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IE-07

January 7, 1997

Mr. Ed Kulzer
Decommissioning Branch
United States Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

40-7604

SUBJECT: Response to USNRC Questions and Comments; Decontamination Plan for the M310 Pilot Plant and D372A Utility Room

Dear Mr. Kulzer:

The following is BP America's (BPA) response to the NRC questions and comments on the Warrensville Site Decontamination Plan which were contained in NRC's letter dated November 14, 1996.

Response to Comment A.1. Radiological Contractor Qualifications

Our internal BP procurement procedures require us to competitively bid a project of this scope. It is our intention to secure an approved Decontamination Plan from NRC and then use the approved plan to solicit proposals from several qualified radiological contractors. A qualified radiological contractor will be selected based on a variety of factors specified in their proposal including radiological experience, project team strength, ability to perform scope of work, safety & environmental record, proposed project schedule, commercial terms etc.

As a path forward, we proposed that NRC approve the Decontamination Plan with the condition that the radiological contractor BPA selects submit a qualifications package to NRC prior to performing the onsite decontamination and survey work.

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Response to Comment A.2. Radiological Safety & Health Training

The contractor selected to perform the work will conduct the radiological safety and health training. The qualifications and experience of their trainer can be submitted with the qualifications package described above in A.1.

Response to Comment B.1: Room D372A

The BPA plan for the D372A Utility Room risk assessment was based on the language of 10CFR20.1405 which provides for termination of licenses under restricted conditions where the conditions are based on restricting the use of the site (institutional controls) so that average individual doses do not exceed an acceptable TEDE. However, BPA recognizes that the subject DU catalyst material in question is not currently licensed; the Source Material License for possession and use of the material having been terminated in 1973.

BPA has proposed in the Plan a risk assessment (TEDE evaluation) for D372A in its current radiological condition and implementation of institutional controls to preclude access to previously licensed material on surfaces, structures, within the block wall, and potentially under the building slab. Since no significant health and safety concern is associated with normal access to the electrical and HVAC equipment in the D372A utility room, BPA intends to defer final decontamination activities to the time when the facility is decommissioned. BPA currently maintains a USNRC Radioactive Materials License for Byproduct, Source, and/or Special Nuclear Material (as specified by isotope and quantity) for radioactive materials used by BPA associated with analytical equipment at the Warrensville facility. BPA could, therefore, be receptive to amending the license to incorporate the previously licensed material contained in D372A.

Custody of the area under the USNRC license would be considered an overall institutional control to ensure the long term protection of the public and environment, particularly at the end-of-life dismantlement of the facility.

Response to Comment B.2: Outdoor Residual Contamination

Contamination survey's were performed on exposed areas exterior to D372A during the prior characterization project. All walls were clean with the exception of one area, namely D374, which was found to have an isolated area of contamination. This was decontaminated to within guideline values. The contamination was attributed to penetrations in the D372A west wall which were done after licensed material operations to connect and extend various service lines.

The north and east walls of D372A on the ground level are sheetrock on inner and outer surfaces which were installed on the original transite panels present during the reactor operating period. Contamination within the walls is generally found on the transite, metal studs, and floor within the wall. Contamination on the floor (under floor tile mastic) is low level.

Core borings through the floor slab were not performed during the characterization project. We have no reason to believe outside contamination exists. The reactor was housed in the existing D372A room which had transite walls, a roof and poured concrete slab floor. At the time of licensed activities, the area outside the north and east transite walls was paved courtyard. This paved courtyard was subsequently removed and building footers and concrete floors were poured and the area is now known as lab D372.

Even in the extremely unlikely event that that subslab contamination is present, the D372A floor slab and adjoining floors form a complete cap over the area which is isolated from any water source or potential method of dispersion.

Our proposed plan for D372A will specify the institutional controls and surveillance to preclude inadvertent intrusion into contaminated areas and will require radiological controls for specific operations in and adjacent to D372A. Potential subslab soil contamination in the D372A area will be evaluated at the end-of-life activity which decommissions the entire facility.

Response to Comment B.3: Radiological Waste

The 4 drums of waste that was collected during the previous remediation of "B", "D" and "E" laboratory areas are currently being stored in room B315. This was one of the B wing labs remediated in 1996 and the area has been vacant since decontamination. The room is posted with radioactive material warning signs and is locked. Access is restricted to periodic maintenance department checks of electrical, HVAC systems etc. BPA plans on storing this material until completion of the M310 area remediation and then dispose of all waste at one time. [NRC approved this temporary storage at our site in an April 19, 1996 letter to BPA.] Disposal of all waste drums will be part of the radiological contractors work scope for the M310 decontamination. We have not yet selected a site where the material will be shipped.

Response to Comment B.4: Soil Samples

Samples of materials were analyzed by high resolution HpGe gamma ray spectroscopy for U238 during the characterization project as reported in the Final Survey Report.

The administrative radionuclide concentration (pCi/g) level for U238 was defined as 25pCi/g for comparison to the regulatory limit of 35pci/g total uranium (U238 & U234). The use of an administrative level allowed for a conservative contribution of up to 30% of the U238 radioactivity concentration for U234 for comparison to the 35pCi/g limit. No alpha spectroscopy analysis was available for analytical confirmation of the U234 radioactivity concentration.

There is no current plan to collect soil samples from M310. The area adjacent to M310 is and has been paved several times since licensed operations. If contamination is detected external to the facility at the surface level, additional survey/sampling will be implemented to confirm acceptable residual contamination in various matrices.

Response to Comment C.1: Decontamination of Equipment

Our plan is to relocate equipment to an adjacent radiologically controlled area to clear the M310 floor area for decontamination. Then, equipment will be surveyed and dismantled as required for decontamination. Decontamination techniques may extend from solvent degreasing to light abrasive cleaning. It is assumed that equipment, if contaminated, can be cleaned within the guideline criteria. Components will then be reassembled for continued service. Other materials which may not be effectively decontaminated, e.g., ventilation ductwork, will be removed and size reduced for packaging as radioactive waste. This material will be combined with waste from the prior laboratory decontamination activity for ultimate disposal. (see B.3 response)

Response to Comment C.2: Characterization of Sewer Line

The drain lines in M310 will be internally evaluated for residual contamination. Based on the results of surveys in the laboratory drain lines during the prior laboratory remediation activity (Site Characterization and Decontamination Project), we do not expect to find significant residual contamination in the lines. These lines have been active since the termination of licensed material activities, and normal process flow in the drains and lines have essentially cleared them of any detectable contamination.

The process sewer system and manholes both upstream and downstream of the M310 drain line connections were surveyed during the SCDP and found to be essentially clean of residual contamination. Additionally, many of the lines and manholes associated with this system have been replaced with new components since licensed material operations.

Response to Comment C.3: Air Monitoring

Air monitoring for occupational exposure and unrestricted areas (effluent) will be performed during decontamination activities. Continuous air samplers are used in the work area (occupational sampling) to continuously sample the "breathing air" zone. Samples for occupational exposure are changed out on a daily basis and analyzed for gross alpha and gross beta-gamma radioactivity. Environmental sampling (unrestricted area effluent monitoring) is performed adjacent to the work area; environmental samples are typically exchanged on a weekly basis and also analyzed for gross alpha and gross beta-gamma radioactivity. Table 301, RADIOLOGICAL ACTION LEVELS, of the Plan presents the action levels for measurement results. At the project completion, or on an individual basis if required, individual or composited samples of both types are analyzed by HpGe gamma spectroscopy analysis for isotopic determinations.

We hope this information adequately addresses the NRC concerns and look forward to your prompt approval of the Decontamination Plan. If you have any questions or require additional information, please contact me at 216-586-5114.

Sincerely,

Dean W. Sares

Dean W. Sares
Sr. Technical Specialist

cc: S. Miller, HEA
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