

Solid Waste Facility Permit

Under the provisions of N.J.S.A. 13:IE-1 It et seq. known as the Solid Waste Management Act, this Solid waste Facility Permit is hereby issued to:

Hoffmann-LaRoche Inc.

FACILITY TYPE: Small Scale Incinerator  
LOT NO.: a portion of 4  
BLOCK NO.: 80 02  
MUNICIPALITY: Clifton  
COUNTY: Passaic  
FACILITY REGISTRATION NO.: 1602001  
EXPIRATION DATE: June 30, 1998

This Permit is subject to compliance with all Conditions specified herein and all regulations promulgated by the Department of Environmental Protection and Energy.

This Permit shall not prejudice any claim the State may have to riparian land, nor does it permit the Permittee to fill or alter or allow to be filled or altered, in any way, lands that are deemed to be Riparian, Wetlands, Stream Encroachment or Flood Plains or within the Coastal Area Facility Review Act (CAFRA) zone or are subject to the Pinelands Protection Act of 1979, nor shall it allow the discharge of pollutants to waters of this State without first acquiring the necessary grants, permits or approvals from the Department of Environmental Protection and Energy.

Failure to comply with all the Conditions specified herein may result in revocation of this Permit and/or may result in other regulatory or legal actions which the Department is authorized to institute by law.

This Solid Waste Facility Permit is nontransferable without the approval from the Department pursuant to N.J.A.C. 7:26-2.7(e).

June 30, 1993  
Date of Modification

Signed by Robert C. Ciolek, Assistant Director  
Robert C. Ciolek  
Assistant Director  
Engineering and Finance

June 30, 1998  
Expiration Date

Solid Waste Facility Permit for Hoffmann-LaRoche Inc. Small-Scale Incinerator Facility Identification Number 1602001189.

This Solid Waste Facility Permit, which includes the Certificate of Approved Registration and Engineering Design Approval (hereinafter Permit) is conditioned upon compliance with all applicable statutes, rules, regulations and ordinances and the implementation of the following:

1. Permitted Waste Types

The following solid waste types and regulated medical waste materials, as defined in N.J.A.C. 7:26-2.13(g) and 7:26-3A ' 6 respectively ,originating from Hoffmann-LaRoche, Inc., Nutley campus or other Hoffman-LaRoche facilities located in New Jersey may be accepted for disposal at this facility.

<u>TYPE</u>	<u>WASTE</u>
Regulated Medical Waste	Classes 1, 2, 3,. 4, 5, 6 and 7 as defined in N.J.A.C 7:26-3A.6(a). Incineration of Regulated Medical waste that is also low level radioactive waste containing byproduct material shall be conducted in accordance with the Permittee's U.S. Nuclear Regulatory Commission (NRC) Materials License No. 29-00018-02, 10 CFR Part' 20 a.-id 40 ,:FR Part 61, Subpart I, -as applicable.
10	Municipal (exclusively confidential paper generated at Hoffman-LaRoche, Inc., Nutley Campus).
27	Dry Industrial Waste (exclusively filter cake and returned products generated at Hoffman-LaRoche, Inc., Nutley Campus).

2. Prohibited Waste Types

The following solid and liquid wastes and regulated waste materials, as defined ' in N.J.A.C. 7:26-2.13(g) and (h), and 7:26-3A.6 respectively, are specifically prohibited from disposal at this facility:

<u>TYPE</u>	<u>WASTE</u>
Regulated Medical Waste	Classes 1,2,3,4,5,6 and 7 as defined in N.J.A.C. 7:26-3A.6(a) that include <u>liquids</u> and <u>semi-liquids</u> used in research and development at activities conducted at Hoffman-LaRoche, Inc facilities <u>that are also</u> low level radioactive waste, but which cannot be combusted in accordance with, the Permittee's U.S. Nuclear Regulatory Commission Materials License No. 29-00018-02, 10 CFT Part 20 and 40 CFR Part 61, Subpart 1, as applicable.
10	Municipal Waste, (except as

	specifically referenced in Condition 1 of this Permit)
12	Dry Sewage Sludge
13	Bulky-Waste
23	Vegetative Waste
25	Animal and Food Processing Waste
27	Dry Industrial Waste (except as specifically referenced in Condition 1 of this Permit)
72	Bulk Liquid and Semi-Liquids
73	Septic Tank Clean-Out Waste
74	Liquid Sewage Sludge

3. Recyclables

Recyclable materials designated -in the Passaic/Essex County District Recycling Plan (ok the host District Recycling Plan(s) of those Hoffman-LaRoche facilities located in New Jersey that will direct waste to the facility), shall not be accepted for disposal at this facility. The regulated medical waste stream directed to the incinerator, is exempt from this requirement.

4. Referenced Engineering Plans

The construction and operation of this facility shall be in accordance with the provisions of N.J.A.C. 7:26-1et seq. and the following:

- a. Standard Application Form (CP #I), construction and discharge permits' with "solid waste Supplement to Standard Application Form CP #1" and "Destination Facility Supplement to Standard Application Form CP #1" dated July 3, 1991; revised and dated May 27, 1992 signed by Dr. Gerhard Frohlich, Vice President & General Manager, Hoffmann-LaRoche Inc.
- b. "Hoffmann-LaRoche Inc.: Solid Waste Facility Permit Application for the Hoffmann-LaRoche Inc. Medical Waste Incinerator" prepared by ENSR Consulting and Engineering, dated July 1991.
- c. Letter from Samuel C. Wong, Senior Environmental Advisor, Environmental Affairs of Hoffmann-LaRoche Inc. dated May 27, 1992 to Sukhdev Bhalla, Chief, Bureau of Resource Recovery.
- d. Letter from Renee R. Bobal, Associate Manager, Hoffmann-LaRoche Inc. dated July, I,, 1992 to Krish Kasturi, Bureau of Resource Recovery.
- e. The following drawings submitted with the application package an referenced at (b) above:
  - Hoffmann-LaRoche Inc. Site Plan, revised on July 28, 1904 and drawn by E.J. Burger.
  - Town of Nutley, Essex County, Now Jersey, revised zoning map, dated may 22, 1989.
  - City of Clifton, New Jersey, zoning map, amended on February 7, 1989.
  - Plot Plan, Drawing No: ND-043-0566C-100, Revision 1, 6-14-91, signed and sealed by Neal A. Schlendorf, N.J.P.E. License No. GE 15086
  - Incineration System, General Arrangement Plan, Drawing No.

3633 G30001, Revision 0, 9-21-94, signed and sealed by Balu Kamat, N.J.P.E. License No. 21134 on 4/19/95.

- Incineration System, Process Flow Diagram Case I, Drawing No. 3633 G31001, Revision D, 3-23-94, signed and sealed by David W. Hagan, N.J.P.E. License No. 34929.
- Incineration System, Process Flow Diagram Case II, Drawing No. 3633 G31002, Revision D, 3-23-94, signed and sealed by David M. Hagan, N.J.P.E. License No. 34929.
- Incineration System, Process Flow Diagram Case III, Drawing No. 3633 G31003, Revision D, 3-23-94, signed and sealed by David W. Hagan, N.J. License No. 34929.
- Incineration System, Process Flow Diagram Case IV, Drawing No. 3633 G31004, Revision D, 3-23-94, signed and sealed by David W. Hagan, N.J. License 140. 34929.
- Incineration System, Process Flow Diagram Case V, Drawing No. 3633 G31005, Revision D, 3-23-94, signed and sealed by David W. Hagan, N.J.P.E. License No. 34929.
- Incineration Systemk Water Balance Diagram, Case III, Drawing No. 3633 G31301, - Revision C, 6-22-94, signed and sealed by David W. Hagan, N.J.P.E. License No. 34929. -
- Incineration System, P & ID Caustic Feed System, Drawing No. 3633 I 31213 Revision 1, 3-2-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Slag & Ash Handling System Drawing No. 3633 I 31212, Revision 1, 3-2-95, signed and sealed by Balchandra A. t, N.J.P.E. License No. 21134.
- Incineration System, P & ID, I. D. Fan & Stack, Drawing No @ 3633 I 31211, Revision 1, 3-2-95 signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Scrubber, Drawing No. 3633 1 31210, Revision 1, 3-2-95 'signed and sealed by -Balchandra A Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Quench System Drawing No. 31209, Revision 1, 3-3-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Electrostatic Precipitator, Drawing no. 3633 1 31208, Revision 1, 3-2-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Evaporative Cooler, Drawing No. 3633 I 31207, Revision 1, 3-2-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, SCC Burner System, Drawing No. 3633 I 31206, Revision 1, 3-2-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Primary Burner System, Drawing No. 3633 I 31205, Revision 1, 3-2-95, signed and sealed by

Balchandra A. Kamat, N.J.P.E. License No. 21134.

- Incineration System, P & ID, Cooling System, Drawing No. 3633 I 31204, Revision 1, 3-2-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Rocking Kiln & SCC, Drawing No. 3633 I 31203, Revision 1, 3-2-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration system, P & ID, Legend, Drawing No. 3633 I 31201, Revision 0, 9-2-94, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Feed System, Drawing No. 3633 I 31202, Revision 1, 3-2-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, 'P & ID, Ammonia Injection System Drawing No. 3633 I 31214, Revision 1, 3-3-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Steam, Drawing No 3633 I 31215, Revision 1, 3-3-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Incineration System, P & ID, Condensate Collection, Drawing No. 3633 I 31216, Revision .1, 3-3-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- P & ID, Unit Heater & Coil Steam & Condensate Distribution Drawing No. 3633 I 31217, Revision 1, 3-3-95, signed and sealed by Balchandra A. t, N.J.P.E. License No. 21134.
- P & ID, Process Potable & Soft Water Distribution, Drawing No. 3633 I 31218, Revision 1, 3-3-95, signed and sealed by Balchandra.A. Kamat, N.J.P.E. License No. 21134.
- P & ID, Instrument Air Distribution, Drawing No. 3633 I 31219, Revision 1, 3-3-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134. .
- Architectural North and West Elevations, Drawing No. ND-043-0566-A404, Revision F, 6-10-94, signed and sealed by W. Douglas Kirklin, N.J. Registered Architect, License No. 12760.
- Architectural South and East Elevations, Drawing No. ND-043-0566-A405, Revision I, 10-26-94, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Site and Paving Plan, Drawing No. ND-043-0566-A401, Revision E, 4-11-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.
- Grading and Site Utility Plan, Drawing No. ND-043-0566-C402, Revision E, 4-11-95, signed and sealed by Balchandra A. Kamat, N.J.P.E. License No. 21134.

In case of conflict, the most recent revisions and supplemental information shall prevail over prior submittals and designs, and the

conditions of this Permit shall supersede those of the engineering design and environmental impact statement referenced above.

5. Operations and Maintenance Manual

The finalized written operations and maintenance (O&M) manual approved by the Department on November 22, 1994 shall be maintained at this facility.

Any subsequent changes to be made to the approved final O&M Manual by the Permittee shall be reviewed and approved by the Department in compliance with N.J.A.C. 7:26-2.11(b)18. within fifteen (15) days of its receipt, the submission made by the Permittee to revise the approved O&M Manual shall be characterized by the Department regarding the nature of the revision relative to N.J.A.C. 7:26-2.6(d), and the Permittee shall be notified of the Department's finding. Any submission to revise the O&M Manual by the Permittee, which is determined by the Department to be a minor modification in accordance with N.J.A.C. 7:26-2.6(d) or is determined to require a minor technical review, shall be deemed approved unless denied within fifteen (15) calendar days of the date of its receipt.

6. Facility Personnel Training

The Permittee shall comply with the following requirements pertaining to facility personnel training:

- a. All personnel who are directly involved in facility waste management activities or who operate, service or monitor any facility equipment, machinery or systems shall successfully complete an initial program of classroom instruction and on-the-job training that includes instruction in the operation and maintenance, of the equipment, machinery and systems which they must operate, service or monitor in the course of their daily job duties, and which teaches them to perform their duties in a manner that ensures the facility's compliance with the requirements of N.J.A.C. 7:26-1et seq. and the conditions of all Department permits issued to the facility.
- b. The training program shall be directed by a person thoroughly familiar with the technology being utilized at the facility, the applicable waste regulations contained within N.J.A.C. 7:26-1et seq., and the conditions of the facility's permits.
- c. The training program shall ensure that facility personnel are able to effectively respond to any equipment malfunction or emergency situation that may arise. The training program shall provide instruction in the use of personal safety equipment, procedures for inspecting and repairing facility equipment, machinery and monitoring systems (including any emergency equipment), the use of communications and/or alarm systems, the procedures to be followed in response to fires, explosions or other emergencies, and the procedures to be followed during planned or unplanned shutdown of operations.
- d. Facility personnel shall successfully complete the initial training program within six (6) months after the date of their employment or assignment to the facility. Employees shall not work in unsupervised positions until they have completed the training program required herein.
- e. Facility personnel shall take part in a planned annual review of the initial training program.

f . Training records that document the type and amount of training received by current facility personnel shall be kept until closure of the facility. Training records on former employees shall be kept for at least one (1) year from the date the employee last worked at the facility.

7. Air Pollution Control

The Permittee shall operate and maintain the combustion system and air pollution control equipment in full compliance with the facility's, "Permit to Construct, Install, or Alter Control Apparatus or Equipment and Certificate to Operate Control Apparatus or Equipment" issued by the Department.

8. Facility Start-UP

The Permittee shall provide written notification to the Division of Solid and Hazardous Waste of the intent to initiate the startup of operations at the facility at least thirty-(30) days in advance of the planned date. The Department reserves the right to have a representative present at the facility to observe any equipment testing that is being conducted as well as the right to collect samples to verify the test results.

9. Facility Staffing

The facility shall maintain sufficient trained personnel during each scheduled shift to assure the proper and orderly operation of all system components, along with the ability to handle all routine facility maintenance requirements and to implement any emergency procedures that may become necessary. Such personnel shall have-sufficient educational background, employment experience and/or training to enable them to perform their duties in such a manner as to ensure the facility's compliance with applicable Department regulations and permits, the conditions of this Permit and all other permits or approvals issued to the facility, and the safe operation of the specific processes utilized at the facility.

Each shift shall have a designated shift supervisor authorized by the Permittee to direct and implement all operational decisions during that shift.

10. Waste Processing Rates

The facility shall not process solid waste at a rate greater than 799 pounds per hour.

11. Maintenance and Repair

Through an effective inspection, planned maintenance, repair and parts replacement program, the facility systems and related appurtenances shall at all times be kept in proper operating order. As part of this program, the Permittee shall maintain an appropriate inventory of spare parts and replacement equipment. Malfunction of instrumentation used to monitor process operations for environmental effects that prevent the continual processing of waste in compliance with this Permit shall be considered a major equipment malfunction as defined in Condition 19 of this Permit, and actions shall be taken accordingly.

The results of all inspections shall be recorded and logged at the facility. These records shall be maintained in the facility for a minimum of five (5) years from the date of inspection. These records shall

include the date and time of the inspection, the name of the inspector, a notation of observations and recommendations, and the date and nature of any repairs or other remedial actions taken. These records shall be made available for inspection by the appropriate representatives of the Department upon request.

12. Storage of Regulated Medical Waste

The Permittee shall comply with the following, storage requirements for regulated medical waste prior to the incineration of this material at the facility:

- a. Regulated medical waste shall be stored in a manner and location that maintains the integrity of the packaging and provides protection from water, rain, wind and vermin;
- b. Prior to being charged to the incinerator, regulated medical waste shall be maintained in a nonputrescent state at all times, by of refrigeration or other method acceptable to the Department;
- c. Regulated medical waste storage areas shall be secured at all times to prevent unauthorized access; and,
- d. Access to on-site storage areas shall be limited to authorized employees only.

13. Housekeeping

Routine housekeeping and maintenance procedures shall be implemented within the facility interior to prevent the excess accumulation of dust and debris, and to maintain general cleanliness in the working environment. Facility grounds shall be maintained free of litter, debris, and accumulations of unprocessed waste, process residues, and effluents.

Unprocessed waste feedstock and facility process waste residues shall be stored and handled in accordance with the applicable requirements of N.J.A.C. 7:26-3A, and shall at all times be kept at levels that prevent spillage or overflow.

All facility floor drains, traps, sumps, or similar catchment basins shall be maintained free of obstructions to facilitate effluent drainage.

14. Wastewater Disposal

All wastewaters generated by the solid waste facility shall be directed to Hoffmann-LaRoche's on-site Environmental Control Facility (ECF) prior to discharge to the Passaic Valley Sewerage Commissioners Treatment Works. Wastewaters received from the incinerator shall be handled in a manner that does not jeopardize the discharge limits placed on Hoffmann-LaRoche's ECF by the Passaic Valley Sewerage Commissioners Treatment Works.

15. Noise Control

Noise control shall be implemented so that sound levels generated by the facility operation shall not exceed the standards set forth by the New Jersey State Noise Control Regulations under N.J.A.C. 7:29-1 et seq. During the first thirty (30) days of full-scale facility operations following the start-up and shakedown period, the Permittee shall conduct a sound level survey of, adequate scope to determine the facility's compliance with the property line sound level limits for both daytime and nighttime periods as specified in N.J.A.C. 7:29-1 et seq. The survey



shall be conducted during those time periods most representative of full-scale facility operations, and shall be managed by a firm qualified to conduct sound level surveys. A detailed report outlining the survey methods, procedures, equipment utilized, and results obtained shall be submitted to the Department within thirty (30) day\* of the completion of the survey.

16. Odor Control

The operation of this facility shall not result in odor associated with solid waste being detected of f site by sense of smell in any area of human use or occupancy. No waste shall be stored at the facility overnight without effective treatment to prevent odors associated with putrefaction.

17. Vermin Control

The Permittee shall institute and maintain an effective vermin control program at the facility, directed by a qualified . applicator of pesticides, in accordance with the New Jersey Pesticide Control Code N.J.A.C. 7:30-1.1 et seq. .

18. Fire Protection

The fire protection system shall be maintained in operable condition at all times. An adequate water supply and adequate fire-fighting equipment shall be maintained at the facility or be readily available to extinguish any and all types of fires. Fire-fighting procedures, including the telephone numbers of the local fire, police, ambulance and hospital facilities, shall be posted in and around the facility at all times.

19. Emergency Situations

An emergency situation is defined as the occurrence of a fire, explosion, or uncontrolled pollutant discharge or emission to the .environment. In the case of an emergency, the plant operator or the emergency coordinator identified in the contingency plan shall. Implement the following actions:

- a. Immediately identify the character, exact source, amount and extent of any discharged materials and notify appropriate State or local agencies with designated response roles, if assistance is needed.
- b. Concurrently, the plant operator or emergency coordinator shall assess possible hazards to public health or the environment that may result from the discharge, fire or explosion. This assessment shall consider both direct and indirect effects.
- c. If the plant operator or emergency coordinator determines that the facility has had an uncontrolled discharge, a discharge above standard levels permitted by the Department, or a fir\* @t explosion he shall: immediately notify appropriate local authorities -if an assessment indicates that evacuation of local areas may be advisable; and immediately notify the Department at (609) 292-7172; and when notifying the Department, report the type of substance and the estimated quantity discharged, if known, the location of the discharge, actions the person reporting the discharge is currently taking and/or proposing to take in order to mitigate the discharge, and any other information concerning the incident which the Department may request at the time of the notification. Nothing in this condition shall be deemed to supersede any notification required pursuant to the Spill Compensation and Control

Act, N.J.S.A. 58:10.23 et seq., Hazardous Substance Discharges: Reports and Notices, N.J.A.C. 7:1-7, or the air pollution notification required pursuant to N.J.S.A. 26:2C-19.

- d. The plant operator shall take all reasonable measures to ensure that fires, explosions and discharges do not recur or spread to other areas of the facility. These measures must include, where applicable, the cessation of process operations, and shall involve the collection and containment of released waste.
- e. Immediately after an emergency, the plant operator or emergency coordinator shall provide for treating, storing or disposing of waste, contaminated soil or water, or any other material contaminated as a result of the discharge, fire or explosion.
- f. The plant operator or emergency coordinator shall ensure that no waste is processed until cleanup procedures are completed and all emergency equipment listed in the contingency plan is again fit for its intended use.
- g. The plant operator or emergency coordinator shall notify the Department and appropriate local authorities I when operations in the affected area(s) of the facility have returned to normal.

Within fifteen (15) days after the incident, the plant operator or emergency coordinator shall submit a written report on the incident to the Department. The report shall include, but not be limited to: the name, address and telephone number of the facility; the date, time and description of the incident; the extent of injuries, if applicable, with names and responsibilities indicated; an assessment of the scope and magnitude of the incident; an assessment of actual damage to the environment, if applicable; a description of the immediate actions that have been initiated to clean up the affected area and prevent a recurrence of a similar incident; and, an implementation schedule for undertaking longer term measures to effect cleanup and avoid recurrence of the incident, if applicable.

A major equipment malfunction is defined as an instance whereby a system control or equipment malfunction occurs that could result in an adverse to the environment or public health that prevents the continual processing of waste in compliance with this Permit. In the case of such an emergency situation; the Permittee shall undertake corrective actions immediately and shall notify the Department within three (3) days.

The notification shall outline the cause of malfunction, the corrective action taken and the anticipated repair time. As a result of equipment or system malfunction or the occurrence of an emergency situation, wastes that cannot be processed and cannot be stored at the facility to compliance with the conditions of this Permit and the applicable regulations of N.J.A.C. 7:26-1 et seq., shall be disposed of in accordance with the approved District Solid Waste Management Plan and/or the Regulated Medical Waste Rules, N.J.A.C. 7:26-3A.

20. Security

Access to the incinerator facility shall be restricted to facility personnel and authorized visitors only. Security procedures shall be in accordance with the Hoffman-LaRoche Security Plan.

21. Process Residue Handling and Storage

Ash residue generated by facility operations shall be containerized prior

to its transport out of doors for storage. Containers used for this purpose shall be filled within the incinerator building and shall be constructed in a manner that protects against the leakage of its contents. The process of transferring ash from container to container shall be controlled to prevent fugitive dusting and spillage. Containers used for exterior storage shall be fully enclosed and watertight, and as such, shall be protected against the intrusion of precipitation and other affects of the weather. Exterior container storage of ash shall be conducted within the area of the facility designated for this purpose, and the ash residue, while in storage, shall be secured to prevent unauthorized access. Ash residue, shall be thoroughly extinguished before its removal - from the incinerator building. Containers shall not be filled to levels that permit overflow or spillage during handling, while in storage or during transport for disposal.

22. Process Residue Disposal Approval

Not less than thirty (30) days prior to the initiation of the facility start-up, the Permittee shall submit the following to the Department for review and approval:

- a. A finalized plan for the secured storage of the residue ash, pending the receipt of the analytical results to be used in the classification of the residue for disposal, during the facility four (4) week ash characterization period, as well as the start-up and testing period that precedes the four week characterization period.
- b. A final contingency plan for the secure handling, storage, transport and disposal of ash residue that may be found to be hazardous. As part of the final contingency plan, the Permittee shall identify and have an agreement with a licensed hazardous waste disposal facility for the purpose of disposing of any ash residue generated that may be proven hazardous after analysis. Evidence of the agreement shall be presented to the Department as part of the final ash contingency plan. The Permittee shall also describe the system that would be available to manifest any residue found to be hazardous after analysis. Further, the Permittee shall identify and confirm the availability of a licensed collection/haulage firm that would provide for the transport of any ash residue found to be hazardous.
- c. Identify the ultimate disposal facility, per the Passaic District Solid Waste Management Plan, for the disposal of residue that is non-hazardous by classification.

23. Residual Ash Monitoring Program

A residual ash monitoring program shall be established and implemented by the Permittee for the purpose of assessing the chemical characteristics of the residue ash generated by facility operation.

As a minimum, this monitoring program shall consist of the following:

- a. During the four (4) week ash characterization period, as well as the startup and testing period that precedes the four week characterization period, the container (a) used to store the combined fly ash and bottom ash residue subject to disposal shall be cored using a device that provides for the stratified random sampling of the container contents. The coring procedure implemented shall allow for the collection of the full vertical profile of the ash stored within the container. Where more than one

core is to be recovered from the container to meet minimum sampling requirements, the coring locations within the container shall be randomly scattered. The discrete core sample so recovered, shall then be thoroughly mixed as a preparatory step to analysis. As a minimum, four (4) core samples of ash residue shall be recovered from the container(s) that comprise the weekly batch of ash subject to characterization. Where multiple containers of ash comprise the weekly batch, the sample' coring shall be proportionally distributed over the total number of containers involved. The following analyses shall be performed on each of the discrete weekly cored samples:

- i) Toxicity Characteristic Leaching Procedure (TCLP) for the eight (8) heavy metals and the eight (8) pesticides and herbicides (As, Ba, Cd, Cr, Pb, Hg, Se Ag and Endrin, Lindane, Methoxychlor, Toxaphene, 2,4-D, Silvex, Chlordane and Heptachlor, respectively); and
- ii. Total 2,3,7,8 - Tetrachlorodibenzo-p-dioxin (TCDD).

The ash characterization testing period shall not be initiated until such time as the operation at the facility has been stabilized following start-up and equipment shakedown procedures; and it can be demonstrated that the facility is receiving the quantity and type (mixed ratio of types) of waste that would be expected under normal operating conditions.

The Permittee shall retain an equivalent portion of each of the discrete cored ash residue samples collected during the four-(4) week ash characterization testing period and the Preceding start-up testing period, so that the Department may conduct follow-up analyses when necessary. The samples shall be clearly identified and stored at the facility for a period of sixty (60) days from the date of sample collection.

Each week's production of ash residue generated prior to the completion of the ash characterization period shall be stored separately from each other and from the previous week's ash in an approved manner, until the analytical results from the week's sampling are received and a determination is rendered on the hazardous or non-hazardous nature of the material.

If the results of the analyses exceed the TCLP test limits or exceed one (1) part per billion of 2,3,7,8 - TCDD, or if the residue material' is otherwise determined to be hazardous by the Department based upon the analytical results, that weekly batch of ash residue shall be disposed of at the hazardous waste disposal facility secured by the Permittee for that purpose pursuant to Condition 22 of this Permit.

If the ash residue as tested separately, is determined to be non-hazardous, it shall be disposed of at the facility designated for that purpose as specified at N.J.A.C. 7:26-6 and in the Passaic County District Solid Waste Management Plan.

- b. At the completion of the four (4) week ash characterization testing period, the analytical data collected for the ash residue stream will be evaluated by the Permittee and subsequently reviewed by the Department to classify the residue stream. If it is found that each of the four (4) weekly batches of ash residue exhibit non-hazardous characteristics based on analysis for all parameters tested, then

that residue ash stream shall be classified as non-hazardous. The non-hazardous ash residue stream can subsequently be disposed of as generated, with the provision that the ash residue stream 3.9 sampled for routine confirmatory analysis. Under such conditions, the following sampling and analysis regimen shall be implemented unless otherwise directed by the Division of Solid and Hazardous Waste:

During each three (3) month period of facility operation, the container(s) used to store the combined fly ash and bottom ash residue subject to disposal shall be sampled using procedures as specified in (a.) above. As a minimum, four (4) core samples of ash residue shall be recovered from the container(s) that comprise the quarterly batch of ash subject to confirmatory analysis. Where multiple containers of ash comprise the quarterly batch, the sample coring shall be proportionally distributed over the total number of containers involved. The following analysis shall be performed on each of the discrete quarterly cored samples:

- i) Toxicity Characteristic Leaching Procedure (TCLP) for the eight (8) heavy metals and the eight (8) pesticides and herbicides (As, Ba, Cd, Cr, Pb, Hg, Se, Ag and  $\alpha$ . Lindane, Methoxychlor, Toxaphene, 2,4-D, Silvex. Chlordane and Heptachlor respectively); and
  - ii) Total 2,3,7,8 - Tetrachlorodibenzo-p-dioxin (TCDD).
- c. All analyses called for as a condition of this Permit shall be performed by a laboratory approved and/or certified by the Department for the analysis of the specified parameters.

Analyses shall be performed in accordance with the procedures outlined in the most recent edition of Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, U.S.E.P.A. Publication SW-846. Results shall be subject to a statistical analysis as outlined in this publication. The Permittee shall submit each set of analytical results with the appropriate statistical analysis to the Division of Solid and Hazardous Waste, Bureau of Resource Recovery upon receipt of said results. The following information shall accompany the analytical determination:

1. The date(s), time(s), and place of sampling;
  2. The name(s) of the individual(s) who performed the sampling;
  3. The date(s) and place of analysis;
  4. The sampling and analytical techniques used and/or protocol\* followed (include the minimum detection levels of the parameters for which analysis is being undertaken, and in the case of the TCLP determinations, the initial and final pH of the sample);
  5. The names of the individuals who performed and supervised the analyses; and
  6. The dated signature and certification of the sampling and analytical report by an authorized agent of the Permittee
- d. The Permittee shall retain all analytical reports at the facility for a period of five, (5) years from the date of analysis.

- e. The Permittee shall increase the monitoring frequency and/or the list of parameters for which testing is to be performed, should the type or quantity of waste types received for processing be significantly altered. The Department reserves the right to alter, at its discretion, the list of test parameters, the methods of sample collection, the analytical procedures employed and the frequency of sampling and analysis, as is deemed necessary.

The Permittee may petition the Department to reduce the number of test parameters specified herein by applying qualitative knowledge of incoming waste streams. Further, if the Permittee has demonstrated through testing that the concentration of any given parameter is found to be consistently below detection levels, the Permittee can petition the Department to eliminate those parameters from subsequent analysis.

24. Operations Records

The Permittee shall maintain records of facility operations on a daily basis. The information maintained shall include:

- a. The individual quantities (by weight) of solid wastes by type, and regulated medical waste incinerated by calendar date; and
- b. The quantity (by weight) of combined ash transported off-site for disposal on any given day. Included will be the name, address and NJDEP Solid Waste or Hazardous Waste Registration Number of the transporter, and the name and address of the disposal facility utilized. In the case where interim containment and/or storage facilities are used, such facilities shall be identified, as shall the facility used for final disposal.

In the event the results of chemical analysis characterizes the ash as hazardous, the operations records specified in (a) and (b) above shall be submitted with the ash analytical results.

The Permittee shall forward copies of the following reports to the Bureau of Resource Recovery as generated:

"Intermediate Handler and Destination Facility Annual Report";  
including copies of operation records specified in (b) above;

"Annual Generator Report - Regulated Medical Waste (RMW)"; and the

"On-Site Medical Waste Incinerator Report".

All operational records shall be maintained on the premises for a three (3) year period, and shall be available for inspection by representatives of the Department upon request.

25. Plans On-Site

One complete set of the following documents shall be kept on file at the facility, and shall be available for inspection by Department personnel or its designated representatives:

- a. The Environmental and Health Impact Statement, with Appendices;
- b. The referenced engineering plans and documents cited in Condition Number 4 of this Permit;

- c. The approved Final Operations and Maintenance Manual;
- d. The applications and support documents for all permits obtained; and.
- e. This Permit and all other Departmental permits with their conditions for construction and-operation.

26. Right of Entry

The Permittee hereby agrees and authorizes Department personnel or the Department's designated representatives to make whatever inspections and examinations of all premises occupied by the facility which may be impacted by the activities authorized by this Permit whenever these representatives in their discretion, consider such an inspection or examination necessary to determine the extent of compliance with the conditions of this Permit. Any refusal to allow entry to the Department's representatives shall constitute grounds for either suspension or revocation of this Permit.

27. Duration of Permit

This Solid Waste Facility Permit is for a maximum period of five-(5) years from the date of its original issuance. This Permit may be renewed at that time, upon proper application in accordance with N.J.A.C. 7:26-2.7. The Permit renewal application shall be submitted no later than six-(6) months prior to the expiration date of this Permit.

Upon Permit expiration, waste delivery and processing activities shall cease and all wastes, process residues and effluents in storage shall be removed from the, premises.

28. Conformance With The Regulated Medical Waste Management Act

The Permittee shall comply with the New Jersey Comprehensive Regulated Medical Waste Management Act, N.J.S.A. 13:1E-48.1 et seq. and all applicable, requirements of the Regulated Medical Waste Rules, N.J.A.C. 7:26-3A.

29. Conformance With The Solid Waste Management Plan

This Permit is conditioned upon conformance with all requirements of the Passaic County District and State Solid Waste Management Plans as adopted and promulgated pursuant to N.J.S.A. 13:1E-1 et seq. No wastes other than those directed to this facility under said plans may be accepted for processing/disposal. Similarly, waste residues generated by facility operation shall be disposed of in conformance with N.J.A.C. 7:26-6 and these solid waste management plans.

Failure to comply' with any or all limitations heretofore mentioned will result in the Department seeking relief under N.J.S.A. 13:1E-1 et seq., the Solid Waste Management Act. Specifically, each day of failure to so comply shall constitute a separate violation on the basis of which a fine shall be assessed and may result in loss of operating authority, pursuant to N.J.S.A. 13:12-12.

The issuance of this Permit and the conditions of operation identified herein shall not relieve the Permittee of his responsibility to secure and maintain all other applicable Federal, State and local permits or similar forms of authorization relating to the construction and operation of this facility.





FACT SHEET FOR HOFFMANN-LA ROCHE, INC.  
SMALL SCALE INCINERATOR  
BLOCK 80.02, LOT PART OF 4  
CITY OF CLIFTON  
PASSAIC COUNTY, NEW JERSEY

1. The original application for the above referenced Hoffmann-LaRoche, Inc small scale incinerator facility was the subject of a Notice of Opportunity for Public Hearing published February 17, 1993. The Notice of Opportunity did not necessitate a public hearing; thereby resulting in a Solid Waste Facility Permit subsequently being issued on June 30, 1993.
2. The permitted small scale incinerator facility is located in the City of Clifton within the Hoffmann-LaRoche Campus, addressed 340 Kingsland Street, Nutley, New Jersey. The small scale incinerator facility presently under construction is to service a portion of the disposal needs of the Hoffmann-LaRoche Campus and is permitted to process designated regulated medical waste, municipal waste, and dry industrial waste at a rate not to exceed 799 pounds per hour.
3. In 1994, representatives of Schering-Plough, Hoffmann-LaRoche and Merck, each of which is authorized to operate a small scale incinerator, jointly petitioned the Division of Solid Waste Management with common concerns regarding existing small scale incinerator Solid Waste Facility Permit conditions. In recognition of these concerns, the Department of Environmental Protection, Division of Solid and Hazardous Waste has reviewed the documentation submitted and conducted follow-up meetings to discuss the issues raised in greater detail, and has determined the referenced Hoffmann-LaRoche, Inc. Small Scale Incinerator, Facility Registration No. 1602001189 be granted tentative approval of modifications to the existing Solid Waste Facility Permit. A public comment period (Notice of Opportunity for Public Hearing) on the modifications has been scheduled as stated in Item 4.

The modifications which are subject to tentative approval involve revisions in substance and content to the conditions of the previously issued Solid Waste Facility Permit.

The modifications to the conditions of the Hoffmann-LaRoche, Inc. Solid Waste Facility Permit are outlined as follows:

Condition 1 - Permitted Waste Types

Reference to tritium (H3) and carbon-14 (C<sup>14</sup>) have been deleted in Condition 1 in recognition that the regulation of low level radioactive waste is specifically within the jurisdiction of the United States Nuclear Regulatory Commission (U.S. N. R. C. ); as specified in the Hoffmann-LaRoche, Inc. U.S.N.R.C. Materials License No. 29-00118-02.

Condition 2 - Prohibited Waste Types

The prohibited regulated medical waste category description has been slightly reworded to emphasize the N.R.C. regulatory authority in the combustion of low-level radioactive waste.

Condition 3 - Recyclables

- a. Reference to low-level radioactive waste has been deleted in deference to U.S. N.R.C. jurisdiction regarding radioactive waste (as discussed

herein).

- b. The wording "in contact with Regulated Medical Waste" has been deleted in deference to the Regulated Medical Waste (RMW) Regulations; specifically 7:26-3A.7, which designates solid waste in contact with RMW to be considered RMW (not a recyclable waste). As previously mentioned, low-level radioactive waste contaminated materials or containers are to be processed as per N.R.C. jurisdiction.
- c. The wording "on site generated" has been deleted since applicable Regulated Medical Waste Regulations (7:26-3A) and Solid Waste Regulations (7:26-2.4(c)2) allow for RMW contaminated materials or containers generated at other associated intracompany plants located within the State of New Jersey to be processed at the subject incinerator.
- d. Reference to inclusion of a recyclable materials detection and removal plan as a section of the Final Operations and Maintenance (O&M) Manual has been deleted since the Final O&M Manual, including the recyclable\* plan, has already been approved for this facility.

#### Condition 5 - Operations and Maintenance Manual

- a. Reference to submission of a Final Operations and Maintenance(O&M) Manual and the listing of inclusions has been deleted since a Final O&M Manual, incorporating necessary inclusions, has been approved for this facility; thereby negating the necessity for further listing of Final O&M inclusion requirements.
- b. Additional language is included in this Condition that requires the Department to characterize O&M Manual revisions proposed by the Permittee within 15 days [relative to N.J.A.C. 7:26-2.6(d)] . This language change is an attempt by the Department to improve response time with regard to minor modifications of the Final O&M Manual.

#### Condition 6 - Community Relations Plan

The Community Relations Plan condition was deleted to conform with N.J.A.C. 7:26-2B.4(a)21; which requires only large scale facilities of 500 tons/day or greater to develop a community relations plan. The small scale incinerator operated by Hoffmann-LaRoche, Inc. processes less than ten tons daily.

#### Condition 7 - Facility Staffing Plan

This Condition requiring the development of a facility staffing plan for inclusion in the Final O&M Manual has been deleted since the Final O&M Manual, containing the required staffing plan, has already been approved by the Department.

#### Condition 8 - Low-Level Radioactive Waste Minimization Plan

This Condition, requiring the preparation of a low-level radioactive waste minimization plan has been deleted in deference to Federal jurisdiction of low-level radioactive waste. As mentioned previously, the regulation of low-level radioactive waste is within the jurisdiction of the United States Nuclear Regulatory Commission (U.S. N.R.C.); and more specifically, the Hoffmann-LaRoche, Inc. U.S. N.R.C. Materials License No. 29-00118-02, 10 CFR Part 20 and 40 CFR Part 61 Subpart I, as applicable.

#### Condition 9 - Facility Personnel Training

Item (g), which requires a written training plan to be included in the Final O&M Manual has been deleted since the Final O&M Manual, included the training plan,

has already been approved for this facility.

Condition 10 - Air Pollution Control

(renumbered Condition 7 in the revised Permit)

Reference to low-level radioactive waste has been deleted in deference to Federal jurisdiction (see previous explanation).

Condition 11 - New Jersey Pollutant Discharge Elimination System (NJDES) - Discharge to Surface Water (DSW) Permit

This Condition, which references the facility NJDES Permit has been deleted since the Permittee's obligations with regard to the NJDES Permit are self-evident and need not be repeated in the Solid Waste Facility Permit.

Condition 14 - Facility Start-Up

(renumbered Condition 10 in the revised Permit)

- a. Item (a), which involves the pre-startup requirement for construction of the ash dumpster enclosure building has been deleted as a result of the Permittee's petition for relief from ash enclosure requirements, in conjunction with the alteration of Department policy allowing for exterior storage (see modification explanation for Condition 29).
- b. Language in Item (b) regarding Permittee operational requirements has been deleted since the Permittee's operational obligations as per Permit and regulations are self-evident.

Condition 16 - Low-Level Radioactive Waste Pre-Incineration Handling

This Condition has been deleted in deference to Federal jurisdiction of low-level radioactive waste (see previous explanation).

Condition 17 - Waste Processing Rates

(renumbered Condition 12 in the revised Permit)

Language referring to low-level radioactive waste has been deleted in deference to Federal jurisdiction.

Condition 23 - Odor Control

(renumbered Condition 18 in the revised Permit)

Reference to maintenance of regulated medical waste in a nonputrescent state has been deleted from this Condition since this requirement is appropriately addressed in the revised Permit Condition 14(b).

Condition 26 - Safety Procedures

This Condition has been deleted from the Permit in recognition of the existing Hoffmann-LaRoche, Inc. Safety Plan for the entire Campus; which encompasses the subject permitted incinerator facility and the concerns calling for compliance with OSHA Standards.

Condition 27 - Emergency Situations

(renumbered Condition 21 in the revised Permit)

The definition of a "major equipment malfunction" as originally referenced in this Condition has been modified to narrow its scope to reflect its correlation to a resultant impact adverse to the environment or public health. In addition, Department notification by the Permittee of a defined emergency situation has

been extended from twenty-four (24) hours to reflect that of three days. It is noted that corrective action requirements have not been modified, which are still to take place immediately. The modification to the definition of a major equipment malfunction and notification required thereof, will not lessen remediation requirements or result in an increased risk of impact to human health or the environment. These changes to equipment malfunction definitions and notification procedures are made in recognition of the fact that the facility does not serve in meeting the general public's waste disposal needs, where immediate Department involvement would be necessary to ensure appropriate re-direction of waste.

Condition 28 - Security

(renumbered Condition 22 in the revised Permit)

Reference to an overall Facility Security Plan has been included 4-n recognition of-Hoffmann-LaRoche, Inc. Facility-wide security concerns which encompasses the subject incinerator site.

Condition 29 - Process Residue Handling and Storage

(renumbered Condition 23 in the revised Permit)

The condition language has been modified to allow for the exterior storage of "watertight" ash residue containers. Permit modification to allow exterior storage was an issue of negotiation with the pharmaceutical industry representatives and subsequently resulted in an alteration of Department policy allowing for exterior storage to occur. This allowance for exterior storage is not expected to result in additional environmental or health impacts.

Condition 30 - Process Residue Disposal Approval

(renumbered Condition 24 in the revised Permit)

- a. Reference to discussion of radioactive ash residue disposal in the final contingency plan (Item b) has been deleted in deference to Federal jurisdiction on this matter (see previous discussions).
- b. Requirements calling for the submission of an executed contract specifically for the disposal of any hazardous ash generated at the incinerator has been modified to allow the Permittee to identify an agreement for the disposal of ash residue that is proven hazardous after analysis. This modification is implemented in recognition of the existing practice of the subject pharmaceutical companies to possess general corporate agreements for hazardous waste disposal. As such, confirmation that the ash from the incinerator facility would be included for disposal under existing company disposal agreements is considered adequate in meeting the disposal contingency concerns of the Division.
- c. Reference to radioactive residue containment/disposal has been deleted from Item b and c in deference to Federal jurisdiction (see previous discussion).

Condition 31 - Residual Ash Monitoring

(renumbered Condition 25 in the revised Permit)

- a. Language in this Condition has been modified to allow for the sampling of a combined ash stream rather than separate bottom ash and fly ash streams as referenced in the original permit. This modification became possible, with Hoffmann-LaRoche, Inc. concurrence, as a result of the U.S. Environmental Protection Agency, Office of Solid Waste, Environmental Fact Sheet (EP-A530-F-95-004) issued January, 1995; allowing incinerator facility operators to combine the bottom ash and fly ash residue streams at the facility before sampling the ash, even though such streams may be

collected separately at the site.

- b. Reference to separate chemical and physical assessment of ash characteristics has been deleted in response to the fact that the physical properties of the residue, relative to its radioactive state, are no longer the subject of the Solid Waste Facility Permit. The stated need in the Solid Waste Facility Permit has been deleted in deference to Federal jurisdiction in matters involving low-level radioactive waste.
- c. Language concerning the separate collection of representative samples for the bottom ash and fly ash streams has been deleted and replaced with requirements to sample the combined ash stream. The combination of ash streams into a single container allows for the implementation of a coring procedure that provides for the stratified random sampling of these containers: thereby resulting in the deletion of grab sampling and compositing requirements. Furthermore, the original permit, which specified sampling of separate ash streams, required a minimum of eight (8) samples for analysis (four bottom ash and four fly ash). With the combining of ash streams, a minimum of four total ash samples is required for analysis of the single combined stream. Although the overall minimum number of samples required was reduced, this reduction is consistent with EPA directives on this matter as well as Department policy which requires a minimum of four ash samples per ash stream subject to disposal.
- d. Analysis specified during the four week characterization and quarterly testing period has been modified to delete reference to low-level radioactive ash residue in deference to Federal jurisdiction.
- e. Requirements relative to the separate storage of bottom ash and fly ash prior to completion of the ash characterization test period has been altered to reflect the storage of the single combined ash stream. Reference to separate bottom ash and fly ash collection points and compositing has been correspondingly deleted (combined ash stream). Also, reference to storage of each week's ash production in covered, water tight metal containers on-site has been modified to allow storage in an approved manner, in recognition of revised Permit Condition 23.
- f. Use of the term "immediately" with regard to submission of analytical results to the Department has been deleted in recognition of the unachievable nature of the literal interpretation of this term.
- g. In addition to existing language allowing the Department flexibility in testing requirements, the Permittee is also formally given opportunity to petition for reduction in testing requirements based on existing knowledge of waste stream and/or ash testing results. It should be noted that this option, although not previously specified within the Permit language, has been available to the Permittee. This option has been exercised by the Division in past instances.
- h. Item (g), which refers to disposal of ash residue at an authorized disposal facility has been deleted in recognition that proper disposal of ash residue by the Permittee is self-evident.

Condition 32 - Operations Records

(renumbered Condition 26 in the revised Permit)

Certain operations record. submittal requirements have been modified/deleted in the revised Permit to reflect ash stream combination, Federal jurisdiction of radioactive waste and the availability of information in other required report submissions made to the Department. The submission requirements have been modified to avoid the submission of duplicate information.

Condition 33 - Plans On-Site

(renumbered Condition 27 in the revised Permit)

- a. The requirement for maintaining the Environmental and Health Impact Statement document on file at the facility was added as Item (a) in recognition of its importance as a component of the overall facility permitting documentation, available for reference by facility personnel and the Department's enforcement staff.
- b. Item (e) was included in the revised Permit to emphasize the need for on-site maintenance of all construction and operation permits within Department jurisdiction.

Condition 35 - Duration of Permit

(renumbered Condition 29 in the revised Permit)

Reference to the permit renewal application meeting all Department requirements when application is made has been deleted, as this requirement is self-evident.

4. Public Comment Period (Notice of Opportunity for Public Hearing)

The public comment period concerning the Hoffmann-LaRoche, Inc. Small Scale Incineration Facility Permit modifications will begin March 30, 1995 and will end April 28, 1995. Comments should be submitted during the public comment period to the office which is processing the referenced modifications at the following address, .

Robert C. Ciolek  
Assistant Director, Engineering and Finance  
Division of Solid and Hazardous Waste  
N.J. Department of Environmental Protection  
840 Bear Tavern Road  
CN 414  
Trenton, New Jersey 08625  
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/ @ 1,