

File: Permitting - Quadrex

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION



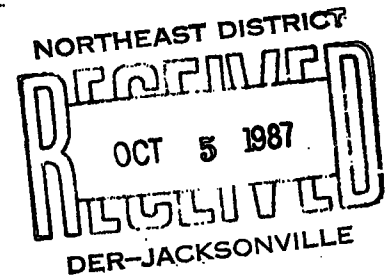
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Interoffice Memorandum

For Routing To Other Than The Addressee

To: _____	Location: _____
To: _____	Location: _____
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From: _____	Date: _____

TO: Ashwin Patel
THROUGH: Satish Kastury *[initials]*
FROM: John E. Griffin *[initials]*
DATE: September 22, 1987



SUBJECT: Quadrex HPS Inc., FLD 980 711 071;
HT01-136540

Attached is a copy of HRS comments along with Pinellas County Health Department. These comments should be included with your NOD.

Should you have any questions, please call me.

JEG/db

Attachment: As noted

D. E. R.

SEP 23 1987

SOUTH WEST DISTRICT
TAMPA

DOCKET # 15

D. E. R.

SEP 24 1987

SOUTH WEST DISTRICT
TAMPA



STATE OF FLORIDA
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

OFFICE OF RADIATION CONTROL
RADIOACTIVE MATERIALS PROGRAM

September 8, 1987

Roger Menendez
Environmental Specialist
State of Florida
Department of Environmental Regulation
Division of Environmental Permitting
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Menendez:

We have completed your requested review of Quadrex HPS Inc., TOP # 980 711 071. We do not see any areas concerning radiation hazards that we have not already addressed or intend to address during the current renewal of Quadrex HPS Inc. radioactive materials license number 1354-1.

Please find in attachment 1 the radiation issues mentioned in the TOP that are incorrect as stated and are currently being addressed by our Department.

Attachment 2 are some discrepancies noted in the TOP that do not have a bearing on the radiation hazards, but by your regulations may need further clarification.

As you indicated in our phone conversation there are gray areas in dealing with the material at Quadrex since it contains both hazardous and radioactive waste. It is good to see two large state agencies working together to insure all areas are addressed to protect public health and safety. If you have any questions or we can be of any assistance in the future, please contact us.

Sincerely,

Michael N. Stephens
Public Health Physicist

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Attachment 1

1. Item 3.2, HM-1993-12 indicates that absorbent material is analyzed for gamma emitters and contamination detected above the Minimum Detectable Activity (MDA) is kept for decay or disposed.

Quadrex does receive gamma emitters but, the majority of the radioactive materials received are tritium (H-3) and Carbon 14 (C-14). These isotopes are beta emitters only and will not be seen on a gamma ray detection system. Quadrex is also currently performing beta analysis although it is not indicated in their TOP application. We are determining the adequacy of their radiation detection instrumentation in the renewal of their license.

2. Item 3.3, HM-1993-12 indicates potential reuse of absorbent material.

We allow the reuse of non-contaminated absorbent material only. We will not allow the reuse of contaminated absorbent material. This is being addressed in Quadrex's renewal application.

3. Items 6.1 and 6.2, HM-1993-12 indicates that drums which contained regulated vials are surveyed and swiped to assure that they are not contaminated prior to release. The swipe is counted using a Ludlum 177 "pancake" probe with a contamination action level of 1000 dpm/100 square centimeters.

Pancake probes have a window thickness of at least 1.7 milligrams per square centimeter. This is the thinnest commercially available. This thickness is only 10% efficient for C-14 and does not detect H-3. This issue has been addressed in their renewal application and we will evaluate alternative beta detection instrumentation. Currently they are performing liquid scintillation counting which is acceptable instrumentation.

4. The efficiency of HEPA filters may be reduced by exposure to organic vapors such as those present at Quadrex. We will consider this issue during renewal. Personally, I do not know of how drastic the efficiency is reduced since it would depend on the type of organic vapor. Further investigation on this issue will be done. At this time I foresee possibly checking the HEPA filter efficiency at some specified frequency. Another possibility is to stage the filters so that the organic vapors are removed before they get to the HEPA filter. Consideration needs to be given to the fact that, although Quadrex must satisfy our regulations as to the concentration of radioactive materials, exposure to these organic vapors which contain radioactive materials is probably more of a chemical health and safety hazard than a radiation hazard.

Attachment 2

1. Possible discrepancy in the frequency drums awaiting processing are inspected.
 - a) Part I page 17, indicates drums are inspected daily.
 - b) Part I page 25, indicates drums are inspected weekly by LSV Manager.
 - c) Contingency Plan page 40, indicates drums are inspected at least weekly.
 - d) Part II page 64, indicates drums are inspected frequently, which is further elaborated to mean at a minimum weekly and daily in most instances.
2. Possible discrepancy in maximum height drums are stacked.
 - a) Part II pages 61 and 64, indicates a maximum of two drums.
 - b) Part II figure 12, HM-1993-25-A, indicates a maximum height of three drums.
3. Quadrex has some underground pipes that may be used to carry hazardous waste. We could not find any reference to this in their TOP application. This is not relevant to our regulations but may be to DER regulations.