diagram showing location of container storage area in reference to building.

Resolution:

Location shown in Figure D-3B.

Comment:

Unit 3: Provide a diagram showing locations of container storage areas in reference to buildings.

Resolution:

No longer a permitted unit (cargo container moved to Unit 1).

Comment:

Unit 4: Precipitation values must be included. Does safety grating serve as a collection and removal point?

Resolution:

No longer a permitted unit. (To be closed under interim status).

Comment:

Unit 5: Provide a diagram showing locations of container storage areas in reference to buildings.

Resolution:

No longer a permitted unit. (Never existed; only proposed).

Comment:

Unit 6: Provide a diagram of the containment area.

Resolution:

No longer a permitted unit. (90-day accumulation area).

Comment:

Unit 7: Provide a diagram showing the locations of container storage areas in reference to buildings.

Resolution:

No longer a permitted unit. (never existed; only proposed).

Comment:

Units 8 & 9: Containment capacity calculations must account for precipitation and account for the presence of the dumpster saddle. Show how these containers are kept from contact with accumulated liquids.

Resolution:

No longer permitted units. Acid dumpsters (Unit 8) to be closed under interim status, and solvent dumpsters (Unit 9) to be used as 90-day storage.

Comment:

Unit 10: Provide a diagram showing locations of container storage areas in reference to buildings.

Resolution:

Location shown in Figure D-7A.

Comment:

Unit 11: Calculations indicate that a 2 inch berm will not provide the required 10% capacity. Include provisions to drain liquids away from the stored containers or to protect the containers from accumulated liquids. Describe type of protective coating used on secondary containment.

Resolution:

Section D-1a(2)(j) describes secondary containment and protection from liquids. Figure D-8 shows a revised layout of this area.

Comment:

Unit 12: Demonstrate how containers will be protected from contact with accumulated liquids. How is secondary containment coated?

Resolution:

Section D-1a(2)(k) describes secondary containment and protection from liquids.

Comment:

Unit 13: Explain how containers will be oriented and calculate maximum capacity. Describe drip pans in more detail. Calculations shown are incorrect.

Resolution:

Section D-1a(2)(l) describes secondary containment in more detail. Figure D-10 shows container orientation. The secondary containment capacity calculation was revised.

Comment:

Container Storage: No Free Liquids:

Container storage areas that store wastes that do not contain free liquids must demonstrate that the storage area is designed or sloped to drain and remove liquids or that containers are elevated or protected from contact with accumulated liquids. Provide the container capacity and storage orientations for these areas.

Resolution:

Table D-2 provides container capacities and maximum inventories for these areas. Protection from contact with accumulated liquids is described in individual container storage area descriptions.

Comment:

Unit 19: Include description of rows, aisle spacing and stacking.

Resolution:

Figure D-10B was added to show information on rows, aisle spacing and stacking.

Comment:

Unit 20: Specify maximum storage capacity and detail how containers will be stored.

Resolution:

Section D-1b(2)(b) revised to add information requested.

Comment:

Unit 24: Aisle spacing shown in Fig. D-14 does not appear to be adequate. Explain how damaged or broken boxes will be handled.

Resolution:

Section D-1b(2)(f) revised to add information requested.

Comment:

Unit 25: Concentrate efforts on obtaining either a delisting of the pond crete and salt crete or an approval for interim status at an off-site mixed waste disposal facility.

Resolution:

Section D-1b(2)(g) revised to add information on current status of permitting mixed waste repository.

Comment:

Unit 25: Not all containers appear to be inspectible on a weekly basis. Protective covering has a projected life of only three years. Explain how a damaged or broken box will be removed.

Resolution:

Section D-1b(2)(g) revised to add information on inspections, removal of damaged boxes, and expected life of area.

Comment:

Unit 26: Explain how containers will be protected from accumulated liquids.

Resolution:

Section D-1b(2)(h) revised to add information on protection of containers from accumulated liquids.

Comment:

Treatment in Containers

Unit 30: What procedures are in place to prevent ignition? What procedures are in place to control organic vapors and dust? What procedures are in place to provide consistent treatment?

Resolution:

Section D-1c(1) revised to add information on ignition prevention and control of emissions.

Comment:

Unit 31: Explain uranium oxide immobilization process.

Resolution:

No longer a permitted unit. (never existed; only proposed)

Comment:

Tank Storage:

Apply new tank regulations.

Resolution:

Information concerning compliance with the new tank regulations has been added to the individual tank descriptions in Section D-2.

Comment:

Submit independent review and certification of each new tank and each existing tank which does not already have adequate secondary containment.

Resolution:

An independent evaluation has been performed and is included in Appendix D-8 for existing tanks which will not have secondary containment in place by January 1988.

Information on new tank assessments is included in Appendix D-9.

Comment:

For each existing tank that the applicant does not provide an independent assessment, clearly demonstrate that adequate secondary containment already exists.

Resolution:

Information on secondary containment construction and operation has been added to the individual tank descriptions in Section D-2.

Comment:

Secondary containment should account for continuous flow systems.

Resolution:

Information on continuous flow containment is included in individual tank descriptions in Section D-2.

Comment:

Unit 40: A tank information table should be provided for the unit 40 tanks.

Resolution:

Provided in Table D-2A.

Comment:

Unit 40: For each of the regulated tanks in the process waste transfer and collection system describe the overflow prevention controls in more detail. Specify a high level indicator set point for each tank.

Resolution:

Overflow prevention controls and high level indicator set points are discussed individually for each permitted tank in Section D-2.

Comment:

Unit 40: Explain how secondary containment areas are sealed.

Resolution:

This information is discussed individually for each permitted tank in Section D-2.

Comment:

Building 428:

Specify high level set point and describe protection against migration of spills.

Resolution:

Section D-2b(1)(c) revised to add information on secondary containment. High level set point was already described.

Comment:

Building
123:

Evaluate sumps to determine whether they will require permitting as storage tanks.

Resolution:

Sump #6 will be permitted as a storage tank. The other sumps will be considered ancillary equipment. See Attachment I for a description of the Rocky Flats Position on this issue.

Comment:

Building
444:

Specify high level set point and describe protection against migration of spills. The secondary containment capacity for the two 4300 gallon tanks does not provide adequate capacity.

Resolution:

Section D-2b(1)(e) revised to add information requested.

Comment:

Building
444:

Describe venting and emission control system on cyanide wash tanks. Specify how tanks are pressure monitored.

Resolution:

Section D-2b(1)(e) revised to add information requested.

Comment:

Building
447:

Specify high level set point and describe protection against the migration of spills. Provide secondary containment calculations.

Resolution:

Section D-2b(1)(e) revised to add information requested.

Comment:

Building
460:

Specify high level set point and describe protection against migration of spills.

Resolution:

Section D-2b(1)(f) revised to add information requested.

Comment:

Building
460:

Secondary containment calculations should take into account the tank supports and any other structures.

Resolution:

Figure D-410 in Appendix D-5 was revised and shows new containment capacity calculations.

Comment:

Building
460:

Specify freeboard levels for open sump tanks. Describe secondary containment for sump tanks.

Resolution:

Section D-2b(1)(f) revised to add information requested.

Comment:

Building
732:

Specify high level set point and describe protection against migration of spills.

Resolution:

Section D-2b(1)(g) revised to add information requested.

Comment:

Building
778:

Determine if sumps are regulated tank storage units.

Resolution:

See Attachment I for Rocky Flats position on this issue.

Comment:

Building
865:

Determine if these sumps are regulated tank storage units.

Resolution:

Two sumps will be permitted as storage tanks. The other sumps are ancillary equipment. All sumps are described in Section D-2b(1)(h).

Comment:

**Building
866:**

Specify high level set point and describe protection against migration of spills.

Resolution:

Section D-2b(1)(i) revised to add information requested.

Comment:

**Building
883:**

Specify high level set point and describe protection against migration of spills.

Resolution:

Section D-2b(1)(j) revised to add information requested.

Comment:

**Building
883:**

Clarify whether or not tanks A-24, A-25, and A-26 will be accepting hazardous waste.

Resolution:

Tanks A-24, A-25, and A-26 may accept hazardous waste and will be permitted tanks.

Comment:

**Building
883:**

For tanks T-1 and T-2, specify how the vault joints are sealed, and specify pressure set points.

Resolution:

Section D-2b(1)(j) revised to add information requested.

Comment:

Building
887:

Specify high level set point and describe protection against migration of spills.

Resolution:

Section D-2b(1)(k) revised to add information requested.

Comment:

Building
889:

Specify high level set point and describe protection against migration of spills.

Resolution:

All the sumps in Building 889 are ancillary equipment. These are described in Section D-26(1)(1).

Comment:

T-207: Provide independent assessment of tank.

Resolution:

No longer a permitted unit. (To be closed under interim status).

Comment:

Unit 41: There is conflicting information on the maximum liquid level height stated on Table D-4 and in Figure D-301. An indicator must be set at the maximum liquid level height.

Resolution:

Table D-4 has been corrected to agree with Figure D-301. A sight gauge and high level alarm are used to determine when a tank is full.

Comment:

Unit 41: Explain how vapor emissions from these tanks will be controlled.

Resolution:

Section D-2c(1)(a) revised to add information on emission control.

Comment:

Unit 41: Provide description of the secondary containment system.

Resolution:

Section D-2c(1)(a) describes the new secondary containment.

Comment:

Unit 42: Decision should be made on NPDES permit.

Resolution:

The decision has been made to indefinitely postpone obtaining an NPDES Permit for Unit 42.

Comment:

Unit 42: Provide description for secondary containment and description of the sump system.

Resolution:

Section D-2c(2)(a) describes secondary containment and the Building 374 sump system.

Comment:

Unit 42: Specify the Liquid High Alarm Level for all tanks. Specify the control set points for high and low pressure and high temperature.

Demonstrate adequate venting capacity and emission control.

Explain treatment systems process control in more detail. What are the alarm level set points for the process control variables such as temperature, pressure, pH, etc..? Explain how the treatment process is monitored to insure that treatment is complete and safe.

Resolution:

Section D-2c(2) revised to add information requested on treatment system operation and controls: All tank high level alarms are set at 90% of full capacity.

Comment:

Unit 43: Table D-6 lists incorrect dimensions.

Resolution:

Dimensions have been corrected.

Comment:

Unit 44: Specify liquid high alarm level. Describe the secondary containment area.

Resolution:

Section D-2d(1)(b) revised to add information requested.

Comment:

Treatment In Tanks

Unit 45: The Uranium Chip Toaster must abide by incinerator requirements.

Unit 46: Same as comments on Unit 45.

Resolution:

The Unit 45 chip roaster will be closed under interim status. Degreasing solvents associated with the chips have been eliminated from the machining areas. This solvent elimination will be verified in the waste analysis plan provided in Attachment II. Uranium - 238 chips are RCRA exempt as AEA source material (6 CCR 1000-7 Section 26.4(4)).

Unit 46 chip roaster was never used to treat RCRA hazardous wastes (To be closed under interim status).

Comment:

Unit 47: Identify which storage tanks are being proposed for permits in light on the recycling regulations.

Resolution:

No longer a permitted unit. (Recycle)

RESPONSE TO CDH COMMENTS
SECTION F (PROCEDURES TO PRESENT HAZARDS)
(6CCR 1007-3 Sections 264.14, 264.15, 264.15, 264.17, 100.41(a)(4),
100.41(a)(5), 100.41(a)(8), 100.41(a)(9) and Part 264 Subpart C).

COMMENTS & RESOLUTIONS
INSPECTION SCHEDULE

Comment:

Inspection Schedule:

The applicant must explain the types of remedial action which will be conducted to correct problems identified by inspection.

Resolution:

Changes will be made to subsection F-2C which will address the three points specified. Specifically;

The types of remedial action to be employed will be explained (spill control, issuance of W.O.s, EJO's, etc.);

Comment:

The applicant must also propose time frames for implementation of remedial actions.

Resolution:

The time frames for implementation of remedial actions specified; and

Comment:

The applicant must prepare descriptions of the remedial actions which can be referenced from the inspection schedules.

Resolution:

The inspection schedules will provide references to the appropriate plant procedures that specify special remedial actions for a particular problem.

Comment:

Tank Inspection Schedule:

Certain tanks require additional inspection items. For tanks which store or treat ignitable wastes, the applicant must include in the inspection schedule items to address the additional fire prevention equipment. For example, items such as an inert gas blanketing system or a carbon filter system must be identified on the inspection schedule.

Resolution:

Changes will be made to subsection F-26 (2) which will include the inspection of fire prevention equipment for tanks which store or treat ignitable wastes.

Comment:

For tanks which use cathodic or other corrosion protection measures, the applicant must include inspection of the corrosion protection system in the schedule.

Resolution:

Changes will be made to subsection F-26(2) which will include the inspection of cathodic or other corrosion protection measures, if present.

Comment:

Incinerator Inspection Schedule:

The incinerator inspection schedule must be modified to reflect changes from comments or the trial burn plan. All additional waste feed cutoff parameters, feed limitations, and safety measures must be added to the inspection list.

Resolution:

Changes will be made to subsections F-26(2)(e) and F-26(5) which will include the comments made on the trial burn plan. The revised trial burn plan will be submitted separately.

Comment:

2. Preventative Procedures, Structures and Equipment:

The applicant must address preventative procedures on a unit specific or unit type specific basis as described below.

- a. Loading and unloading: Loading and unloading procedures must be detailed for each type of activity (i.e. container transfer, transfer of concrete blocks, transfer to tanks). For areas where loading and unloading of tanks or containers occur repeatedly such as on loading docks the applicant must explain what structures and procedures are in place to contain spills. The applicant must explain what procedures will be used when handling containers to prevent spills, releases, or other accidents. This information must include:
- a description of secondary containment provided in loading and unloading areas;
 - an explanation of how containers are secured during transport, the safety procedures used to prevent damage to containers during transport; and
 - a description of how gas cylinders will be secured during transport and storage to prevent breakage or puncture. Furthermore, the applicant must explain what procedures will be used to prevent spills, releases, ignition or other accidents when transferring wastes to or from tanks and containers. This information must include:
 - procedures to prevent sparking when transferring ignitables.
 - procedures used to minimize vapor emission and spills when transferring wastes.
- b. Run-off and run-on: For those units which are outside of buildings, the applicant must provide unit specific run-on/run-off control measures. What structures and procedures are used to control and monitor run-on and run-off to prevent releases of hazardous waste? Secondary containment for units outside of buildings must provide precipitation cover or additional capacity to hold precipitation.
- c. Personnel Protective Equipment: The applicant must describe on a case-by-case basis, the types of equipment used to protect Rocky Flats personnel from dangerous exposures to hazardous waste. The applicant may submit independent certification demonstrating that all protective equipment associated with hazardous waste activities meets OSHA requirements. The applicant must also propose a schedule for on-going evaluation of protective equipment.

Areas which are used for secondary containment for hazardous waste units should not encompass work areas. Personnel will, out of necessity, enter secondary containment areas for inspection, maintenance, transfer, and other operations. However, employee full time work areas should not be exposed to the risk of hazardous waste spills.

- d. Power Outages: The applicant must explain the emergency power backup system in more detail. Does the backup power begin immediately after a power failure or is there some delay?

Resolution:

- a. Loading and unloading procedures for each type of activity is described in Section F-4a and Section D under each unit for Tanks.

Secondary containment for permitted units is discussed in Section D under each unit and Table D-5A and B and D2C and D4A. There is no secondary containment at loading and unloading areas. These areas are inspected daily. Therefore any spills or leaks will be immediately contained and cleaned up (Section F-2b). A description of how containers are secured during transport is given in Section F-4. This Section includes a description of how gas cylinders are secured during transport and storage.

The procedure to prevent sparking when transferring ignitables is given in Section F-4a. The procedures used to minimize vapor emissions and spills when transferring wastes is given in Section F-5a. When transferring from a container to a tank, the containers are open for a minimal length of time.

- b. Run-off and run-on:

The storage pads, Unit 15 and Unit 25, are raised 4" to prevent run-on. Run-off is collected in a bermed area on Unit 25 and sampled before release into a retention pond (Section C-4). The run-off from Unit 15 will be collected in a bermed area to catch flow and sampled for VOA and nitrates as it is released into a retention pond. This is described in Section C-4.

Dock areas are raised and 25% are covered to prevent run-on and run-off. This is described in Section F-4(a) and (b). Secondary containment for permitted units is described in Section D under each unit and Tables D-5A and B, 2C, and 4A.

c. Personnel Protective Equipment:

The protective equipment in the event of a spill meets OSHA requirements and is listed for each type of unit in Section F-4e. The inspection of this equipment is described in F-2. In normal transfer operation, protective clothing and equipment is worn as described in Section F-4e. Areas which are used for secondary containment do not encompass work areas. Personnel will only enter these areas for inspection, maintenance, and unit operation.

d. Power Outages:

The emergency power backup system is described in Section F-4d.

Comment:

3. Prevention of Reaction of Ignitable, Reactive and Incompatible Wastes:

The applicant must define which units will accept ignitable waste, reactive wastes, or incompatible wastes. The applicant must describe how these wastes are identified and labeled. The applicant must describe in greater detail the procedures and precautions used to prevent reaction of ignitable, reactive, and incompatible waste. (See below)

- a. Incompatible and Reactive Wastes: The applicant must identify where mixing of incompatible or reactive wastes occurs. The applicant must describe how the mixing is monitored and controlled to prevent releases of hazardous constituents. Where incompatibles or reactive wastes are stored in the same area, the applicant must describe for each case what structures and procedures are in place to prevent mixing of wastes and spills.
- b. Ignitable Wastes: The applicant must provide information on a unit specific basis demonstrating compliance with all applicable National Fire Protection Association (NFPA) codes. Alternatively, the applicant may submit an independent certification demonstrating compliance with all applicable NFPA codes. The applicant must also include a proposed schedule for reassessment of compliance with the NFPA codes.

Resolution:

a. Incompatible and Reactive Wastes:

The unit specific waste analysis plans in Section C-3 identifies where mixing of incompatible or reactive wastes occur. These waste analysis plans describe how the mixing is monitored and controlled. Where these wastes are stored in the same area, the procedures and structures are described which prevent mixing of wastes and spills.

b. Ignitable Wastes:

Each permitted treatment and storage unit handling ignitable wastes has been reviewed for compliance with applicable NFPA Codes. This is described in Section F-5.

Comment:

4. Required Equipment:

- a. **Spill Control Equipment:** The applicant must identify the contents of the spill control equipment kits referenced as kits "A", "B", and "C".
- b. **Decontamination Equipment:** The applicant must provide and describe equipment for decontamination of personnel and equipment.

Resolution:

Spill Control Equipment, including the contents and location of spill kits referenced as "A", "B" and "C", are given in Section F-3a(3). Decontamination procedures are described in Appendix G-4.

RESPONSE TO CDH COMMENTS
SECTION 6 (CONTINGENCY PLAN)
(6 CCR 1007-3 Section 100.41(a)(7) and Part 264 Subpart D)

COMMENTS & RESOLUTIONS

Comments:

1. Emergency Coordinator:

The applicant must provide a list of the names, addresses and phone numbers of all emergency coordinators.

Resolution:

The names, addresses and phone numbers of all emergency coordinators is provided in Section 6, Appendix 6-5.

There is an Emergency Director (Shift Superintendent) on duty 24 hours a day at the plant, every day of the year.

Comments:

2. Implementation of Contingency Plan:

The applicant must include the following items under the implementation section of the contingency plan:

- a. The contingency plan must be implemented if a hazardous waste incident results in an injury which requires more than first aid attention.
- b. The contingency plan must be implemented in the event of an uncontained release of hazardous waste to surface or ground waters.

Resolution:

The contingency plan will be implemented if a hazardous waste incident results in an injury which requires more than first aid attention or in the event of an uncontained release of hazardous waste to surface or ground water. See Section 6-3.

Comments:

3. Emergency Response Procedures:

- a. Notification: The applicant must also notify the Colorado Department of Health, Hazardous Materials and Waste

Management Division whenever the contingency plan is implemented.

- b. **Control Procedures:** The applicant must specify specific response procedures which will be implemented to minimize the release of hazardous waste or hazardous waste constituents in the case of a release to the plants surface water control system. Specifically, what steps will be taken to prevent any release of surface waters?

The applicant must explain what steps are taken to minimize the effects of a power failure. The application is not clear on whether a period of delay occurs after a power outage before the backup power is activated.

Also, the applicant references the waste analysis plan for use when analyzing contaminated soil samples. However the waste analysis plan does not include a sampling and analysis section for soils. These additional plans for soil sampling and soil analysis must be provided.

Resolution:

- a. **Notification:**

The Colorado Department of Health, Hazardous Materials and Waste Management Division is notified whenever the contingency plan is implemented according to the procedure described in Section 6, Appendix 6-7. Appendix 6-7 will be delivered to the State on January 1988.

- b. **Control Procedure:**

The specific response procedure to minimize the release of hazardous waste or hazardous waste constituents in the case of a release to the plant surface water control system is described in Section 6-d(2).

The emergency power system is activated 20 seconds after a power failure. This short time period minimizes the effects of a power failure and assures no release to the environment. (Section 6-d(3)).

The plans for soil sampling and soil analysis in the event of a spill or release is described in Section C-4 and Section 6-4f.

Comment:

4. Location, Description, and Capabilities of Emergency Equipment:

- a. The applicant must provide information which shows the location of fire extinguishers.
- b. The applicant must demonstrate that the amount of supplied air units is adequate for the personnel response needs.

Resolution:

- a. The location of fire extinguishers is provided in Appendix G-3.
- b. Each processing building has a quantity of supplied air units specified by the HS&E Department as adequate for the specified emergency personnel response needs.

Comment:

5. Contingency Plan Attachments:

- a. The applicant must provide evacuation route documents for all buildings in which hazardous waste is stored or treated. These evacuation plans should be attached to the contingency plan for that building.
- b. For each building the applicant should provide waste handling information specific to the waste streams handled within that building. The contingency plan for a given building should contain this waste management data.

Resolution:

- a. The contingency plan in Appendix G-6 contains the evacuation routes for each building.
- b. The waste flow diagrams, process description and waste stream identification and characterization information will be distributed to all process buildings. This information will be kept in Building superintendants offices for reference in the event of an emergency.

RESPONSE TO CDH COMMENTS
SECTION H (PERSONNEL TRAINING)
(6 CCR 1007-3 Sections 264.16 and 100.41(a)(12))

COMMENTS & RESOLUTIONS

Comments:

1. On-The-Job Training:

The applicant must include procedures to demonstrate that employees receive adequate on-the-job training. The applicant must describe how on-the-job training is tracked and documented. The applicant must describe the categories of training which are included in on-the-job training.

Resolution:

A description of the on-the-job training is included in Section H-2.

Comment:

2. Module II Training:

Module II training must include training on the plant's contingency plan and emergency measures. Middle managers who will be receiving the Module II training must be familiar with these emergency procedures since they will often be making accident response decisions.

Resolution:

The training approach of Modules I-III for RCRA training has been revised. See Section H revisions for a description of the RCRA computer-aided-instruction and on-the-job training approach. Emergency preparedness training for the EOC is currently being addressed by the development of five training programs. These programs are: 1) EOC Indoctrination, 2) Crisis & Information Management Team Training, 3) Satellite Centers Training, 4) Computer Operator Training, and 5) Field Management Team Training. EOC Cadre members and their alternates will attend the EOC indoctrination and other appropriate training programs for their jobs. The field management team training addresses the on-the-scene response to emergencies. Designated individuals from each building (or organizations) make up this team should an emergency take place within their building. These designated individuals may or may not be middle managers.

RESPONSE TO CDH COMMENTS
SECTION I (CLOSURE OF PERMITTED UNITS)

COMMENTS & RESOLUTIONS

Comment:

- 1a) The applicant must provide justification that closure activities will of necessity take longer than 180 days to complete.

Resolution:

Section I-2a (1) of the Part B Permit Application presents a schedule for closure of the Rocky Flats Plant. This schedule includes all portions of the hazardous and mixed waste management system, however, this schedule should not be interpreted as stating that closure of all units begins on day zero. The closure of each individual unit begins 90 days after receipt of the final volume of hazardous or mixed waste, is permitted in CCR 264.113(a). The receipt of the final volume of waste is determined by how that system interacts and relates to the other hazardous waste management units. For instance, since the 374 Process Waste Treatment Plant may be used to treat contaminated wash and rinse waters from drum storage areas, closure of the 374 system cannot commence until all the drum storage units are decontaminated. No hazardous waste management units will be enclosed but inactive. As presented in November 1986, only the Main Hazardous Waste Storage Area (Unit 10) and the Process Waste Collection System required more than 180 days for closure. The closure period for the Main Hazardous Waste Storage area has been revised to 180 days. Likewise, the newly built pad west of the 903 pad and all other new areas are also designated for a 180 day closure period. The Process Waste Collection System Closure is anticipated to take a minimum of 540 days. The closure schedule for the Process Waste Tanks and Process Waste Collection System does indicate 540 days will elapse between beginning and completing closure of this system. This should not be interpreted as all portions of this system undergoing decontamination at the same time. This schedule rather represents the total elapsed time from the commencement of closure procedures to the completion of all such decontamination procedures for all of the process waste tanks and collection system. As explained and detailed

in the Part B Permit Application and the previous question, closure of the process waste tanks and collection system will proceed sequentially, and transfer, storage, and treatment facilities will be used to manage wastes and rinsates. All buildings and treatment facilities associated with the process waste tanks and collection system will not be decontaminated at the same time, although certification of closure, since these are all part of one waste management unit, will be simultaneous for all. Due to this sequential progression of closure, no unclosed but inactive portions of this system will be present.

Comment:

- 1b) The applicant must demonstrate that he has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but inactive facility.

Resolution:

As explained in the response to question 1a (above), no unclosed but inactive units will be present at the Rocky Flats Plant. Units will be in operation until closure activities commence. All closure activities for each individual unit will be done within 180 days, excepting the Process Waste Collection System which will require 540 days for closure. Human health and the environment will be protected during all closure activities through required inspections (discussed in Section I), routine ground water monitoring activities, air monitoring activities, surface water sampling activities, soil sampling activities, and security procedures. All such monitoring activities will be maintained, as discussed in the Part B Permit Application, until all hazardous and mixed waste management units are closed. The extensive environmental monitoring and security procedures will identify the migration of any hazardous constituents and prevent access to the plant. Remedial actions will be taken should problems be identified in the course of environmental monitoring.

Comment:

- 2a) The maximum waste inventories reported in Section I and Section D were not always consistent. These inconsistencies should be corrected. Specifically Units 1, 5, 10, 19, and 21 were reported inconsistently.

Resolution:

The correct ~~maximum~~ inventories for Units 1, 10, and 19 are reported below and will be consistently reported in Sections I and D:

| Unit | & | Maximum Inventory |
|------|---|-------------------|
| 1 | & | 870 Drums |
| 10 | & | 120 Drums |
| 19 | & | 378 Boxes |

Units 5 and 21 were never operated as long-term storage facilities, and are no longer intended for use as long-term storage facilities. Therefore these units have been deleted from Section D and I of the RCRA Part B Permit.

Comment:

- 2b) The applicant must specify the criteria used to determine whether cleaning water will be treated on-site or sent to an approved off-site treatment or disposal facility.

Resolution:

Cleaning waters compatible with the Rocky Flats Plant waste treatment facilities will be treated on-site. Wastes compatible with the Rocky Flats Plant waste treatment facilities currently include high and low pH solutions, radioactive solutions, and solutions contaminated with inorganics. Waste that are reactive, ignitable, or highly concentrated in organics are incompatible with the RFP waste treatment facilities. It is currently anticipated that all cleaning wastes will be compatible with the RFP waste treatment facilities.

Comment:

- 2ci) Most parameters listed will not be present in rinsate sources. It is incorrect to establish three standard deviations from a zero or detection limit value. The applicant should set a level for these type of parameters.

Resolution:

When background values for a parameter in a rinsate source are less than the detection limit (here used as the minimum

quantifiable amount), then used rinse water must be at or below the detection limit for that parameter. In instances in which some samples of the rinsate source are below the detection limit, with other samples above the detection limit, then a value of one-half the detection limit will be used for all analyses less than the detection limit. These values will be used in the statistics to develop the mean plus three standard deviations which must be met by the used rinse water. When only one sample of the rinsate source has been collected, then the used rinse water sample must be of a less-than-or-equal concentration.

Comment:

The use of TOC and TOX for cleanup of asphalt areas is not appropriate verification of decontamination. The asphalt will cause elevated levels of TOC and TOX. The applicant should select indicators for which the structure materials do not create an interference.

Resolution:

This point is quite appropriate. When asphalt is sampled for verification of decontamination, TOC and TOX are inappropriate. Therefore, when concerned about decontamination of asphalt with respect to hazardous solvents, the appropriate solvent will be used exclusively. When decontaminating asphalt with respect to oil, the triple wash and rinse procedure plus other hazardous materials will be relied upon for verification of decontamination.

Comment:

2ciii) If sampling of rinse water will be used to determine the success of decontamination, details such as the following must be included: frequency of sampling, number of samples, where and how will the samples be collected?

Resolution:

Rinsate sources will be grab sampled after the preparation of the appropriate cleaning solution for use at a unit undergoing closure. Therefore, the rinsate source will have any of the chemicals identified in Tables 1 and 2 of Appendix I-1 of Section I present when sampled. When a triple wash and rinse of a unit is expected to require less than 500 gallons of water, then one sample of the rinsate source will be taken.

Two samples of the rinsate source will be taken when a triple wash and rinse is expected to take 500 - 1000 gallons, and three samples of the rinsate source will be taken when the triple wash and rinse is expected to exceed 1000 gallons. Typically, only one sample of the used wash and rinse water will be collected, and this sample will be taken of the third rinse solution after collection in the vacuum cleaner or sump used during the wash and rinse activities. The analytical results of prepared and used wash and rinse solutions will only be compared with appropriate values at any unit undergoing decontamination.

Comment:

- 3a) Correct the inconsistencies between Section D and Section I of the Part B Permit.

Resolution:

The correct tank volumes are listed below and will be consistently used in all Sections of the RCRA Part B Permit Application henceforth. Revisions to decontaminated volumes and ~~maximum~~ waste volumes in Section I have also been made.

| <u>Unit #</u> | <u>Volume</u> |
|---------------|----------------|
| 40.13 | 225 gallons |
| B460/T-4 | 1000 gallons |
| 40.04 | 4300 gallons |
| 40.05 | 4300 gallons |
| 40.01 | 1960 gallons |
| B883/A-24 | 750 gallons |
| B883/A-25 | 750 gallons |
| B883/A-26 | 750 gallons |
| B883/B-16 | 500 gallons |
| 41.01 | 10,470 gallons |
| 41.02 | 10,470 gallons |
| 42.01 | 38,558 gallons |
| 42.02 | 38,558 gallons |
| 42.03 | 38,558 gallons |
| 42.07 | 22,992 gallons |
| 42.08 | 22,992 gallons |
| 42.09 | 22,992 gallons |
| 42.19 | 3606 gallons |
| 42.20 | 4645 gallons |
| 47.01 | 2000 gallons |
| 47.02 | 2250 gallons |
| 47.03 | 2250 gallons |
| 48.01 | 30,000 gallons |

Comment:

- 3b) The verification of decontamination problems specified for containers also apply to the verification procedures for tanks.

Resolution:

The resolutions as presented in the resolutions to questions 2ci), 2cii), and 2ciii) also apply to tanks. Please refer to the above referenced resolutions.

Comment:

- 4) The verification of decontamination problems specified for containers also apply to the verification procedures for incinerators.

Resolution:

The resolutions presented for questions 2ci), 2cii), and 2ciii) also apply to incinerators. Please refer to the above referenced resolutions.

RESPONSE TO CDH COMMENTS

ATTACHMENT I

Ancillary equipment in the process waste system includes piping, pumps, valves, and ancillary sump systems. Ancillary equipment will be inspected daily (above ground portions only) and provided with secondary containment as required by 40 CFR 264.193 and 264.195. Inspection schedules are presented in Section F of this permit application. Ancillary sump systems include both polyethylene under-sink-style sumps and in-floor lined concrete sumps, with capacities of less than 55 gallons and typical residence times of less than 24 hours. Sumps with greater volumes and/or residence times have been included with the permitted units as "sump tanks." Table D-2A provides information on the ancillary sump systems.

ATTACHMENT I
TABLE D-2A
ANCILLARY SUMP SYSTEMS

| BLDG. | ROOM | SUMP # | CAPACITY (GALLONS) | RESIDENCE TIME | MATERIAL* | DESCRIPTION |
|-------|------|----------|-----------------------|-------------------|-----------|-----------------|
| 123 | 125 | 1 | 17 | 10 min | pe | under sink |
| | 103 | 2 | 17 | 10 min | pe | under sink |
| | 103 | 3 | 10 | 10 min | pe | under sink |
| | 111 | 4 | 17 | 10 min | pe | under sink |
| 865 | 106E | P-3 | 16 | 2 hr | SS | under sink |
| | 106W | P-4 | 6 | 1 hr | pe | under sink |
| | 108 | P-1 | 6 | 1 hr | pe | under sink |
| | 135 | - | 6 | 1.5 hr | pe | under sink |
| | 136 | - | 6 | 6 hr | pe | under sink |
| | 144S | - | 6 | 4 hr | pe | under sink |
| | 144N | - | 16 | 4 hr | pp | lined conc. pit |
| | 145 | Breakout | 11 | 4 hr | pe | under sink |
| | 889 | 106 | 1 | 16 | 8 hr | pp |
| 106 | | 2 | 16 | 8 hr | pp | lined conc. pit |
| 108 | | 3 | 16 | 8 hr | pp | lined conc. pit |
| 106 | | 4 | 16 | 8 hr | pp | lined conc. pit |
| 106 | | 5 | 16 | 8 hr | pp | lined conc. pit |
| 106 | | 6 | 16 | 8 hr | pp | lined conc. pit |

* pe = polyethylene
SS = stainless steel
pp = polypropylene
hood

ATTACHMENT II

Waste Analysis Plan for Freon and 1, 1, 1 - Trichloroethane in oil and Triosol\ taken from uranium machining areas.

Purpose: Freon and 1, 1, 1-Trichloroethane will be eliminated from the Building 444 and 883 uranium machining areas by January 4, 1987. Administrative controls and additional training are being used to maintain the areas solvent free. The analysis plan stated below will provide the assurance the program is successful.

Analysis Plan: Two samples will be taken from randomly selected machines in Building 444 and 883 once a week. The samples will be screened for Freon and 1, 1, 1-Trichloroethane at the 1000 ppm level using the sampling and analysis protocol specified in SW 846.

Phase I : If six consecutive samples show no solvent present then:

Phase II : slip to sampling once a month for three months. If solvent free, then:

Phase III: Sampling will be on a biennial basis as described in Section C-2 of the Part B Permit Application.