UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 2, 1995

MEMORANDUM TO: Tom Wenck, T-8A-33
FCSS, FCEB, NMSS

FROM: Jack Spraul, T-7J-9
HLW&QAS, HLUR, NMSS

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI)

I have reviewed the "Quality Assurance Program" (QAP) portion of the September 15, 1995 USEC submittal (Rifakes to Paperiello) of the application for a certificate of compliance for the Gaseous Diffusion Plants (GDPs). The submittals of the QAP were identical for both the Portsmouth and the Paducah GDPs. For the record, I again used the basic and supplementary requirements of ASME NQA-1-1989 Edition, "Quality Assurance Program Requirements for Nuclear Facilities," as acceptance criteria. I did not use the appendixes of ASME NQA-1-1989 as part of my acceptance criteria.

In addition to reviewing the QAP in detail, I also performed an overview of Chapter 4, "Accident Analysis," and Chapter 6, "Organization and Operating Programs," of the SARs of both GDPs as referenced in the QAP to see whether there are any conflicts with the QAP.

My review resulted in the attached Request for Additional Information (RAI); and, by direction, Typographical Notes.

The acceptability of the safety/quality classifications (as discussed below) of the plant structures, systems, and components (SSCs) should be assigned to and determined by NRC technical staff prior to certification of either GDP. §2.2.2 of the QAP defines the scope of the QAP. §2.2.2 identifies three categories of SSCs and related activities:

1. "Q" - SSCs identified from the Accident Analysis (SAR Chapter 4) as "safety systems" and "design features for safety" which are required to protect 1) the health and safety of workers 2) the health and safety of the public, and 3) the environment. Additionally, SSCs required by Nuclear Criticality Safety Approvals are also classified "Q." SSCs classified as "Q" are placed on a "Q List." The QAP applies to these items and to associated activities and services that could affect their safety function.

2. "AQ" - SSCs and associated activities and services that are not "Q" but are subject to regulatory requirements. SSCs classified as "AQ" (Augmented Quality - a level of QA above standard industry practice) are

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placed on an "AQ List." §2.1, §2.2, and Appendix A of the QAP apply to these SSCs and to associated activities and services.

3. "NS" - All other SSCs and associated activities and services are in this "NS" or "Non-Safety" category.

The QAP indicates that the Accident Analysis, Chapter 4 of the SAR, identifies SSCs classified as "Q" based on the accident analysis. The attached RAIs on SAR Chapter 4 and QAP §2.2.2 ask for more specificity regarding where SSCs required to be on the Q List and on the AQ List are identified in the application.

SSCs and associated activities and services classified as "AQ" are identified somewhat in the matrix (Figure A-1, QAP page 47) provided as part of Appendix A of the QAP.

To repeat, the acceptability of the safety/quality classifications of the SSCs of the GDPs should be assigned to and determined by the technical staff.

If you have any questions or comments, call me on 415-6715.

Attachment: As stated

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REQUEST FOR ADDITIONAL INFORMATION

SARs Chapter 4 Accident Analysis

PGDP/PORTS

Identify clearly, in Chapter 4 of each SAR, the items that are on the Q List and the items that are on the AQ list.

SARs Chapter 6 Organization and Operating Programs

PGDP/PORTS §6.1

The fourth paragraph in §6.1 of the SARs states: "The line organization is responsible for the safe operation of the GDP." Identify what organizations make up "the line organization." Contrariwise, the fourth paragraph in §6.1.1 of the SARs states: "USEC is responsible for safe operation of the GDPs." Clarify.

PGDP/PORTS §6.1.1.3

The second paragraph of §6.1.1.3 of the SARs states that the Nuclear Regulatory Assurance and Policy Manager is responsible "for conducting audits to verify that the Quality Assurance Plan is implemented at the GDPs." Describe how this is accomplished or reference where in the application for certification this information can be found.

PGDP §6.1.1.15/PORTS §6.1.1.16

The second paragraph of these SAR sections states: "The Technical Operations Manager is responsible for engineering activities in support of operations, including design, fabrication, and construction of plant modifications or additions, safety analysis *(PORTS only)*, the configuration management program, and quality control." This can be interpreted in at least two ways:

- The Technical Operations Manager is responsible for 1) engineering activities in support of operations, including design, fabrication, and construction of plant modifications or additions, 2) safety analysis *(PORTS only)*, 3) the configuration management program, and 4) quality control.

- The Technical Operations Manager is responsible for engineering activities in support of 1) operations, including design, fabrication, and construction of plant modifications or additions, 2) safety analysis *(PORTS only)*, 3) the configuration management program, and 4) quality control.

Please clarify the sentence. Other portions of the SAR indicate that the first interpretation is correct and that the Technical Operations Manager "is responsible for ... quality control." If this is true, briefly describe how this responsibility is met and discuss the interface between the Technical Operations Manager and the Safety, Safeguards and Quality Assurance Manager. If not true, indicate the manager at each plant who is responsible for quality control, briefly describe how this responsibility is met, and discuss the interface between this manager and the Safety, Safeguards and Quality Assurance Manager.

PGDP/PORTS Figure 6.1-2

Figure 6.1-2 of the PGDP SAR shows the Training Manager reporting to both the Portsmouth Plant Manager and the Paducah (Deputy) Plant Manager. Figure 6.1-2 of the PORTS SAR shows the UE Procedures Manager reporting to both the Paducah Plant Manager and the Portsmouth (Deputy) Plant Manager. This difference should be explained (if intentional) or corrected (if unintentional).

PGDP/PORTS §6.2

Indicate, by position title on an organization chart, the PORC member and alternate who represent the functional area of quality assurance at each GDP.

PGDP/PORTS §6.2.1.5 & §6.7.1

The terms "safety structures, systems, and components," and "safety systems" are used throughout the SARs. For example, refer to Items 3 and 4 of the last paragraph of §6.2.1.5. The first page of Section 6.7 refers to SSCs "relied upon for safety" and "Safety functions." Clarify whether these (and similar) terms refer 1) to only the items on the Q List or 2) to the items on the Q List and the items on the AQ List.

PGDP/PORTS §6.3.5.2.3

Item 2c indicates that Design Engineering "Performs design/modification processes that implement the design change control requirements established in the QAP ..." This commitment should address "design control" as well as "design change control."

PGDP/PORTS §6.3.5.4.2

Item 3 in the second paragraph is "Safety Database (Q List)." Include the AQ List in the safety database or explain why this is inappropriate.

PGDP/PORTS §6.4.11

The commitments of this section on M&TE are limited to "M&TE used on Q List SSCs." Expand the commitments to include M&TE used on AQ List SSCs or explain why this is inappropriate.

PGDP/PORTS §6.6.1

The third paragraph in each SAR indicates that the (Headquarters?) training staff audits division training activities. Clarify whether personnel performing these audits (auditors and lead auditors) are qualified in accordance with §2.2.4 of the QAP. Also, indicate whether these audits are in addition to the audits of training performed under the responsibility of the Safety, Safeguards, and Quality Manager as specified in Item 4 of §2.18.3.2 of the QAP.

The fourth paragraph in the PGDP SAR refers to "the Q List in the Quality Assurance Program portion of this application," and the fourth paragraph in the PORTS SAR refers to "the Q List in the Quality Assurance Plan portion of this application." Clarify these references since the Quality Assurance Program does not include the Q list and there is no Quality Assurance Plan portion of the PORTS application.

The fifth paragraph in each SAR addresses the training and qualification of workers involved with Q List items. Address the training and qualification of workers involved with AQ List items or explain why this is inappropriate.

PGDP/PORTS §6.6.3.5
The second paragraph indicates that evaluations by Quality Assurance auditors are "part of the self-assessment program." Evaluations by Quality Assurance auditors are normally not considered to be self-assessments because of the independence of the Quality Assurance auditors from the audited organization, as reflected in Section 6.8 of the SARs. Please clarify §6.6.3.5 in this regard.

PGDP §6.6.13/PORTS §6.6.12
These SAR §s limit the training of quality control inspection personnel to the qualification and requalification of 1) Code, Mechanical, and Welding Inspection personnel and 2) nondestructive examination personnel. The third paragraph of QAP §2.2.4 states that the qualification and requalification of *(all)* inspection personnel is performed in accordance with the requirements of Supplement 2S-1 to ASME NQA-1-1989. Rectify these two commitments.

Clarify whether personnel who perform tests to verify conformance to specified requirements for the purpose of acceptability (for example, post-maintenance tests discussed in Section 6.4 of the SARs) are also qualified and requalified in accordance with the requirements of Supplement 2S-1 to ASME NQA-1-1989.

PGDP §6.6.14/PORTS §6.6.13
These paragraphs address the training of managers/supervisors of workers involved with Q List items. Address the training of managers/supervisors of workers involved with AQ List items or explain why this is inappropriate.

PGDP/PORTS §6.8.1
Provide a clear commitment in the SARs that assessments are performed in accordance with written plans and check lists and that assessment results are documented.

PGDP/PORTS §6.8.1.7
The next to last sentence starts: "Inspections are performed ..." Should not "Inspections" be "Management self-assessments"?

PGDP/PORTS §6.10.1.15 & §6.10.2.13
Section 6.8 of the SARs differentiates between assessments and audits. The differences become less distinct in §6.10.1.15 and §6.10.2.13, "Assessments," which state that "effectiveness ... is periodically assessed through the audit program ..." While these may be true statements, please revise them in both SARs such that the differences between audits and assessments remains clear.

PGDP/PORTS §6.11.4.2

The paragraph following the first ball refers to "the Quality Assurance Plan (QAP)." The reference should be to "the Quality Assurance Program (QAP)."

Quality Assurance Program (QAP)

§2.2.2

QAP §2.2.2 defines the scope of the QA program. It states that the Accident Analysis (SAR Chapter 4) identifies "safety systems" and "design features for safety" which are required to 1) protect the health and safety of workers and the public and 2) protect the environment. It states further that these items are placed on the "Q" List. Since the QAP applies to these items and to associated activities and services that could affect their safety function, indicate with more specificity in the QAP where these items are identified in Chapter 4 of the SARs.

QAP §2.2.2 states that structures, systems, and components (SSCs) required by Nuclear Criticality Safety Approvals are also placed on the "Q" List. Since the QAP also applies to these SSCs and to associated activities and services that could affect their safety function, specify in the QAP where these SSCs are identified in the certification application.

The last sentence of the fifth paragraph of §2.2.2 of the QAP states: "This list forms the basis and identifies the items to which this QAP applies." In light of the previous sentence which refers to the Q List and the AQ List, it appears that the last sentence should read: "These lists form the bases and identify the items ..." Please make this change or explain why the change is not appropriate.

§2.2.4

Clarify in the QAP whether personnel who perform tests to verify conformance to specified requirements for the purpose of acceptability (for example, post-maintenance tests discussed in Section 6.4 of the SARs) are also qualified and requalified in accordance with the requirements of Supplement 2S-1 to ASME NQA-1-1989.

Item c in the third paragraph of §2.2.4 of the QAP commits USEC to meet the maximum certification intervals recommended in the 1984 edition of SNT-TC-1A. The staff has generally taken the position that the five year interval allowed by SNT-TC-1A for the recertification of Level III NDE personnel should be no longer than the three years allowed for the Level I and II personnel. Commit to this position or provide justification for not doing so.

Figure 2-2

Note 1 of QAP Figure 2-2 indicates the Safety, Safeguards & Quality Manager is a "USEC position located at the plant." Similarly, Note 2 of QAP Figure 2-2 indicates that three organizational elements reporting to this manager are "located at the plant." Clarify whether each plant

(PGDP/PORTS) has its own Safety, Safeguards, & Quality Manager and each of these three organizational elements.

Briefly describe how each of the three organizational elements reporting to the Safety, Safeguards and Quality Manager(s) function.

§2.3.3.2

The last sentence in §2.3.3.2 of the QAP states that, for commercial grade items, the requirements of §2.7.3.9 are "considered." Change "considered" to "met" or "applied" or a similar word or indicate why this would not be appropriate.

Section 2.7

Describe in the QAP how the GDPs address the requirements in Section 7 of Supplement 10S-1 of ASME NQA-1-1989 for in-service inspection.

§2.10.2

QAP §2.10.2 states that the Technical Operations Manager is responsible for ensuring that inspections are performed. Identify to whom (by position title on an organization chart) inspectors report.

§2.15.2

The third paragraph of §2.15.2 of the QAP states that the Technical Operations Manager is "responsible for ... ensuring that as-built records reflect the accepted deviation <u>if such records are required</u>." (Underline added.) Delete the underlined words or describe when such records are not required.

§2.17

Briefly describe in the QAP how the first two requirements of Section 5, "RETRIEVAL," of Supplement 17S-1 of ASME NQA-1-1989 are met.

§2.17.3

Item 8 of §2.17.3 of the QAP describes characteristics of both single record storage facilities and dual record storage facilities in accordance with Section 4.4 of Supplement 17S-1 of ASME NQA-1-1989. A commitment that the QA record storage facilities of the GDPs meet the requirements of Section 4.4 of Supplement 17S-1 of ASME NQA-1-1989 except as noted in QAP Appendix C would suffice and should be substituted.

Clarify in the QAP (and in §6.10.1.8 of the SARs) whether the GDPs store single copies of quality assurance records, dual copies of quality assurance records, or a combination of both single and double copies. If only single copies of some (or all) quality assurance records are maintained, specify in the QAP the maximum allowable time limit for temporary storage of these records.

§2.18.3.2

The last sentence of Item 3 of QAP §2.18.3.2 specifies some procurement situations when "external audits are not necessary." It appears that these procurements may be for commercial grade items as discussed in QAP §2.7.3.9. If so, this should be clarified in §2.18.3.2. If not, specify

how the GDPs verify that the items will perform their intended safety functions.

Item 4 in §2.18.3.2 of the QAP indicates that the requirements of Chapter 2 of the QAP are audited at least once every three years. This is not in-line with NRC Regulatory Guide 1.28 (for design and construction of nuclear power plants) which states: "Internal Audits" - Applicable elements of an organization's quality assurance program should be audited at least once each year or at least once during the life of the activity, whichever is shorter." This guidance has also been applied to operating nuclear power plants (10 CFR Part 50), work related to the disposal of radioactive wastes in geologic repositories (10 CFR Part 60), packaging and transportation of radioactive wastes (10 CFR Part 71), independent spent fuel storage installations (10 CFR Part 72), and the manufacture and distribution of sealed sources and devices containing byproduct material (10 CFR Part 32). Reduce the proposed three-year internal audit cycle for the GDPs (10 CFR Part 76) to a one-year cycle or explain why this is inappropriate.

Figure A-1

Based on Footnote 5 of Figure A-1 on Page 47 of the QAP, it appears that "Chemical Safety" should be on the Q List rather than the AQ List. Justify its AQ classification or change its classification to Q.

Figure A-2

The "'AQ List' Criteria" on Figure A-2 (Page 48) of the QAP may be too broad. That is, if failure of an item could reasonably result in "Serious injury to personnel," "Significant adverse impact on the environment," or "The spread of radioactive contamination," it appears that the item should be on the "Q List" rather than the "AQ List." We note that §2.2.2 of the QAP indicates that items on the "Q List" are those "necessary to prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public, workers, and the environment. Revise the criteria or explain why this is inappropriate.

Appendix B

Requests for additional information regarding Appendix B, "ITEMS ADDRESSED BY COMPLIANCE PLAN," will not be developed until after receipt of the plan.

Typographical notes from review of the QAP:

§2.3.3.3(6)

The second sentence on page 8 of the QAP should say either "Design analyses documentation includes ..." or "Design analyses documents include ..."

§2.14.3(1)

Delete the period before the semicolon at the end of the fourth line on page 30 of the QAP.

§2.17.3

The last sentence of item a(9) on page 34 of the QAP should have "in" instead of "correspondence number,".

Item 9, "Temporary storage of records ... are stored in ... or be certified ..." needs to be edited for clarity.

§2.18.3.2(4)

Item 4 in QAP §2.18.3.2 should say "requirements ... are ..." rather than "requirements ... is ..."

Appendix A

In §3.0, the words, "including design changes," need to be parenthetical for the following verb, "is," to be singular. A better approach would be to say: "design and design changes are defined ..."