Snake River Alliance

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February 24, 2000

VIA FACSIMILE (301) 415-2700 AND U.S. MAIL

Dr. William D. Travers
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Re: Disposal of Radioactive FUSRAP Waste in Idaho

Dear Dr. Travers:

On behalf of the members of the Snake River Alliance, I am writing about radioactive waste that is being disposed of at a Resource Conservation and Recovery Act ("RCRA") permitted hazardous waste disposal facility in my state. This facility is operated by Envirosafe Services of Idaho, Inc. ("Envirosafe"). Envirosafe has a contract with the U. S. Army Corps of Engineers ("USACE") to dispose of radioactive waste from the Formerly Utilized Sites Remedial Action Program ("FUSRAP") at its facility which is located near Grand View, Idaho.

The Snake River Alliance's concerns about this situation can be summarized as follows:

- The NRC is not regulating radioactive FUSRAP waste that is being disposed of in Idaho;
- The state of Idaho has no authority to regulate the disposal of this radioactive waste; and
- The state of Idaho does not have a radiation control program or qualified employees that have the knowledge or ability to enforce any worker health and safety or environmental protection program that is adopted by the disposer of this radioactive waste.

This letter discusses in more detail the basis for my concerns and requests action by the Nuclear Regulatory Commission ("NRC" or "Commission") to look into this matter and take action to ensure that worker health and safety, the public, and the environment are fully protected from radiation exposure as a result of the disposal of radioactive FUSRAP waste in Idaho.

The people of Idaho have become very concerned with the disposal of radioactive waste due to problems at the Department of Energy's Idaho National Environmental and Engineering

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EDO-01

EDO --G20000108

Laboratory ("INEEL") site which is located above the Snake River plain aquifer. Like the INEEL, Envirosafe is located near Idaho's Snake River, and any contamination of the Snake River or its aquifer by radioactive waste from Envirosafe would create a critical situation for the people of my state. Further, I understand that there is a situation underneath the Envirosafe site that is resulting in a rising groundwater table which makes the disposal of long-lived radioactive waste at that facility very troubling to me.

Apparently, the FUSRAP waste that is being disposed of at Envirosafe is Atomic Energy Act ("AEA") section 11e.(2) radioactive byproduct material. I understand that the NRC has taken the position that if this uranium mill tailings waste was generated before 1978, it is not regulated by the NRC, and it can be disposed in Envirosafe's landfill. However, if this very same material was generated after 1978 by an NRC licensee, it is regulated by the NRC, and it cannot go to Envirosafe but must be disposed in a licensed radioactive waste disposal facility.

The state of Idaho is not an "Agreement State" with the NRC, and it does not have its own radiological control program. The state defers to the NRC on matters relating to radiological health and safety. I had always understood that the NRC has responsibility for the regulation of non-Department of Energy radioactive waste in Idaho.

It seems clear to the Snake River Alliance in sections 81 and 84 of the Atomic Energy Act ("AEA") that Congress wanted the NRC to have authority for all 11e.(2) material regardless of when it was generated.

Further, section 274(c)(4) of the AEA seems to give the Commission the authority to regulate any byproduct material "as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission."

In addition, the NRC's regulations interpreting its Agreement State program make clear that states like Idaho that do not have Agreement State status are precluded from regulating byproduct material from the standpoint of radiological health and safety -- this responsibility rests completely with the NRC. See 10 CFR Part 8.4.

I have attached a copy of a letter from Katherine Kelly of Idaho's Division of Environmental Quality ("DEQ") to Idaho State Senator Robbi King. Ms. Kelly states in her letter that, "The NRC does not regulate the FUSRAP waste being accepted for disposal at the Envirosafe facility, and DEQ does not explicitly regulate the radioactive component of the

waste." Ms. Kelly goes on to state that, "The receipt and disposal of any waste at Envirosafe is, however, regulated by rigorous hazardous waste requirements and several additional permit conditions expressly directed toward the radioactive component of FUSRAP waste." In fact, however, radioactive FUSRAP waste is classified as "byproduct material" under the AEA, and I understand that both RCRA and Idaho Code Section 39-4403 specifically exclude byproduct material from their definitions of hazardous waste. Idaho only has authority to regulate the disposal of hazardous waste at Envirosafe and not radioactive byproduct (FUSRAP) waste.

As Ms. Kelly herself points out in her letter to Senator King,

> ...at present no Idaho rules are in place that specifically regulate Envirosafe's receipt and disposal of the radioactive component of FUSRAP wastes. Were any such rules or requirements considered for proposal by DEQ, we would have to closely consider our authority to adopt the rules given the stringency provisions the Legislature has included in the EPHA and HWMA. The stringency provisions limit DEQ's rulemaking authority to rules no broader in scope or more stringent than those of the federal government.

Essentially what Ms. Kelly is saying is that it is doubtful DEQ could even develop rules or regulations covering the disposal of radioactive waste at Envirosafe, because its authority in this regard is limited. Since DEQ's statutory authority does not provide for the regulation of the disposal of radioactive waste, DEQ has no authority to adopt rules and regulations in this regard.

Arguably, the only way Idaho could regulate radioactive waste is by Envirosafe's voluntary agreement to include provisions within its permit that would allow the state to regulate radioactive waste received at its facility. This seems to be the position taken by Ms. Kelly in her letter to Senator King. However, in looking at Envirosafe's permit, it is clear that there is no requirement within that permit or otherwise for Envirosafe to do anything. (See copy of Envirosafe Permit for FUSRAP Waste, attached.) While there are references to an Envirosafe FUSRAP Health and Safety Manual, there is no requirement that Envirosafe abide by that Manual. The allowable doses under the permit appear to be very high. There is no bioassay program for workers. There are no reporting requirements. There is no requirement that groundwater at the site be monitored for radionuclides.

Moreover, the state of Idaho does not have a radiation control program of any kind. Other than employees who work for Idaho's INEEL Oversight Program which is funded by the Department of Energy, the state of Idaho does not have qualified health physics employees

who have the ability to determine whether Envirosafe is complying with its own worker health and safety requirements. Thus, the state has no legal authority or practical ability to enforce any worker health and safety or environmental protection requirements.

If Idaho has no authority and the NRC is refusing to regulate this radioactive FUSRAP waste, who is looking out for the radiological health and safety of the people of Idaho? What is the NRC doing to ensure that workers, the public, and the environment in Idaho are protected from exposures to radiation as a result of the disposal of radioactive waste at this facility?

Please respond to this inquiry and provide answers to my questions at your earliest convenience. Further, please consider this a formal request for action pursuant to 10 CFR Part 2.206 to enforce the AEA and the NRC's regulations governing the disposal of all radioactive byproduct materials, including FUSRAP waste and similar radioactive byproduct uranium mill tailings generated prior to 1978.

Sincerely,

Pamela Allister

Pamela Allister
Executive Director

Enclosures

cc: Richard Meserve, Chairman, Nuclear Regulatory Commission w/enclosures
Governor Dirk Kempthorne w/enclosures
Senator Larry Craig w/enclosures
Senator Mike Crapo w/enclosures
Representative Mike Simpson w/enclosures
Representative Helen Chenoweth w/enclosures
Vice President Al Gore w/enclosures

SNAKE RIVER ALLIANCE

FAX COVER

Date: 02-25-00

To: Dr. William D. Travers Phone:
Executive Director for Operations
Company: U.S. Nuclear Regulatory Commission Fax:
Washington, DC 20555 (301) 415-2700

From: Total pages, including cover:

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☐ 310 East Center
Pocatello, ID 83201
(208) 234-4782
Fax 323-4922

☐ Urgent ☒ For Review ☒ Please Comment ☐ Please Reply ☐ Please Recycle

Notes: Attachments follow in US Postal Services delivery.

Working for Peace and the Environment since 1979

The Snake River Alliance is an Idaho-based grassroots group working for peace and justice, the end of nuclear weapons production activities, and responsible solutions to nuclear waste and contamination.

STATE OF IDAHO
DIVISION OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Administrator

December 23, 1999

Robbi King
State Senator, District 20
P.O. Box 28
Glenns Ferry, Idaho 83623

Dear Senator King:

Steve Allred asked that I respond to your letter dated December 9, 1999, concerning regulation of the receipt and disposal of radioactively contaminated waste at the Envirosafe Services of Idaho, Inc. (Envirosafe) facility in Owyhee County.

Envirosafe is a hazardous waste disposal facility regulated by the Idaho Division of Environmental Quality (DEQ) under the Hazardous Waste Management Act of 1983 (HWMA), Idaho Code §§ 39-4401, et seq. The HWMA and the Idaho hazardous waste rules at IDAPA 16.01.05, adopt a state hazardous waste regulatory program authorized pursuant to Subtitle C of the federal Resources Conservation and Recovery Act (RCRA).

In recent years, Envirosafe has been awarded contracts to dispose of U.S. Army Corps of Engineers (USACE) waste generated by the Formerly Utilized Sites Remedial Action Program (FUSRAP). These FUSRAP wastes are generally in the form of mill tailings and soils. The wastes contain very low concentrations of uranium, thorium, or radium generated from the process of extracting materials from ore. In addition to the radioactive component, some of the wastes characterize as "hazardous" under the HWMA and RCRA Subtitle C.

If FUSRAP waste contains a hazardous component, its treatment, storage and disposal in Idaho is subject to the requirements of the HWMA, and it can only be disposed of at a facility permitted to accept hazardous waste such as the Envirosafe facility. Even if the FUSRAP wastes do not qualify as a "hazardous waste," USACE has determined that the wastes will only be disposed of at Subtitle C facilities permitted to accept hazardous waste, rather than the less rigorously regulated Subtitle D solid waste landfills. In theory, however, under existing Idaho law, certain radioactively contaminated waste may be eligible at Subtitle D or non-municipal solid waste facilities.

The federal Nuclear Regulatory Commission (NRC) regulates the disposal of radioactive waste in Idaho and Utah (the U.S. Department of Energy is self-regulating on the INEEL site). Regarding their radioactive component, the NRC has determined that FUSRAP wastes are not subject to NRC regulation. If the wastes were subject to NRC regulation, they would be eligible for disposal only

at a NRC-licensed facility such as Envirocare in Utah. The Envirosafe facility does not have an NRC license. NRC has not prohibited the disposal of FUSRAP wastes at a Subtitle C facility such as that operated by Envirosafe, and nothing in Idaho law prohibits such disposal.

While Idaho Code §§ 39-3001, et seq., and the Idaho Environmental Protection and Health Act, Idaho Code §§ 39-101, et seq., provide DEQ and the Board of Health and Welfare general authority to regulate radiation and protect public health and safety, and the environment, at present no Idaho rules are in place that specifically regulate Envirosafe's receipt and disposal of the radioactive component of FUSRAP wastes. Were any such rules or requirements considered for proposal by DEQ, we would have to closely consider our authority to adopt the rules given the stringency provisions the Legislature has included in the EPHA and HWMA. The stringency provisions limit DEQ's rulemaking authority to rules no broader in scope or more stringent than those of the federal government. Setting aside the question of DEQ's administrative or statutory authority, Envirosafe has voluntarily agreed to include in their Subtitle C permit certain requirements that are equivalent to NRC standards for facilities accepting low-level radioactive wastes. The additional permit requirements include the following:

- Implementation of a screening process to insure that wastes are not accepted if a load fails established radioactivity limits;
- In-depth personnel training and monitoring for handling low level radioactive wastes;
- Installation and operation of stationary air and particulate sampling and radon gas measurements; and
- Construction of a landfill cap barrier equivalent to the cap required by NRC.

Once incorporated into the permit, these additional conditions are enforceable by DEQ. Envirosafe's noncompliance with these or any of its permit conditions could result in an administrative or civil action by DEQ.

Envirosafe has accepted approximately 150,000 tons of FUSRAP waste since 1997. This amount represents about one-third of the volume of waste that Envirosafe receives in a normal year. If they are awarded the contracts they have bid for, the Envirosafe facility expects to receive 50,000 tons of FUSRAP waste in 2000, 75,000 tons in 2001, 100,000 tons in 2002, and 125,000 tons in 2003. This volume will contribute significantly to Envirosafe's receipts and will result in significant fees (most at $5/ton) for the State general fund.

In summary, the NRC does not regulate the FUSRAP waste being accepted for disposal at the Envirosafe facility, and DEQ does not explicitly regulate the radioactive component of the waste. The receipt and disposal of any waste at Envirosafe is, however, regulated by rigorous hazardous

waste requirements and several additional permit conditions expressly directed toward the radioactive component of FUSRAP waste. For your information, I have attached a chart comparing NRC permit requirements with those currently in place in Envirosafe's Subtitle C permit.

If you have additional questions or concerns, please let me know.

Sincerely,

Katherine B. Kelly
Administrator
State Waste Management and Remediation Program Office

KBK/ra SW99MONSONKINGESU.LTR

Enclosure

cc: C. Stephen Allred
ESbpf
COF

licensed activity which causes in-
abroad, or if there is any activity
ad which causes further injury in
nited States the situation will re-
further investigation at that
." This sentence follows an ex-
and lengthy statement that the
urrence" is an event at the site of
activity:

* * The occurrence which is the subject
is definition is that event at the site of
licensed activity, or activity for which
commission has entered into a contract,
h may cause damage, rather than the
where the damage may perhaps be
d. This site must be within the United
es. The suggested exclusion of facilities
r license for export was not accepted,
is because the definition of "nuclear in-
nt" limits the occurrence causing dam-
to one within the United States. It does
matter what license may be applicable if
occurrence is within the United States.
ere is anything from a nuclear incident
he licensed activity which causes injury
ad or if there is any activity abroad
h causes further injury in the United
es the situation will require further in-
igation by the Congress at that time

d literally, the last sentence would
m inconsistent with the preceding
tement. It is, however, possible to
d the sentence as consistent with
preceding statement if it is taken
indicating a recognition by Congress
the fact that the statutory limita-
n of liability to $500,000,000 would
bably not limit claims by foreign
idents to that amount in foreign
rts and that therefore the persons
lemnified were not fully protected
inst bankrupting claims, one of the
mary purposes of the bill.[4]

f) The point in question received
nt consideration during the hear-
s preceding adoption of the bill held
the Joint Committee on Atomic En-
y. A summary of the study of the
omic Industrial Forum, cited above,
s introduced into the record of the
ring and included a conclusion that
provisions of the bill seemed to
er the situation.[5] That conclusion would seem entitled to more than ordinary weight since the Forum study received the careful consideration of the Joint Committee,[6] and the study referenced a statement from the 1956 Report very similar to the confusing statement in the 1957 Report noted above.[7]

(g) There was also a rather ambiguous colloquy in the hearings between Representative Cole and Mr. Charles Haugh in which Representative Cole indicated that the Joint Committee

"* * * will do pretty well if we successfully protect the American people and property owners in this country without worrying about those that live abroad."[8]

(h) Congress, in enacting the Price-Anderson Indemnity Act added to section 2 of the Atomic Energy Act of 1954, a new subsection which stated, inter alia:

In order * * * to encourage the development of the atomic energy industry, * * * the United States may make funds available for a portion of the damages suffered by the public from nuclear incidents and may limit the liability of those persons liable for such losses.

This statutory purpose is frustrated if the atomic energy industry is not protected from bankrupting liabilities for damages caused abroad by an accident occurring in the United States.[9] In the Report, the Joint Committee on Atomic Energy made explicit mention of the fact that the private insurance to be provided for reactor operators included coverage for damage in Canada and Mexico and, at another point, noted the Committee's hope that the insurance contract in its final form would cover the same scope as the bill.[10]

(i) It is my opinion that since the language of the Act draws no distinction between damage received in the United States and that received abroad, none can properly be drawn. To read the Act as imposing such a limitation in the absence of statutory direction and in the light of an avowed Congressional intention to encourage the development of the atomic energy industry would be unwarranted. The confusing sentence cited in the Report must, therefore, be read consistently with the language of the Act in the manner suggested above, i.e., as recognizing Congressional inability to limit foreign liability, or must be ignored as inconsistent with the broad coverage of the statutory language.

[25 FR 4075, May 7, 1960]

Atomic Industrial Forum, Financial Protection Against Atomic Hazards, The International Aspects, p. 52 (1959).

Hearings before the Joint Committee on Atomic Energy, Governmental Indemnity for Reactor Safety, 85th Cong., 1st Sess., p. 181 (1957) (hereinafter referred to as "Hearings.")

[6] Hearings, p. 163.

[7] Hearings, p. 182.

[8] Hearings, p. 97. It is significant to note that Mr. Haugh stated at that point the problem of the reactor operator who is concerned with any type of liability. He noted that the insurance contracts would cover "*** the instance where *** something happen[ed] out of the country and a suit is brought in the United States on that."

[9] The Atomic Industrial Forum study notes that "[T]o be adequate, the governmental indemnity must cover industry's liability to residents of the countries who suffer as a result of an accident at an installation based in the United States." p. 61. This is certainly the case and one of the major Congressional purposes is frustrated should the Act be said to be unclear on this point. The principal reason for the conclusion that there is coverage reached in the Forum study is the fact that Price-Anderson provides indemnity for "any legal liability." Arthur Murphy, Director of the study, in a recent article, has stated that the confusing sentence in the Report is "* * * inconsistent with the flat coverage of any legal liability by the indemnity." Murphy, Liability for Atomic Accidents and Insurance, in Law and Administration in Nuclear Energy 75 (1959). In the testimony before the Joint Committee last year, Professor Samuel D. Estep, one of three authors of the comprehensive study of Atoms and the Law apparently relying upon the legislative history, stated that the problem of a reactor accident in the United States causing damage in a foreign country was unclear, presumably since he considered the phrase "any legal liability" directed at a different problem. Hearings before the Joint Committee on Atomic Energy, Indemnity and Reactor Safety, 86th Cong., 1st Sess., p. 77 (1959); Stason Estep, and Pierce, Atoms and the Law, 577 (1959). Professor Estep stated that there "surely ought to be" coverage and suggested a clarifying amendment. His statement that the phrase "any legal liability" covers only the question of time restrictions for claims seems to me erroneous since the language used, "any legal liability," seems intentionally broad. Additionally, should this very narrow reading be given to admittedly broad statutory language, the Congressional purpose would be frustrated.

[10] Report, p. 11.

§ 8.3 [Reserved]

§ 8.4 Interpretation by the General Counsel AEC jurisdiction over nuclear facilities and materials under the Atomic Energy Act.

(a) By virtue of the Atomic Energy Act of 1954, as amended,[11] the individual States may not, in the absence of an agreement with the Atomic Energy Commission, regulate the materials described in the Act from the standpoint of radiological health and safety. Even States which have entered into agreements with the AEC lack authority to regulate the facilities described in the Act, including nuclear power plants and the discharge of effluents from such facilities, from the standpoint of radiological health and safety.

(b) The Atomic Energy Act of 1954 sets out a pattern for licensing and regulation of certain nuclear materials and facilities on the basis of the common defense and security and radiological health and safety. The regulatory pattern requires, in general, that the construction and operation of production facilities (nuclear reactors used for production and separation of plutonium or uranium-233 or fuel reprocessing plants) and utilization facilities (nuclear reactors used for production of power, medical therapy, research, and testing) and the possession and use of byproduct material (radioisotopes), source material (thorium and uranium ores), and special nuclear material (enriched uranium and plutonium, used as fuel in nuclear reactors), be licensed and regulated by the Commission.[12] In carrying out its statutory responsibilities for the protection of the public health and safety from radiation hazards and for the promotion of the common defense and security, the AEC has promulgated regulations which establish requirements for the issuance of licenses (Parts 30–36, 40, 50, 70, 71, and 100 of this chapter)

[11] Pub. L. 83-703, 68 Stat. 919.

[12] The terms "byproduct material," "source material," and "special nuclear material" are defined in the Atomic Energy Act, sections 11e, 11z, and 11aa, respectively. The terms "production facility" and "utilization facility" are defined in sections 11v and 11cc of the Act, respectively.

ENVIROSAFE SERVICES OF IDAHO, INC.

September 16, 1999

Ms. Katherine Kelly
State Waste Program Administrator
Division of Environmental Quality
Idaho Department of Health and Welfare
1410 North Hilton
Boise, ID. 83706

Dear Ms. Kelly:

Regarding: **Envirosafe Services of Idaho, Inc. (ESII) - IDD073114654**
Class 1 Permit Modification to ESII's RCRA Part B Permit

This letter is being sent to provide notice of a Class 1 Permit Modification prepared in accordance with 40 CFR §270.42 and as adopted in IDAPA 16.01.05.012. This Permit modification is necessary to provide additional waste acceptance parameters that will continue to ensure protection of human health and the environment. Pursuant to general Class 1 Permit modification criteria established in 40 CFR §270.42 (d)(2)(i) it has been determined that the changes described herein, although, do not substantially alter the permit conditions they do, however, increase the capacity of the facility to protect human health and the environment.

This notice is being filed in accordance with 40 CFR 270.42 (a). The mailing list used is on file with the State of Idaho IDHW as the official mailing list.

The attached notice details the requirements for this modification and the effective date. In addition, proof of mailing (certified mail receipts) will be forwarded as proof that the required mailing was completed in accordance with 40 CFR Part 270.42(a)(ii).

If you have any questions, please feel free to contact either me or Lee Weber at (208) 834-2275.

Sincerely,

Michael W. Spomer
General Manager

Attachments

cc: √Bob Bullock, IDEQ
Brian Gaber, IDEQ
Lee Weber, ESII

P.O. Box 400, Grand View, Idaho 83624 • (208) 834-2275 • (800) 274-1516 • Fax: (208) 834-2997

NOTIFICATION OF CLASS 1 MODIFICATION

Addition of waste acceptance parameters that will continue to ensure protection of human health and the environment

BY

ENVIROSAFE SERVICES OF IDAHO, INC.

IDD073114654

EFFECTIVE ON

September 16, 1999

The following Class 1 Notice of Modification is submitted in accordance with the requirements of IDAPA 16.01.05.012 (40 CFR Part 270.42(a)) as follows:

1. 270.42(a)(1)(i):
This notice of Permit Modification is effective on September 16, 1999. This notice is being transmitted within the required time frame of no later than 7 days after the effective date of the modification. This notice incorporates language in to the Part B Permit that identifies additional waste acceptance parameters to provide added assurance for the protection of human health and the environment.

These changes provide for more frequent monitoring and sampling in accordance with the definition requirements for a Class 1 Permit modification found in 40 CFR 270.42 Appendix 1 (A)(4). In addition and pursuant to 40 CFR 270.42(d)(2)(i), more detailed language describing the barrier for long-term control of wind dispersal, erosion and air emissions of some wastes has been added to ensure further protection of human health and the environment.

The exact changes required to the existing RCRA Part B Permit and supporting documents are presented in Appendix A of this Notice.

Other information required by 40 CFR Part 270 is as follows:

- 270.13 There is no change required to the contents of the Part A Permit Application.
- 270.14 The only change required by this section is to the Waste Analysis Plan (WAP) as required in 270.14(b)(3) and this change is presented in **Appendix A.**
- 270.15 There is no change required to either the Part B Application documents or the Part B Permit required by this section.
- 270.16 There is no change required to either the Part B Application documents or the Part B Permit required by this section.
- 270.17 There is no change required to either the Part B Application documents or the Part B Permit required by this section.
- 270.18 Not applicable.
- 270.19 Not applicable.
- 270.20 Not applicable.

- 270.21 The only change required by this section is to the Landfill Units Design and Operation Plan as required in 270.21(b)(5) and this change is presented in **Appendix A.**
- 270.62 Not applicable.
- 270.63 Not applicable.

2. 270.42(a)(1)(ii):

A copy of the receipts for the certified mailing to the required mailing list maintained under 40 CFR Part 124.10(c)(ix) will be forwarded upon completion for inclusion as **Appendix B.**

A copy of the receipts for the certified mailing to the appropriate units of State and Local government, as required by 40 CFR Part 124.10(c)(x) will be forwarded for inclusion as **Appendix C.** Please note that these personnel will be sent a complete package including the entire text of this Notice. In addition please be aware that there is no local fire Chief or Fire District for distribution.

3. 270.42(a)(2):

This Class 1 Permit Modification does not require prior written approval by the Director in accordance with 40 CFR 270.42 (d)(2)(i) and 40 CFR appendix 1 to 40 CFR 270.42, Classification of Permit Modifications, Section A.4.a.

4. 270.42(a)(3):

ESII does not elect to follow Class 2 Permit Modifiation procedures of 40 CFR Part 270.42(b) for this Permit Modifiation.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Michael W Spomer
Signature
Michael W. Spomer, General Manager

Sept 17, 1999
Date

APPENDIX A

PERMIT PAGES

ATTACHMENT 2 - WASTE ANALYSIS PLAN

PAGE C-17 and C-18
September 16, 1999

NOTE: Only pages C-17 and C-18 have been modified in the Waste Analysis Plan. No other changes have been made to the WAP other than the Table of Contents.

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C-2 Preacceptance Protocol

C-2a Hazardous Waste Preacceptance Review

The preacceptance protocol has been designed to ensure that only hazardous waste streams that can be properly and safely stored, treated, and/or disposed of by ESII are approved for receipt at the facility. A two-step approach is taken by ESII. The first step is the chemical and physical characterization of the candidate waste stream by the generator. The second step is the preacceptance evaluation performed by ESII to determine the acceptability of the waste for receipt at the facility. Figure C-2 presents a logic diagram of the preacceptance protocol that is utilized at the ESII facility.

C-2a(1) FUSRAP Waste Acceptance Criteria

The following waste acceptance criteria is established for accepting radiologically contaminated waste material from FUSRAP sites administered by the Army Corps of Engineers. Although the Nuclear Regulatory Commission (NRC) does not regulate this material, NRC regulations suggest certain concentrations of radioactive material are considered unimportant. Using this as a guide ESII's consultant, Radiation Safety Associates, Inc. in Hebron, Connecticut, developed the following acceptance limits for FUSRAP materials (detailed analysis of these criteria is presented in ESII's *Waste Acceptance Criteria and Justification for FUSRAP Material*, prepared by Radiation Safety Associates, Inc.).

1. ESII may only receive FUSRAP material containing natural uranium, natural thorium, and their daughter products. ESII may not accept any material that is or has been regulated by the Atomic Energy Commission or the Nuclear Regulatory Commission.
2. Unless approved in advance by ESII, average activity concentrations may not exceed 355 pCi/g natural uranium (^{nat}U) and 110 pCi/g natural thorium (^{nat}Th) in any individual shipping container (e.g., rail car). Specific isotopes in the ^{238}U decay series will be evaluated against the action level of 174 pCi/g and specific isotopes in the ^{232}Th decay series will be evaluated against the action level of 55 pCi/g. ESII may accept, on a case-by-case basis, FUSRAP material that exceeds these guidelines provided that the material does not meet the definition of radioactive material as defined by the Department of Transportation in 49 CFR 173.403.
3. If individual "pockets" of activity are known to exceed or are suspected of exceeding three times the average activity concentration guidelines described above, ESII may still accept the material so long as the generator certifies that the dose rate in contact with the unshielded container does not exceed 0.5 mrem/hr (500 μrem/h) (e.g., no shielding added to the rail car).
4. The generator of the FUSRAP material must certify that the material being shipped does not meet the definition of radioactive material as defined by the Department of Transportation in 49 CFR 173.403.

FUSRAP waste acceptance criteria, as presented, when used in conjunction with an effective radiation monitoring and protection program as defined in ESII's *FUSRAP Health and Safety Manual* and *FUSRAP Material Receipt Procedures* provides adequate protection of human health and the environment. This criteria assures that the highest potential dose to a worker handling FUSRAP material at ESII should never exceed 400 mrem/year.

Figure C-2 Pre-acceptance Protocol

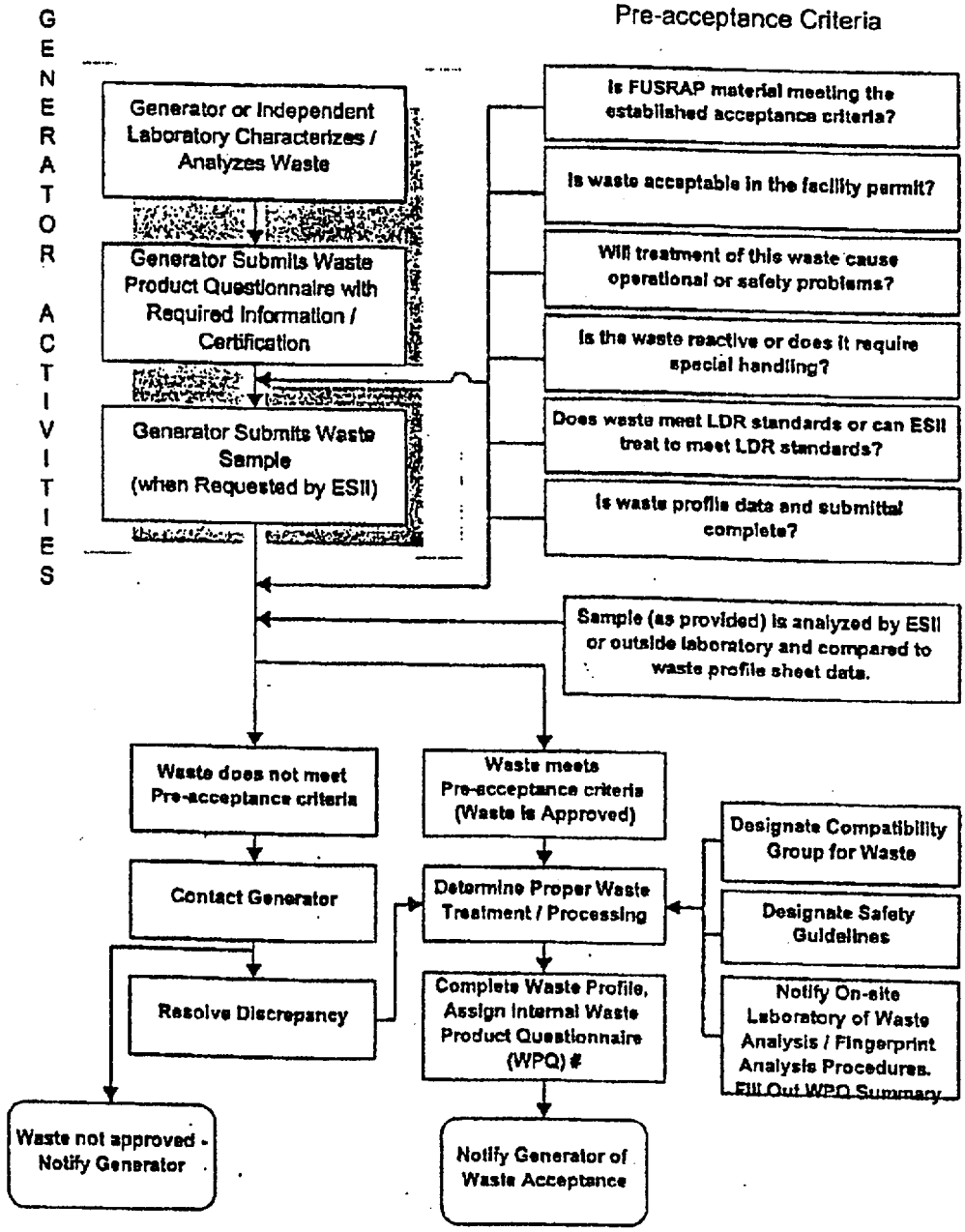

Figure C-2 Pre-acceptance Protocol

ATTACHMENT 19 - LANDFILL UNITS: Design and Operation

Page 49 and 50a through 50c
September 16, 1999

NOTE: Only page 49 has been modified in the LANDFILL UNITS: Design and Operation Plan. Pages 50a through 50c have been added to describe the typical section through Landfill 14 of the fill. No other changes have been made other than the Table of Contents.

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LIST OF TABLES:

LIST OF FIGURES:

As waste placement operations approach the top of the below-grade liner system, clean soil perimeter dikes will be constructed to provide for waste and runoff containment. These dikes will be constructed in stages, varying in height from 0 to 6 feet, with a top width of 10 feet, an exterior slope of 3 horizontal to 1 vertical, and an interior slope of 1.5 horizontal to 1 vertical (see Figure D-10). Each lift of soil dike will be compacted to 90% of the standard proctor density. Density tests will be performed at the rate of 1 per 10,000 square feet of lift, to ensure the specified compaction is achieved.

ESII maintains stockpiles of clean native soils, which were excavated during construction of the Landfill Trenches. This material is used, as necessary, for cover, construction of the above-grade containment dikes, and to provide clean access roads. The clean soil is transported and applied using construction equipment and compacted with the hauling and spreading equipment, which readily achieves a minimum of 85% of the standard Proctor density. Clean soil, asphaltic emulsion, or other approved cover material is placed to minimize the potential for volatilization and wind dispersal. The permeability of the cover soil is adequate to promote drainage through the landfill.

Placement of FUSRAP material above grade must not extend beyond a maximum slope of 5 horizontal to 1 vertical (See figure D-12). Native soil or select wastes (e.g., stabilized baghouse dust, or other wastes based upon considerations of ease in placement for a shallow lift) will be placed above the FUSRAP material. This lift above the 5:1 slope will serve as a barrier for the FUSRAP material as described in Figure D-12 and the attached radon attenuation modeling output. The barrier will consist of six to twelve inches of native soil to be placed as described above for the placement of the cover. Although this barrier is not necessary to achieve the performance requirement of 20pCi/m2/s radon flux on the surface of the landfill, this barrier is an additional precaution that ESII is electing to apply.

Version 1.2 - Feb. 2, 1989 - G. F. Birchard Tel.# (301)492-7000

U.S. Nuclear Regulatory Commission Office of Research
RADON FLUX, CONCENTRATION AND TAILINGS COVER THICKNESS ARE CALCULATED FOR MULTIPLE LAYERS
Envirocare of Idaho--5 Layer Barrier

CONSTANTS		
RADON DECAY CONSTANT	.0000021	s^-1
RADON WATER/AIR PARTITION COEFFIECIENT	.26	
SPECIFIC GRAVITY OF COVER & TAILINGS	2.65	

GENERAL INPUT PARAMETERS		
LAYERS OF COVER AND TAILINGS	5	
NO LIMIT ON RADON FLUX		
LAYER THICKNESS NOT OPTIMIZED		
DEFAULT SURFACE RADON CONCENTRATION	0	pCi l^-1
SURFACE FLUX PRECISION	.1	Pci m^-2 s^-1

LAYER INPUT PARAMETERS		
LAYER 1		
THICKNESS	2580	cm
POROSITY	.4	
MEASURED MASS DENSITY	1.6	g cm^-3
MEASURED RADIUM ACTIVITY	174	pCi/g^-1
DEFAULT LAYER EMANATION COEFFICIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	5.116D-04	pCi cm^-3 s^-1
WEIGHT % MOISTURE	6	%
MOISTURE SATURATION FRACTION	.240	
CALCULATED DIFFUSION COEFFIECIENT	3.115D-02	cm^2 s^-1

LAYER 2		
THICKNESS	106.7	cm
POROSITY	.5	
MEASURED MASS DENSITY	2.24	g cm^-3
MEASURED RADIUM ACTIVITY	0	pCi/g^-1
DEFAULT LAYER EMANATION COEFFICIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	0.000D+00	pCi cm^-3 s^-1
WEIGHT % MOISTURE	14	%
MOISTURE SATURATION FRACTION	.827	
CALCULATED DIFFUSION COEFFIECIENT	7.233D-03	cm^2 s^-1

LAYER 3		
THICKNESS	182.9	cm
POROSITY	.37	
MEASURED MASS DENSITY	2	g cm^-3
MEASURED RADIUM ACTIVITY	0	pCi/g^-1
DEFAULT LAYER EMANATION COEFFICIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	0.000D+00	pCi cm^-3 s^-1
WEIGHT % MOISTURE	3	%
MOISTURE SATURATION FRACTION	.162	
CALCULATED DIFFUSION COEFFIECIENT	3.997D-02	cm^2 s^-1

LAYER 4		
THICKNESS	45.72	cm
POROSITY	.412	
MEASURED MASS DENSITY	1.62	g cm^-3
MEASURED RADIUM ACTIVITY	0	pCi/g^-1
DEFAULT LAYER EMANATION COEFFICIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	0.000D+00	pCi cm^-3 s^-1
WEIGHT % MOISTURE	5.5	%
MOISTURE SATURATION FRACTION	.216	
CALCULATED DIFFUSION COEFFIECIENT	3.407D-02	cm^2 s^-1

LAYER 5		
THICKNESS	30.48	cm
POROSITY	.37	
MEASURED MASS DENSITY	2	g cm^-3
MEASURED RADIUM ACTIVITY	0	pCi/g^-1
DEFAULT LAYER EMANATION COEFFICIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	0.000D+00	pCi cm^-3 s^-1
WEIGHT % MOISTURE	3	%
MOISTURE SATURATION FRACTION	.162	
CALCULATED DIFFUSION COEFFIECIENT	3.997D-02	cm^2 s^-1

DATA SENT TO THE FILE 'RNDATA' ON DRIVE A:

N	FOI	CNI	ICOST	CRITJ	ACC
5	-1.000D+00	0.000D+00	0	0.000D+00	1.000D-01

LAYER	DX	D	P	Q	XMS	RHO
1	2.880D+03	0.115D-02	4.000D-01	5.116D-04	2.480D-01	1.600
2	1.067D+02	7.233D-03	5.000D-01	0.000+00	5.272D-01	2.240
3	1.829D+02	3.997D-02	3.700D-01	0.000P+00	1.622D-01	2.000
4	4.572D+01	3.407D-02	4.120D-01	0.000D+00	2.163D-01	1.620
5	3.048D+01	3.997D-02	3.700D-01	0.000D+00	1.622D-01	2.000

BARE SOURCE LAYER FLUX FROM LAYER 1: 2.492d+02 pCi m^-2 s^-

RESULTS OF THE RADON DIFFUSION CALCULATIONS

LAYER	THICKNESS (cm)	EXIT FLUX (pCi m^-2 s^-1)	EXIT CONC. (pCi l^-1)
1	2.880D+03	7.157D+01	1.736D+05
2	1.067D+02	1.718D+01	9.344D+03
3	1.829D+02	6.840D+00	2.884D+03
4	4.572D+01	5.108D+00	9.888D+02
5	3.048D+01	4.986D+00	0.000D+00

Figure D-12

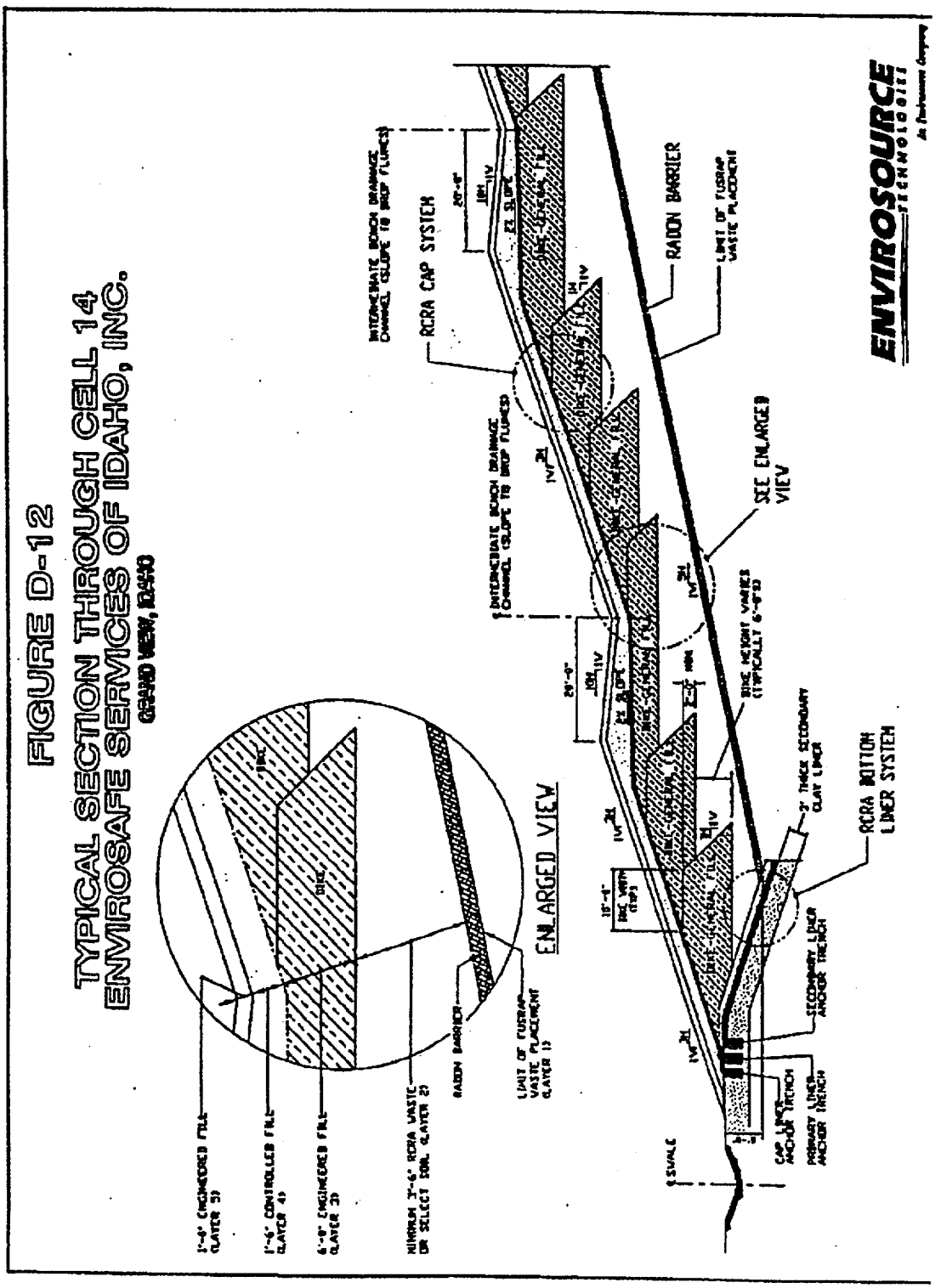
FIGURE D-12
TYPICAL SECTION THROUGH CELL 14
ENVIROSAFE SERVICES OF IDAHO, INC.
GRAND VIEW, IDAHO
ENVIROSOURCE
RCRA CAP SYSTEM
RADON BARRIER
SEE ENLARGED VIEW
RCRA BOTTOM LINER SYSTEM
ENLARGED VIEW
LIMIT OF FUSRAP VASTE PLACEMENT
SWALE

STATE OF IDAHO
DIVISION OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Administrator

December 23, 1999

Robbi King
State Senator, District 20
P.O. Box 28
Glenns Ferry, Idaho 83623

Dear Senator King:

Steve Allred asked that I respond to your letter dated December 9, 1999, concerning regulation of the receipt and disposal of radioactively contaminated waste at the Envirosafe Services of Idaho, Inc. (Envirosafe) facility in Owyhee County.

Envirosafe is a hazardous waste disposal facility regulated by the Idaho Division of Environmental Quality (DEQ) under the Hazardous Waste Management Act of 1983 (HWMA), Idaho Code §§ 39-4401, et seq. The HWMA and the Idaho hazardous waste rules at IDAPA 16.01.05, adopt a state hazardous waste regulatory program authorized pursuant to Subtitle C of the federal Resources Conservation and Recovery Act (RCRA).

In recent years, Envirosafe has been awarded contracts to dispose of U.S. Army Corps of Engineers (USACE) waste generated by the Formerly Utilized Sites Remedial Action Program (FUSRAP). These FUSRAP wastes are generally in the form of mill tailings and soils. The wastes contain very low concentrations of uranium, thorium, or radium generated from the process of extracting materials from ore. In addition to the radioactive component, some of the wastes characterize as "hazardous" under the HWMA and RCRA Subtitle C.

If FUSRAP waste contains a hazardous component, its treatment, storage and disposal in Idaho is subject to the requirements of the HWMA, and it can only be disposed of at a facility permitted to accept hazardous waste such as the Envirosafe facility. Even if the FUSRAP wastes do not qualify as a "hazardous waste," USACE has determined that the wastes will only be disposed of at Subtitle C facilities permitted to accept hazardous waste, rather than the less rigorously regulated Subtitle D solid waste landfills. In theory, however, under existing Idaho law, certain radioactively contaminated waste may be eligible at Subtitle D or non-municipal solid waste facilities.

The federal Nuclear Regulatory Commission (NRC) regulates the disposal of radioactive waste in Idaho and Utah (the U.S. Department of Energy is self-regulating on the INEEL site). Regarding their radioactive component, the NRC has determined that FUSRAP wastes are not subject to NRC regulation. If the wastes were subject to NRC regulation, they would be eligible for disposal only

at a NRC-licensed facility such as Envirocare in Utah. The Envirosafe facility does not have an NRC license. NRC has not prohibited the disposal of FUSRAP wastes at a Subtitle C facility such as that operated by Envirosafe, and nothing in Idaho law prohibits such disposal.

While Idaho Code §§ 39-3001, et seq., and the Idaho Environmental Protection and Health Act, Idaho Code §§ 39-101, et seq., provide DEQ and the Board of Health and Welfare general authority to regulate radiation and protect public health and safety, and the environment, at present no Idaho rules are in place that specifically regulate Envirosafe's receipt and disposal of the radioactive component of FUSRAP wastes. Were any such rules or requirements considered for proposal by DEQ, we would have to closely consider our authority to adopt the rules given the stringency provisions the Legislature has included in the EPHA and HWMA. The stringency provisions limit DEQ's rulemaking authority to rules no broader in scope or more stringent than those of the federal government. Setting aside the question of DEQ's administrative or statutory authority, Envirosafe has voluntarily agreed to include in their Subtitle C permit certain requirements that are equivalent to NRC standards for facilities accepting low-level radioactive wastes. The additional permit requirements include the following:

- Implementation of a screening process to insure that wastes are not accepted if a load fails established radioactivity limits;
- In-depth personnel training and monitoring for handling low level radioactive wastes;
- Installation and operation of stationary air and particulate sampling and radon gas measurements; and
- Construction of a landfill cap barrier equivalent to the cap required by NRC.

Once incorporated into the permit, these additional conditions are enforceable by DEQ. Envirosafe's noncompliance with these or any of its permit conditions could result in an administrative or civil action by DEQ.

Envirosafe has accepted approximately 150,000 tons of FUSRAP waste since 1997. This amount represents about one-third of the volume of waste that Envirosafe receives in a normal year. If they are awarded the contracts they have bid for, the Envirosafe facility expects to receive 50,000 tons of FUSRAP waste in 2000, 75,000 tons in 2001, 100,000 tons in 2002, and 125,000 tons in 2003. This volume will contribute significantly to Envirosafe's receipts and will result in significant fees (most at $5/ton) for the State general fund.

In summary, the NRC does not regulate the FUSRAP waste being accepted for disposal at the Envirosafe facility, and DEQ does not explicitly regulate the radioactive component of the waste. The receipt and disposal of any waste at Envirosafe is, however, regulated by rigorous hazardous

waste requirements and several additional permit conditions expressly directed toward the radioactive component of FUSRAP waste. For your information, I have attached a chart comparing NRC permit requirements with those currently in place in Envirosafe's Subtitle C permit.

If you have additional questions or concerns, please let me know.

Sincerely,

Katherine B. Kelly
Administrator
State Waste Management and Remediation Program Office

KBK/ra SW99\MONSONKINGESU.LTR

Enclosure

cc: C. Stephen Allred
ESbpf
COF

licensed activity which causes in-
abroad, or if there is any activity
ad which causes further injury in
United States the situation will re-
further investigation at that
." This sentence follows an ex-
t and lengthy statement that the
urrence" is an event at the site of
ctivity:

* * The occurrence which is the subject
is definition is that event at the site of
licensed activity, or activity for which
ommission has entered into a contract,
h may cause damage, rather than the
where the damage may perhaps be
d. This site must be within the United
s. The suggested exclusion of facilities
r license for export was not accepted.
is because the definition of "nuclear in-
nt" limits the occurrence causing dam-
to one within the United States. It does
matter what license may be applicable if
occurrence is within the United States.
ere is anything from a nuclear incident
he licensed activity which causes injury
ad or if there is any activity abroad
h causes further injury in the United
es the situation will require further in-
igation by the Congress at that time

d literally, the last sentence would
m inconsistent with the preceding
tement. It is, however, possible to
d the sentence as consistent with
preceding statement if it is taken
indicating a recognition by Congress
the fact that the statutory limita-
n of liability to $500,000,000 would
bably not limit claims by foreign
idents to that amount in foreign
rts and that therefore the persons
lemnified were not fully protected
inst bankrupting claims, one of the
mary purposes of the bill.[4]

f) The point in question received
nt consideration during the hear-
s preceding adoption of the bill hold
the Joint Committee on Atomic En-
y. A summary of the study of the
omic Industrial Forum, cited above,
s introduced into the record of the
ring and included a conclusion that
provisions of the bill seemed to
er the situation.[5] That conclusion would seem entitled to more than ordinary weight since the Forum study received the careful consideration of the Joint Committee.[6] and the study referenced a statement from the 1956 Report very similar to the confusing statement in the 1957 Report noted above.[7]

(g) There was also a rather ambiguous colloquy in the hearings between Representative Cole and Mr. Charles Haugh in which Representative Cole indicated that the Joint Committee

"* * * will do pretty well if we successfully protect the American people and property owners in this country without worrying about those that live abroad."[8]

(h) Congress, in enacting the Price-Anderson Indemnity Act added to section 2 of the Atomic Energy Act of 1954, a new subsection which stated, inter alia:

In order * * * to encourage the development of the atomic energy industry, * * * the United States may make funds available for a portion of the damages suffered by the public from nuclear incidents and may limit the liability of those persons liable for such losses.

This statutory purpose is frustrated if the atomic energy industry is not protected from bankrupting liabilities for damages caused abroad by an accident occurring in the United States.[9] In the Report, the Joint Committee on Atomic Energy made explicit mention of the fact that the private insurance to be provided for reactor operators included coverage for damage in Canada and Mexico and, at another point, noted the Committee's hope that the insurance contract in its final form would cover the same scope as the bill.[10]

(i) It is my opinion that since the language of the Act draws no distinction between damage received in the United States and that received abroad, none can properly be drawn. To read the Act as imposing such a limitation in the absence of statutory direction and in the light of an avowed Congressional intention to encourage the development of the atomic energy industry would be unwarranted. The confusing sentence cited in the Report must, therefore, be read consistently with the language of the Act in the manner suggested above, i.e., as recognizing Congressional inability to limit foreign liability, or must be ignored as inconsistent with the broad coverage of the statutory language.

[25 FR 4075, May 7, 1960]

Atomic Industrial Forum, Financial Protection Against Atomic Hazards, The International Aspects, p. 52 (1959).
Hearings before the Joint Committee on Atomic Energy, Governmental Indemnity for Reactor Safety, 85th Cong., 1st Sess., p. 181 (1957) (hereinafter referred to as "Hearings.")
[6] Hearings, p. 168.
[7] Hearings, p. 182.
[8] Hearings, p. 97. It is significant to note that Mr. Haugh stated at that point the problem of the reactor operator who is concerned with any type of liability. He noted that the insurance contracts would cover "*** the instance where *** something happen[ed] out of the country and a suit is brought in the United States on that."
[9] The Atomic Industrial Forum study notes that "[T]o be adequate, the governmental indemnity must cover industry's liability to residents of the countries who suffer as a result of an accident at an installation based in the United States." p. 61. This is certainly the case and one of the major Congressional purposes is frustrated should the Act be said to be unclear on this point. The principal reason for the conclusion that there is coverage reached in the Forum study is the fact that Price-Anderson provides indemnity for "any legal liability." Arthur Murphy, Director of the study, in a recent article, has stated that the confusing sentence in the Report is " * * * inconsistent with the flat coverage of any legal liability by the indemnity." Murphy, Liability for Atomic Accidents and Insurance, in Law and Administration in Nuclear Energy 75 (1959). In the testimony before the Joint Committee last year, Professor Samuel D. Estep, one of three authors of the comprehensive study of Atoms and the Law apparently relying upon the legislative history, stated that the problem of a reactor accident in the United States causing damage in a foreign country was unclear, presumably since he considered the phrase "any legal liability" directed at a different problem. Hearings before the Joint Committee on Atomic Energy, Indemnity and Reactor Safety, 86th Cong., 1st Sess., p. 77 (1959); Stason Estep, and Pierce, Atoms and the Law, 577 (1959). Professor Estep stated that there "surely ought to be" coverage and suggested a clarifying amendment. His statement that the phrase "any legal liability" covers only the question of time restrictions for claims seems to me erroneous since the language used, "any legal liability," seems intentionally broad. Additionally, should this very narrow reading be given to admittedly broad statutory language, the Congressional purpose would be frustrated.
[10] Report, p. 11.

§8.3 [Reserved]

§8.4 Interpretation by the General Counsel: AEC jurisdiction over nuclear facilities and materials under the Atomic Energy Act.

(a) By virtue of the Atomic Energy Act of 1954, as amended,[11] the individual States may not, in the absence of an agreement with the Atomic Energy Commission, regulate the materials described in the Act from the standpoint of radiological health and safety. Even States which have entered into agreements with the AEC lack authority to regulate the facilities described in the Act, including nuclear power plants and the discharge of effluents from such facilities, from the standpoint of radiological health and safety.

(b) The Atomic Energy Act of 1954 sets out a pattern for licensing and regulation of certain nuclear materials and facilities on the basis of the common defense and security and radiological health and safety. The regulatory pattern requires, in general, that the construction and operation of production facilities (nuclear reactors used for production and separation of plutonium or uranium-233 or fuel reprocessing plants) and utilization facilities (nuclear reactors used for production of power, medical therapy, research, and testing) and the possession and use of byproduct material (radioisotopes), source material (thorium and uranium ores), and special nuclear material (enriched uranium and plutonium, used as fuel in nuclear reactors), be licensed and regulated by the Commission.[12] In carrying out its statutory responsibilities for the protection of the public health and safety from radiation hazards and for the promotion of the common defense and security, the AEC has promulgated regulations which establish requirements for the issuance of licenses (Parts 30–36, 40, 50, 70, 71, and 100 of this chapter)

[11] Pub. L. 83–703, 68 Stat. 919.
[12] The terms "byproduct material," "source material," and "special nuclear material" are defined in the Atomic Energy Act, sections 11e, 11z, and 11aa, respectively. The terms "production facility" and "utilization facility" are defined in sections 11v and 11cc of the Act, respectively.

ENVIROSAFE SERVICES OF IDAHO, INC.

September 16, 1999

Ms. Katherine Kelly
State Waste Program Administrator
Division of Environmental Quality
Idaho Department of Health and Welfare
1410 North Hilton
Boise, ID. 83706

Dear Ms. Kelly:

Regarding: **Envirosafe Services of Idaho, Inc. (ESII) - IDD073114654**
Class 1 Permit Modification to ESII's RCRA Part B Permit

This letter is being sent to provide notice of a Class 1 Permit Modification prepared in accordance with 40 CFR §270.42 and as adopted in IDAPA 16.01.05.012. This Permit modification is necessary to provide additional waste acceptance parameters that will continue to ensure protection of human health and the environment. Pursuant to general Class 1 Permit modification criteria established in 40 CFR §270.42 (d)(2)(i) it has been determined that the changes described herein, although, do not substantially alter the permit conditions they do, however, increase the capacity of the facility to protect human health and the environment.

This notice is being filed in accordance with 40 CFR 270.42 (a). The mailing list used is on file with the State of Idaho IDHW as the official mailing list.

The attached notice details the requirements for this modification and the effective date. In addition, proof of mailing (certified mail receipts) will be forwarded as proof that the required mailing was completed in accordance with 40 CFR Part 270.42(a)(ii).

If you have any questions, please feel free to contact either me or Lee Weber at (208) 834-2275.

Sincerely,

Michael W. Spomer
General Manager

Attachments

cc: √Bob Bullock, IDEQ
Brian Gaber, IDEQ
Lee Weber, ESII

P.O. Box 400, Grand View, Idaho 83624 • (208) 834-2275 • (800) 274-1516 • Fax: (208) 834-2997

NOTIFICATION OF CLASS 1 MODIFICATION

Addition of waste acceptance parameters that will continue to ensure protection of human health and the environment

BY

ENVIROSAFE SERVICES OF IDAHO, INC.

IDD073114654

EFFECTIVE ON

September 16, 1999

The following Class 1 Notice of Modification is submitted in accordance with the requirements of IDAPA 16.01.05.012 (40 CFR Part 270.42(a)) as follows:

1. 270.42(a)(1)(i):
This notice of Permit Modification is effective on September 16, 1999. This notice is being transmitted within the required time frame of no later than 7 days after the effective date of the modification. This notice incorporates language in to the Part B Permit that identifies additional waste acceptance parameters to provide added assurance for the protection of human health and the environment.

These changes provide for more frequent monitoring and sampling in accordance with the definition requirements for a Class 1 Permit modification found in 40 CFR 270.42 Appendix 1 (A)(4). In addition and pursuant to 40 CFR 270.42(d)(2)(i), more detailed language describing the barrier for long-term control of wind dispersal, erosion and air emissions of some wastes has been added to ensure further protection of human health and the environment.

The exact changes required to the existing RCRA Part B Permit and supporting documents are presented in Appendix A of this Notice.

Other information required by 40 CFR Part 270 is as follows:

- 270.13 There is no change required to the contents of the Part A Permit Application.
- 270.14 The only change required by this section is to the Waste Analysis Plan (WAP) as required in 270.14(b)(3) and this change is presented in **Appendix A.**
- 270.15 There is no change required to either the Part B Application documents or the Part B Permit required by this section.
- 270.16 There is no change required to either the Part B Application documents or the Part B Permit required by this section.
- 270.17 There is no change required to either the Part B Application documents or the Part B Permit required by this section.
- 270.18 Not applicable.
- 270.19 Not applicable.
- 270.20 Not applicable.

- 270.21 The only change required by this section is to the Landfill Units Design and Operation Plan as required in 270.21(b)(5) and this change is presented in **Appendix A.**

- 270.62 Not applicable.

- 270.63 Not applicable.

2. 270.42(a)(1)(ii):

A copy of the receipts for the certified mailing to the required mailing list maintained under 40 CFR Part 124.10(c)(ix) will be forwarded upon completion for inclusion as **Appendix B.**

A copy of the receipts for the certified mailing to the appropriate units of State and Local government, as required by 40 CFR Part 124.10(c)(x) will be forwarded for inclusion as **Appendix C.** Please note that these personnel will be sent a complete package including the entire text of this Notice. In addition please be aware that there is no local fire Chief or Fire District for distribution.

3. 270.42(a)(2):

This Class 1 Permit Modification does not require prior written approval by the Director in accordance with 40 CFR 270.42 (d)(2)(i) and 40 CFR appendix 1 to 40 CFR 270.42, Classification of Permit Modifications, Section A.4.a.

4. 270.42(a)(3):

ESII does not elect to follow Class 2 Permit Modifiation procedures of 40 CFR Part 270.42(b) for this Permit Modifiation.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Michael W Spomer
Signature

Sept 17, 1999
Date

Michael W. Spomer, General Manager

APPENDIX A

PERMIT PAGES

ATTACHMENT 2 - WASTE ANALYSIS PLAN

PAGE C-17 and C-18
September 16, 1999

NOTE: Only pages C-17 and C-18 have been modified in the Waste Analysis Plan. No other changes have been made to the WAP other than the Table of Contents.

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C-2 Preacceptance Protocol

C-2a Hazardous Waste Preacceptance Review

The preacceptance protocol has been designed to ensure that only hazardous waste streams that can be properly and safely stored, treated, and/or disposed of by ESII are approved for receipt at the facility. A two-step approach is taken by ESII. The first step is the chemical and physical characterization of the candidate waste stream by the generator. The second step is the preacceptance evaluation performed by ESII to determine the acceptability of the waste for receipt at the facility. Figure C-2 presents a logic diagram of the preacceptance protocol that is utilized at the ESII facility.

C-2a(1) FUSRAP Waste Acceptance Criteria

The following waste acceptance criteria is established for accepting radiologically contaminated waste material from FUSRAP sites administered by the Army Corps of Engineers. Although the Nuclear Regulatory Commission (NRC) does not regulate this material, NRC regulations suggest certain concentrations of radioactive material are considered unimportant. Using this as a guide ESII's consultant, Radiation Safety Associates, Inc. in Hebron, Connecticut, developed the following acceptance limits for FUSRAP materials (detailed analysis of these criteria is presented in ESII's *Waste Acceptance Criteria and Justification for FUSRAP Material*, prepared by Radiation Safety Associates, Inc.).

1. ESII may only receive FUSRAP material containing natural uranium, natural thorium, and their daughter products. ESII may not accept any material that is or has been regulated by the Atomic Energy Commission or the Nuclear Regulatory Commission.
2. Unless approved in advance by ESII, average activity concentrations may not exceed 355 pCi/g natural uranium (^{nat}U) and 110 pCi/g natural thorium (^{nat}Th) in any individual shipping container (e.g., rail car). Specific isotopes in the ^{238}U decay series will be evaluated against the action level of 174 pCi/g and specific isotopes in the ^{232}Th decay series will be evaluated against the action level of 55 pCi/g. ESII may accept, on a case-by-case basis, FUSRAP material that exceeds these guidelines provided that the material does not meet the definition of radioactive material as defined by the Department of Transportation in 49 CFR 173.403.
3. If individual "pockets" of activity are known to exceed or are suspected of exceeding three times the average activity concentration guidelines described above, ESII may still accept the material so long as the generator certifies that the dose rate in contact with the unshielded container does not exceed 0.5 mrem/hr (500 μrem/h) (e.g., no shielding added to the rail car).
4. The generator of the FUSRAP material must certify that the material being shipped does not meet the definition of radioactive material as defined by the Department of Transportation in 49 CFR 173.403.

FUSRAP waste acceptance criteria, as presented, when used in conjunction with an effective radiation monitoring and protection program as defined in ESII's *FUSRAP Health and Safety Manual* and *FUSRAP Material Receipt Procedures* provides adequate protection of human health and the environment. This criteria assures that the highest potential dose to a worker handling FUSRAP material at ESII should never exceed 400 mrem/year.

Figure C-2 Pre-acceptance Protocol

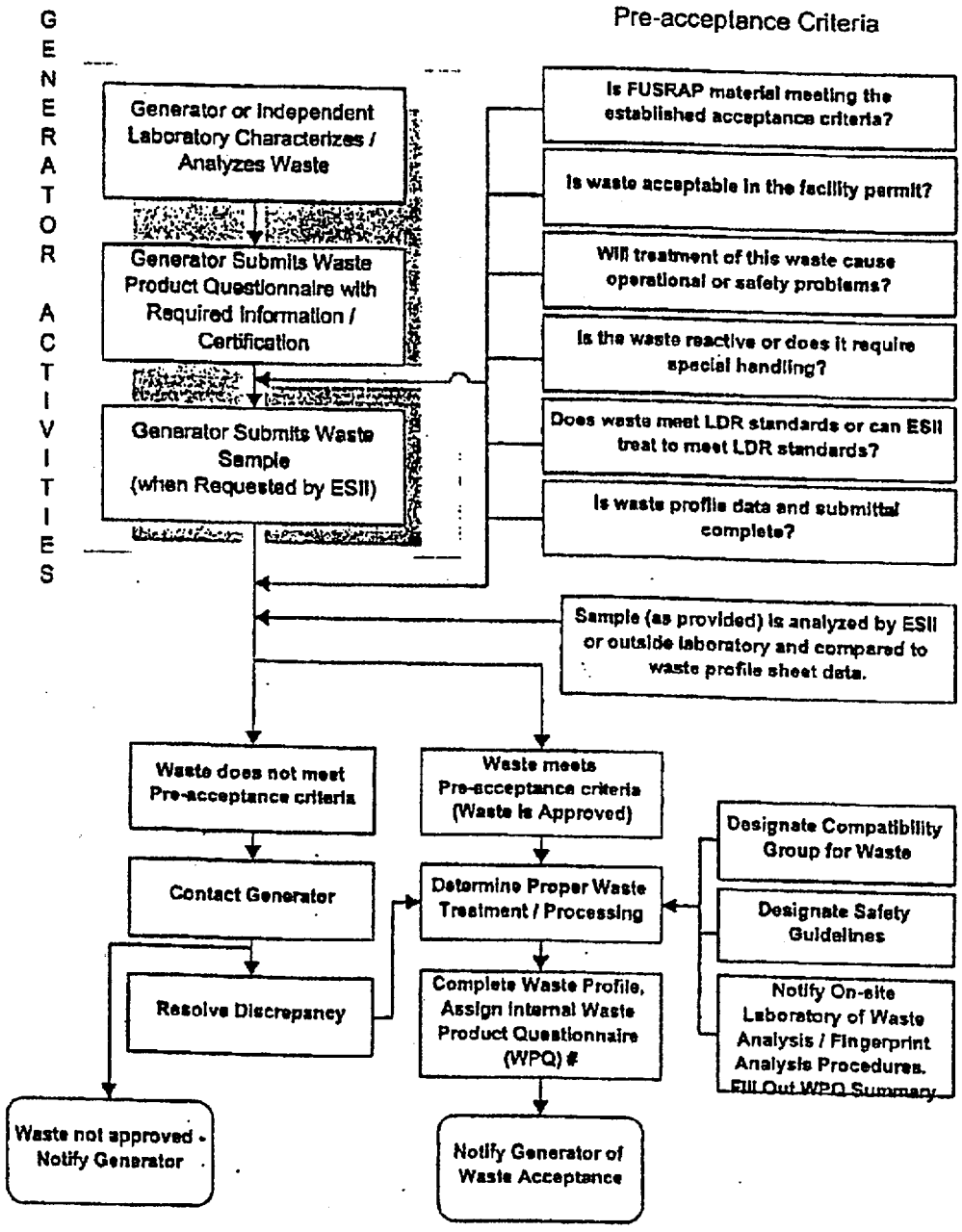

Figure C-2 Pre-acceptance Protocol

ATTACHMENT 19 - LANDFILL UNITS: Design and Operation

Page 49 and 50a through 50c
September 16, 1999

NOTE: Only page 49 has been modified in the LANDFILL UNITS: Design and Operation Plan. Pages 50a through 50c have been added to describe the typical section through Landfill 14 of the fill. No other changes have been made other than the Table of Contents.

TABLE OF CONTENTS, continued

LIST OF TABLES:

LIST OF FIGURES:

As waste placement operations approach the top of the below-grade liner system, clean soil perimeter dikes will be constructed to provide for waste and runoff containment. These dikes will be constructed in stages, varying in height from 0 to 6 feet, with a top width of 10 feet, an exterior slope of 3 horizontal to 1 vertical, and an interior slope of 1.5 horizontal to 1 vertical (see Figure D-10). Each lift of soil dike will be compacted to 90% of the standard proctor density. Density tests will be performed at the rate of 1 per 10,000 square feet of lift, to ensure the specified compaction is achieved.

ESII maintains stockpiles of clean native soils, which were excavated during construction of the Landfill Trenches. This material is used, as necessary, for cover, construction of the above-grade containment dikes, and to provide clean access roads. The clean soil is transported and applied using construction equipment and compacted with the hauling and spreading equipment, which readily achieves a minimum of 85% of the standard Proctor density. Clean soil, asphaltic emulsion, or other approved cover material is placed to minimize the potential for volatilization and wind dispersal. The permeability of the cover soil is adequate to promote drainage through the landfill.

Placement of FUSRAP material above grade must not extend beyond a maximum slope of 5 horizontal to 1 vertical (See figure D-12). Native soil or select wastes (e.g., stabilized baghouse dust, or other wastes based upon considerations of ease in placement for a shallow lift) will be placed above the FUSRAP material. This lift above the 5:1 slope will serve as a barrier for the FUSRAP material as described in Figure D-12 and the attached radon attenuation modeling output. The barrier will consist of six to twelve inches of native soil to be placed as described above for the placement of the cover. Although this barrier is not necessary to achieve the performance requirement of 20pCi/m2/s radon flux on the surface of the landfill, this barrier is an additional precaution that ESII is electing to apply.

-----*****! RADON !*****-----
Version 1.2 - Feb. 2, 1989 - G.F. Birchard Tel.# (301)492-7000
U.S. Nuclear Regulatory Commission Office of Research
RADON FLUX, CONCENTRATION AND TAILINGS COVER THICKNESS ARE CALCULATED FOR MULTIPLE LAYERS
Envirosafe of Idaho--5 Layer Barrier

CONSTANTS		
RADON DECAY CONSTANT	.0000021	S^-1
RADON WATER/AIR PARTITION COEFFIECIENT	.26	
SPECIFIC GRAVITY OF COVER & TAILINGS	2.65	

GENERAL INPUT PARAMETERS		
LAYERS OF COVER AND TAILINGS	5	
NO LIMIT ON RADON FLUX		
LAYER THICKNESS NOT OPTIMIZED		
DEFAULT SURFACE RADON CONCENTRATION	0	pCi l^-1
SURFACE FLUX PRECISION	.1	Pci m^-2 s^-1

LAYER INPUT PARAMETERS		
LAYER 1		
THICKNESS	2880	cm
POROSITY	.4	
MEASURED MASS DENSITY	1.6	g cm^-3
MEASURED RADIUM ACTIVITY	174	pCi/g^-1
DEFAULT LAYER EMANATION COEFFICIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	5.116D-04	pCi cm^-3 s^-1
WEIGHT % MOISTURE	6	%
MOISTURE SATURATION FRACTION	.240	
CALCULATED DIFFUSION COEFFIECIENT	3.115D-02	cm^2 s^-1

LAYER 2		
THICKNESS	106.7	cm
POROSITY	.5	
MEASURED MASS DENSITY	2.24	g cm^-3
MEASURED RADIUM ACTIVITY	0	pCi/g^-1
DEFAULT LAYER EMANATION COEFFIECIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	0.000D+00	pCi cm^-3 s^-1
WEIGHT % MOISTURE	14	%
MOISTURE SATURATION FRACTION	.827	
CALCULATED DIFFUSION COEFFIECIENT	7.233D-03	cm^2 s^-1

LAYER 3		
THICKNESS	182.9	cm
POROSITY	.37	
MEASURED MASS DENSITY	2	g cm^-3
MEASURED RADIUM ACTIVITY	0	pCi/g^-1
DEFAULT LAYER EMANATION COEFFIECIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	0.000D+00	pCi cm^-3 s^-1
WEIGHT % MOISTURE	3	%
MOISTURE SATURATION FRACTION	.162	
CALCULATED DIFFUSION COEFFIECIENT	3.997D-02	cm^2 s^-1

LAYER 4		
THICKNESS	45.72	cm
POROSITY	.412	
MEASURED MASS DENSITY	1.62	g cm^-3
MEASURED RADIUM ACTIVITY	0	pCi/g^-1
DEFAULT LAYER EMANATION COEFFICIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	0.000D+00	pCi cm^-3 s^-1
WEIGHT % MOISTURE	5.5	%
MOISTURE SATURATION FRACTION	.216	
CALCULATED DIFFUSION COEFFIECIENT	3.407D-02	cm^2 s^-1

LAYER 5		
THICKNESS	30.48	cm
POROSITY	.37	
MEASURED MASS DENSITY	2	g cm^-3
MEASURED RADIUM ACTIVITY	0	pCi/g^-1
DEFAULT LAYER EMANATION COEFFICIENT	.35	
CALCULATED SOURCE TERM CONCENTRATION	0.000D+00	pCi cm^-3 s^-1
WEIGHT % MOISTURE	3	%
MOISTURE SATURATION FRACTION	.162	
CALCULATED DIFFUSION COEFFIECIENT	3.997D-02	cm^2 s^-1

DATA SENT TO THE FILE 'RNDATA' ON DRIVE A:

N	F01	CN1	ICOST	CRITJ	ACC
5	-1.000D+00	0.000D+00	0	0.000D+00	1.000D-015

LAYER	DX	D	P	Q	XMS	RHO
1	2.880D+03	3.115D-02	4.000D-01	5.116D-04	2.480D-01	1.600
2	1.067D+02	7.233D-03	5.000D-01	0.000+00	5.272D-01	2.240
3	1.829D+02	3.997D-02	3.700D-01	0.000+00	1.622D-01	2.000
4	4.572D+01	3.407D-02	4.120D-01	0.000D+00	2.163D-01	1.620
5	3.048D+01	3.997D-02	3.700D-01	0.000D+00	1.622D-01	2.000

BARE SOURCE LAYER FLUX FROM LAYER 1: 2.492d+02 pCi m^-2 s^-

RESULTS OF THE RADON DIFFUSION CALCULATIONS

LAYER	THICKNESS (cm)	EXIT FLUX (pCi m^-2 s^-1)	EXIT CONC. (pCi l^-1)
1	2.880D+03	7.157D+01	1.738D+05
2	1.067D+02	1.718D+01	9.344D+03
3	1.829D+02	5.840D+00	2.884D+03
4	4.572D+01	5.108D+00	9.888D+02
5	3.048D+01	4.986D+00	0.000D+00

Figure D-12

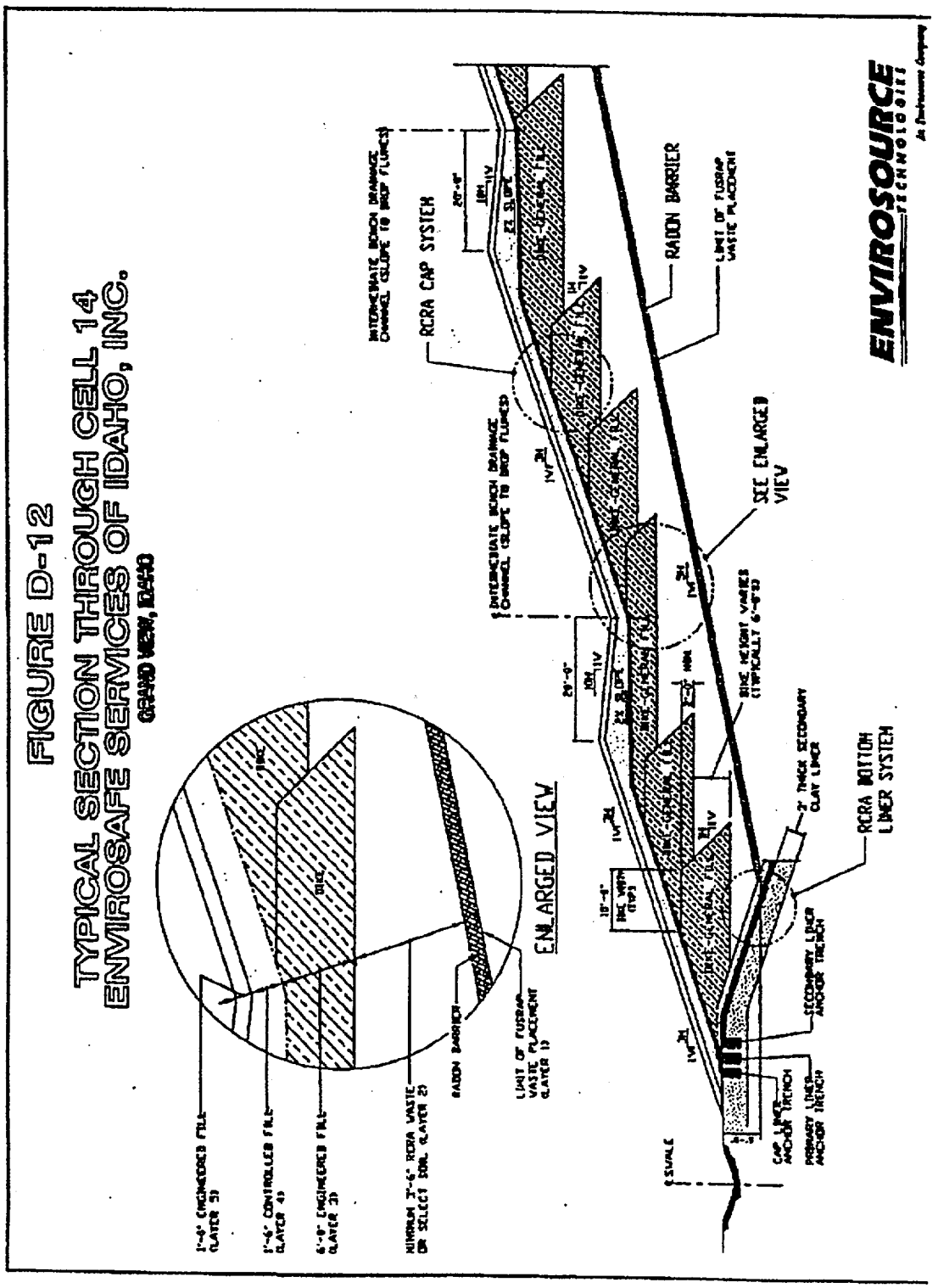
FIGURE D-12
TYPICAL SECTION THROUGH CELL 14
ENVIROSAFE SERVICES OF IDAHO, INC.
ENVIROSOURCE TECHNOLOGIES
RCRA CAP SYSTEM
RADON BARRIER
LIMIT OF FUSRAP WASTE PLACEMENT
SEE ENLARGED VIEW
RCRA BOTTOM LINER SYSTEM
ENLARGED VIEW
LIMIT OF FUSRAP WASTE PLACEMENT CLASS 1
RADON BARRIER
SWALE