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US Nuclear Regulatory Commission  
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MIDLAND PROJECT  
DOCKETS 50-329, 50-330  
PERMANENT PLANT DEWATERING  
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On March 23, 1981 I wrote a letter on Activities for the Resolution of Outstanding Issues Regarding the Midland Soils Hearings. One of the subjects discussed in that letter was a request that the Staff concur with our position on installing wells for construction activities (which eventually will become 20 Backup Interceptor Wells for the Permanent Dewatering System) along the Service Water and Circulating Water Buildings. On April 3, 1981 I wrote another letter which provided more information on this subject. On April 6 and 7, 1981 we had verbal communication with the Staff during which they requested more information. The following responds to these requests:

1. Attached is a copy of the technical sections of Specification C-88 which is presently in the review stage. These sections state the technical requirements imposed upon the subcontractor for installing the 20 backup wells. This document identifies methods to be used, certificates of compliance, sand concentration acceptance criteria, etc. "Contractor" means the Bechtel onsite geologist/hydrogeologist supervising the work. Copies of the forms which will be completed for each well by the onsite geologist/hydrogeologist are also attached. These forms, when completed, will provide documentation that the wells are installed to, and the subcontractor has met all requirements of the specification. The specification also identifies that the monitoring program for fines is a Q-listed activity. The Quality Control procedures for this activity have been reviewed and approved by the Midland Project Quality Assurance Department (MPQAD). Bechtel Quality Control monitors the sampling and testing activities. MPQAD has conducted and will continue audits of this activity. An over inspection plan is also being implemented by MPQAD.
2. The laboratory method for determining the quantity of sand in the well discharge water is based on, "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER," Total Suspended Matter (nonfilterable residue), 13th Edition 1971, APHA, AWWA, WPCF.

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3. Bailer samples obtained during the cable tool well drilling process are acceptable for designing screens and filter packs for wells (Reference "Ground Water Manual," US Department of the Interior, 1977). Samples obtained during jetting are not acceptable for designing screens and filter pack. Prior to designing a filter pack and screen size, it is recommended practice to obtain representative samples from the zone to be filter packed using standard drilling and sampling techniques. The samples collected during well installation, whether during jetting the 20 backup wells or by the cable tool method for the remaining 44 permanent wells, are for information only, not design. Because of the importance of the permanent dewatering wells, 55 borings (PD-Series) were drilled specifically for the dewatering investigation. These borings were drilled into the strata to be dewatered at the general location of the dewatering wells. Representative samples of granular materials were tested and compared to samples tested during previous exploration phases. The filter pack and corresponding screen were designed in accordance with these gradations (See response to 50.54F Question 47-4). We believe that this is adequate information on the grain size distribution of the materials to be dewatered. Gradations of natural and backfill sands obtained from samples taken from borings drilled near the intake and pump structures are included on Figure A. A sufficient number of samples have been tested from this area and the design filter pack conforms with these materials. The composite shown on Figure A also coincides with the band of gradations shown on 50.54F Figure 47-12 and FSAR Figure 2.5-29 for natural sands. It should be recognized that the acceptance of the wells is based on the amount of sand produced in the discharge water. Every attempt has been made to design the wells and provide for direction of construction of the wells so that the amount of sand produced will be minimal. If a finer strata is encountered, although unlikely, the well could produce unacceptable amounts of sand and, in this case the well would be abandoned and a new well installed at an alternate location.
4. An estimate of the amount of material removed from each well during development will be made by the geologist/hydrogeologist supervising the work. (See attached well installation data sheet).
5. The backup well depths are adequate to meet the dewatering requirements during underpinning work for the Service Water Pump Structure. The screened interval of the well is controlled by the elevation of the top of the impervious till. In the vicinity of the CH borings the till is higher. Since the till is relatively impervious, the water level cannot be drawn down below the top of the till, therefore, screening below the top of the till would not be of any benefit. It should be noted that the locations of the backup wells proposed along the east side of the Service Water Pump Structure (50.54F Figure 47-11) have been repositioned to the north east corner of the structure to avoid interference with planned underpinning excavation pits (Figure B).
6. The subcontractor will circulate water during filter-pack placement.
7. The wells will be developed by the backwashing method utilizing either intermittent pumping and/or jetting (Reference attached, "Well Drilling Operations," Departments of the Army and the Air Force, September, 1965).

As noted in the two previous letters these wells can be abandoned and grouted, at anytime. We believe that the additional information in this letter should be sufficient so that you can concur with our request to proceed.

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