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LOS ALAMOS NATIONAL LABORATORY HAZARDOUS & SOLID WASTE GROUP (ESH-19) FAX TRANSMITTAL SHEET

FAX #: (505) 667-5224

VERIFICATION #: (505) 667-0666

DATE: 12-15-94 ID # _____ LOG NO: ESH-19:94-FAX-

FROM: Jack Ellinger PHONE #: (667-0633)

TO: Barbara Haditschek FAX #: () 827-4361 VERIFY PHONE # () _____

GRP/ORG: NMED

TO: Jody Plum FAX #: () 5-5095 VERIFY PHONE # () _____

GRP/ORG: LRAO

TO: Kathy Etsberry / Barth Reader FAX #: () 5-3750 VERIFY PHONE # () _____

GRP/ORG: CST

MESSAGE: _____

To: Paul Schumann - CST 5-3750

To: Mike Baker - CST 5-8347

NUMBER OF PAGES TO FOLLOW: _____

Cy: HSWS File
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SECTION LEADER

GROUP OR DEPUTY GROUP LEADER

September 26, 1994



MEMO

TO: Barbara Hoditschek
FROM: Jack Ellvinger *JE*
DATE: December 15, 1994
RE: December 20, 1994 Meeting to Discuss the
Controlled Air Incinerator

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Attached is an agenda for the December 20, 1994 meeting on the Controlled Air Incinerator. Please review the agenda and inform me if you should have any changes to it.

Also notice that a brief discussion on the TWISP has been added. This is to give you a heads up on some modifications for the TRU Pad project permit that will be needed to satisfy fire protection concerns at DOE and LANL. We have briefly discussed these in the last two meetings that we've had.

This is a rather ambitious agenda. To make the best of the time that we have to meet on the CAI issues I've included the data base that briefly describes the alterations to the CAI with indications how we are approaching them in terms of the permit and a rationale why we are proceeding in this direction.

If you have any questions or changes you wish to make please give me a call at 667-0633 or fax them to me at 667-5224.

cc Jody Plum, LAAO
Kathy Elsberry, LANL
Paul Schumann, LANL
Mike Baker, LANL

AGENDA FOR THE NMED MEETING ON 12/20/94

- * Identification of alterations made to the CAI system
- * Identification of potential modifications to the LANL Hazardous Waste Permit.
- * Discussion of the Kathy Sisneros letter and the direction LANL is taking to include Mixed Waste for treatment in the CAI.
- * Discussion and status report of the DRE reverification and the FFCA required Trail Burn.
- * Status report on the rad monitoring that will be utilized in conjunction with the operation of the CAI
- * TWISP - Proposed permit modifications to the TRU Pads to accommodate newly recognized fire suppression needs (15-30 min).

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SUMMARY OF LANL CAI MODIFICATIONS, UPGRADES, AND MAINTENANCE
BY AFFECTED SYSTEM

| System | Category | Title | Description | Permit Implications |
|--------------------|-------------|-----------------------------------|---|---|
| CAI Building | None | Air Locks | Personnel and material air locks are being added and roll up doors replaced to comply with DOE Order 6430.1A (Containment Criteria).(Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: The change descri to the authorized unit as described in Permit Modu |
| CAI Building | None | Ash Pit | A pit to accomodate the gravity ash drop out and removal system has been constructed under the primary combustion chamber. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: The change described does not pertain to th described in Permit Module V. |
| CAI Building | None | Building Exhaust | New building exhaust fan expansion joints constructed to replace deteriorated joints. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: The change described does not pertain to th described in Permit Module V. |
| CAI Building | None | Building HVAC | Replacement of the existing building evaporative cooler with a mechanical chiller system. Ventilation control upgrades including new PLC based data aquisition and connection to main CAI control room for process area, high bay, and storage bay exhaust systems. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: The change described does not pertain to th described in Permit Module V. |
| CAI Building | None | Siesmic Upgrades | TA-50-37 may be structurgally upgraded to withstand a more intense design earthquake. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: The change described does not pertain to th described in Permit Module V. |
| Combustion Chamber | Upgrade | Combustion Air Blower Replacement | Replacement of combustion air blowers with flanged units of same type (performed to allow for addition of HEPA filters to flange). Combustion air glovebox face removed. (Necessary due to control valve size changes occuring in this glovebox.) (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Replacement units are identical except for change from indirect HEPA filtration of the glove filtration on the blower provides filtration of c equivalent to the previous condition (ie., functio Minor design changes are not permit modifications |
| Combustion Chamber | Upgrade | Hearth Sweep-out System Addition | IGOR (Integrated Glovebox-Operated Robotics) system for hearth sweep-out and inspection of PCC, SCC and main duct added. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: The system upgrade is not used during incin is used mainly to clean ash off the incinerator h has no effect on DRE or any other relevant inciner |
| HEPA Filters | Maintenance | Material Change | Third-stage HEPA moved and housing replaced with 316L stainless steel. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Material substitution as part of normal mai moved physically, but not relative to other unit the process and process diagram does not change. |

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SUMMARY OF LANL CAI MODIFICATIONS, UPGRADES, AND MAINTENANCE
BY AFFECTED SYSTEM

| System | Category | Title | Description | Permit Implications |
|------------------------------|-------------|---------------------------------------|---|--|
| Instrumentation and Controls | Maintenance | Backup Power | A new uninterruptible power supply and new transfer switching equipment have been installed to replace aging battery packs. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Instrumentation and Controls | Maintenance | Combustion Chamber O2 Monitor | Replacement of O2 monitors in the primary and secondary combustion chambers. The RCRA operating permit requires monitoring of upper (secondary) chamber oxygen monitoring. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Instrumentation and Controls | Maintenance | Control Systems Upgrade | pH meters on the scrub solution recycle line are being moved to new locations to provide better data acquisition and parameter control. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Instrumentation and Controls | Maintenance | Control Valve Replacement | Replacement of control valves on the combustion air and natural gas supply lines with new control valves. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Instrumentation and Controls | Maintenance | Cooling Loop Breakthrough Detection | A conductivity meter has been installed on the primary cooling water loop to detect breakthrough or leaking from the secondary cooling water loop. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Instrumentation and Controls | Maintenance | Electrical Rewiring | Entire electrical system rewired to separate high voltage and low voltage instrument wiring in order to eliminate induced signals. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Instrumentation and Controls | Maintenance | Flow Meter Replacement | A new gyroscopic/coriolis mass flow meter installed on the liquid feed line to provide instantaneous readings of liquid waste flow to the high intensity vortex burner. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Instrumentation and Controls | Maintenance | Flowmeter Replacement | Flow meters on the scrub solution recycle system have all been replaced with gyroscopic/coriolis mass flowmeters. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Instrumentation and Controls | Maintenance | HEPA Filter Pressure Drop Measurement | Individual differential pressure gauges added to each HEPA filter to detect blinding and breakthrough. Formerly, pressure drop was measured across the filter plenum, not individual filters. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |

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SUMMARY OF LANL CAI MODIFICATIONS, UPGRADES, AND MAINTENANCE
BY AFFECTED SYSTEM

| System | Category | Title | Description | Permit Implications |
|------------------------------|-------------|----------------------------------|--|---|
| Instrumentation and Controls | Maintenance | Instrument Air Supply | Instrument air compressor replaced by Ingersoll Rand duplex compressor specifically designed for instrument air systems. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (53 FR 28, 1988). |
| Instrumentation and Controls | None | Neutron Monitors | Addition of neutron monitors in the CAI process area, external to the CAI process volume. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: The change described does not pertain to th described in Permit Module V. |
| Instrumentation and Controls | Upgrade | Burner Control Logic Enhancement | Addition of lead-lag logic control for fuel-to-air ratio control to compensate for sluggish air supply response versus rapid fuel supply response. (Previously performed manually.) (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Replacement of equipment with functionally components is a modification only if the permit is change. Addition of automatic process control to operated systems is a functionally equivalent equi (53 FR 37930, September 28, 1988) |
| Instrumentation and Controls | Upgrade | Burner Control Logic Enhancement | Removal of mechanical linkage control of fuel and combustion air so these may be controlled independently and automatically. (Previously performed manually.) (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Replacement of equipment with functionally components is a modificalton only if the permit is change. Addition of automatic process control to operated systems is a functionally equivalent equi (53 FR 37930, Septemeber 28, 1988) |
| Instrumentation and Controls | Upgrade | Burner Control Logic Enhancement | Addition of control loop relating liquid waste feed to equivalent natural gas feed rate. Will ensure that neither heat capacity nor combustion air capacity of burner is exceeded. (Previously performed manually.) (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Replacement of equipment with functionally components is a modificalton only if the permit is change. Addition of automatic process control to operated systems is a functionally equivalent equi (53 FR 37930, Septemeber 28, 1988) |
| Instrumentation and Controls | Upgrade | Burner Control Logic Enhancement | Addition of control loop to compensate for changes in the liquid waste supply which will adjust for differing liquid waste combustion air requirements. (Previously performed manually.) (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Replacement of equipment with functionally components is a modificalton only if the permit is change. Addition of automatic process control to operated systems is a functionally equivalent equi (53 FR 37930, Septemeber 28, 1988) |
| Instrumentation and Controls | Upgrade | Combustion Gas Monitor Removal | Removal of combustion gas monitor in the combustion gas glovebox, due to removal of the glovebox front. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: This monitor was removed because combustion enters the combustion gas blowers through a glove combustion gases cannot accumulate and cause an e. before. (The combustion gas monitor was an alarm. There is no permit condition or monitoring requir |

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SUMMARY OF LANL CAI MODIFICATIONS, UPGRADES, AND MAINTENANCE
BY AFFECTED SYSTEM

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| System | Category | Title | Description | Permit Implications |
|------------------------------|-------------|----------------------------------|--|--|
| Instrumentation and Controls | Upgrade | Control System Upgrade | Replacement of mechanical process recorders and controllers with multipoint digital controllers. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Replacement of equipment with functionally components is a modification only if the permit is change. Replacement of mechanical-based control s software-based control systems is a functionally e replacement. (53 FR 37930, September 28, 1988) |
| Instrumentation and Controls | Upgrade | Control System Upgrade | Change in offgas pressure control valve control logic from feedback to feedforward-based control. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: This change in the control logic changes th the pressure control valve, making response quicke flucuation in valve response. Valve function is r affected. (Functionally equivalent component char September 28, 1988) |
| Instrumentation and Controls | Upgrade | Control System Upgrade | Replacement of mechanical relay-based control logic with a Programmable Logic Controller (PLC). The PLC will control some of the critical system interlocks and provide data aquisition. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Replacement of equipment with functionally components is a modification only if the permit is change. Replacement of mechanical-based control s software-based control systems is a functionally e replacement. (53 FR 37930, September 28, 1988) |
| Instrumentation and Controls | Upgrade | Offgas Alpha-Beta Monitor | Addition of offgas continuous alpha-beta monitor, for compliance with the RCRA permit monitoring requirement. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Monitor added to comply with permit monitor Equipment added is a requirement and does not aff monitoring condition. |
| Instrumentation and Controls | Upgrade | Offgas CO/CO2/H2O Monitor | Addition of an offgas CO/CO2/H2O. This is to comply with the RCRA permit monitoring requirement for CO monitoring. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: BASIS: Monitor added to comply with permit monitor Equipment added is a requirement and does not aff monitoring condition. |
| Instrumentation and Controls | Upgrade | Offgas NO/NOx/SO2 Monitor | Addition of an offgas NO/NOx/SO2. There is no RCRA permit monitoring requirement. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: BASIS: Addition of this monitor is for additional capability outside of the permit monitoring requi has no effect on the permit or any permit monitor |
| Instrumentation and Controls | Upgrade | Offgas Total Hydrocarbon Monitor | Addition of an offgas total hydrocarbon monitor to comply with the RCRA permit monitoring requirement. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: BASIS: Monitor added to comply with permit monito Equipment added is a requirement and does not aff monitoring condition. |
| Misc. APC Systems | Maintenance | Material Change | Change in offgas ducting not otherwise mentioned with ducts constructed of AL-6XM, in addition to minor rerouting. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5 28, 1988). |

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SUMMARY OF LANL CAI MODIFICATIONS, UPGRADES, AND MAINTENANCE
BY AFFECTED SYSTEM

| System | Category | Title | Description | Permit Implications |
|-------------------|-------------|--------------------------------|---|---|
| Misc. APC Systems | Maintenance | Material Change | Replacement of sampling trombone with identical unit constructed of AL-6XN. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Misc. APC Systems | Maintenance | Piping Change | Addition of offgas superheater drain valve, in order to drain off accumulated condensation for the prevention of internal corrosion of the unit. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). There is no change in function or cap this change. |
| Misc. APC Systems | None | NESHAPS Sampling Train Upgrade | Changes to stack-gas sampling train to comply with NESHAPS sampling requirements. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: The NESHAPS stack-gas sampling train is no RCRA operating permit, nor are the analytical res with any RCRA permit monitoring conditions. |
| Misc. APC Systems | Upgrade | Carbon Adsorber Redesign | Replacement of the carbon adsorber unit with a redesigned, dual-pass annular design unit constructed of Hastelloy C-22 and AL-6XN. Performance of the replacement unit has been modeled and determined to be functionally superior to the old unit. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Replacement of equipment with functionally components is a modification only if the permit i change. The new unit is functionally equivalent replaces and does not affect any aspect of the pe |
| Misc. APC Systems | Upgrade | Flow Straightener Addition | Addition of flow straighteners downstream of the HEPA bank and between the I.O. blowers and offgas flow meter. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Addition of flow straighteners is required instruments which have also been added in order t monitoring requirements. The addition does not a any monitoring conditions. |
| Misc. APC Systems | Upgrade | Sampling Duct Expansion | Added expanded sampling duct section on the sampling trombone and stack. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: This addition is required by the monitorin have also been added in order to meet permit moni The addition does not affect the permit or any mc |
| Piping | Maintenance | Material Change | Replacement of most pipes not otherwise mentioned with Hastelloy C-276 (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Piping | Maintenance | Material Change | Replacement of all process pumps. New pumps contain Hastelloy wetted parts. All units are sealess technology. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Piping | Maintenance | Material Change | Existing instrument air supply lines replaced with Duraplus plastic pipe, straightened, and consolidated. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |

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SUMMARY OF LANL CAI MODIFICATIONS, UPGRADES, AND MAINTENANCE
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| System | Category | Title | Description | Permit Implications |
|-------------------------|----------------|-----------------------------------|---|--|
| Piping | Maintenance | Piping Change | Liquid feed line (1/2") replaced with a 3/8" line. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items, including minor design modifications (53 FR 37924, September 28, 1988). in function or capacity associated with this change |
| Piping | Maintenance | Routine Maintenance | Replaced original steam lance nozzles with identical parts. Addition of strainers to steam line and slight rerouting. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (53 FR 37924, September 28, 1988). |
| Piping | Process change | Piping Change | Movement of caustic addition line from process sump tank entry point to upstream of the scrubber liquid return pump. This change is to ensure proper mixing of the added caustic and better pH control. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance items modifications (53 FR 37924, September 28, 1988). in function or capacity associated with this change |
| Piping | Process Change | Piping Change | Main Ram Glovebox air supply HEPA replaced by direct piping of combustion air to the underfire air blower. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance items modifications (53 FR 37924, September 28, 1988). in function or capacity associated with this change |
| Piping | Upgrade | Piping Change | Added check valve on absorber column makeup water line to prevent backflow. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance, or modifications (53 FR 37924, September 28, 1988). in function or capacity associated with this change |
| Piping | Upgrade | Piping Change | Check valve added to combustion air line, for prevention of combustion air and or combustion gas backflow out of the PCC. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance items modifications (53 FR 37924, September 28, 1988). in function or capacity associated with this change |
| Piping | Upgrade | Piping Change | Added block valve on quench tower booster pump inlet. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance items modifications (53 FR 37924, September 28, 1988). in function or capacity associated with this change |
| Prime Mover | Upgrade | IOB Drive Upgrade | Addition of variable frequency drives to the induced draft blowers to allow for precise control of draft. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance items modifications (53 FR 37924, September 28, 1988). in function or capacity associated with this change |
| Process Liquid Handling | Maintenance | Process Liquid Filtration Upgrade | Addition of 1/16" perforated screen strainers to hydrocyclone overflow line for the protection of scrub solution recycle pumps downstream of the hydrocyclone. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items, including minor design modifications (53 FR 37924, September 28, 1988). protect fluid handling equipment downstream. The function or capacity associated with this change |

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| System | Category | Title | Description | Permit Implications |
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| Support Systems | | Scrub Solution Blowdown Treatment | Solution to scrub solution blowdown treatment being sought. POTENTIAL MOD ONLY (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: BASIS: |
| Support Systems | Maintenance | Caustic Supply Tank | Caustic tank replaced with new tank equipped with pre-mixed caustic supply hookups. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Support Systems | Maintenance | Cooling Tower Replacement | Old cooling towers replaced with new identical units. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Support Systems | Maintenance | Natural Gas Supply Upgrade | The natural gas supply line has been upgraded to 1.5 inches. A new meter was installed. (An earthquake shutoff valve may be added.) (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Support Systems | Upgrade | Ash Stabilization | POTENTIAL MOD ONLY Ash vitrification system may be added as a complement to the CAI. This could affect permit requirement V.G.1 "Ash Control", because cementation is the specified treatment. (Ref.: LANL CAI Modification Summary (8 Aug 94)) | PERMIT MOD REQUIRED?: BASIS: |
| Waste Feed | Maintenance | MEGAS Replacement | Multiple Energy Gamma Assay System (MEGAS) for SNM assay replaced with Multiple Axis Dual Analysis Measurement (MADAM) system. Also, the MADAM and waste package X-ray systems have been moved from the waste feed glovebox. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance ite modifications (53 FR 37924, September 28, 1988). system is not addressed by the permit. |
| Waste Feed | Maintenance | Routine Maintenance | Replacement of the old feed glovebox with a stainless steel glovebox. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Maintenance items are not modifications (5/28, 1988). |
| Waste Feed | Upgrade | Fire Suppression System Change | Main ram feeder glovebox carbon dioxide fire suppression system added. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance ite modifications (53 FR 37924, September 28, 1988). system is not addressed by the permit. |
| Waste Feed | Upgrade | Fire Suppression System Change | Replacement of water-based feed glovebox fire suppression system with a foam-based system. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance ite modifications (53 FR 37924, September 28, 1988). system is not addressed by the permit. |

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SUMMARY OF LANL CAI MODIFICATIONS, UPGRADES, AND MAINTENANCE
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| System | Category | Title | Description | Permit Implications |
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| Waste Feed | Upgrade | HEPA Filter Addition | Main ram feeder glovebox HEPA filter added. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance it modifications (53 FR 37924, September 28, 1988). system is not addressed by the permit. |
| Waste Feed | Upgrade | Liquid Feed Tank Top Replacement | Liquid feed tank covers replaced with tops that allow solids addition. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance it modifications (53 FR 37924, September 28, 1988). system is not addressed by the permit. |
| Waste Feed | Upgrade | Ram Feeder Redesign | Ram feeder chain-drive mechanism replaced with hydraulic system. (Ref.: LANL CAI Summary of Modifications (8 Aug 94)) | PERMIT MOD REQUIRED?: NO BASIS: Minor design changes, like maintenance i modifications (53 FR 37924, September 28, 1988). system is not addressed by the permit. |

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