11/10/98

Mr. L.S. Abraham
DOT Compliance Coordinator
BP Oil Company
200 Public Square
Cleveland, OH 44114-2375

Dear Mr. Abraham:

Thank you for your letter of March 23, 1998, to Ivan Huntoon, Director, Office of Pipeline Safety Central Region. Your letter has been referred to me for response.

You request a waiver of the -0.85 volt pipe-to-soil potential cathodic protection (CP) criteria for breakout tanks at BP Oil Pipeline Company's Dayton marketing facility. You state that the bottom of each breakout tank has been replaced with a new tank bottom installed over the existing bottom with six inches of sand placed between the two bottoms along with an elastomeric liner and a leak detection system. A galvanic zinc strip anode CP system has been installed in the sand between the two bottoms. You further state the CP system is designed to provide sufficient protection against corrosion, but it is not designed to provide the constant pipe-to-soil potential of -0.85 volts generally associated with conventional ground beds.

The hazardous liquid pipeline safety regulations in 49 CFR 195.414(c) require that each operator electrically inspect all breakout tanks to determine the need for cathodic protection and to provide cathodic protection where necessary. The regulations in 49 CFR Part 195 do not specify cathodic protection criteria, but allow the operator to determine the most appropriate criteria for its pipeline facilities. Therefore, it is not appropriate to issue a waiver in regard to the -0.85 volt pipe-to-soil potential criteria since 49 CFR part 195 does not contain that specific criteria.

In determining operator compliance with performance-based regulations, we generally refer to industry standards. The National Association of Corrosion Engineers (NACE) has established criteria for acceptable levels of cathodic protection to mitigate against corrosion in its publication NACE RP-0169-96, Control of External Corrosion of Underground or Submerged Metallic Piping Systems. The pipe-to-soil potential of -0.85 volts, which you state you are not able to achieve, is only one criterion contained in RP-0169-96. There are other criteria, such as a minimum of 0.1 volts of cathodic polarization measured between the tank bottom metallic surface and a stable reference electrode contacting the electrolyte.

Section 8 of API Recommended Practice (RP) 651, Cathodic Protection of Aboveground Petroleum Storage Tanks, mentions the 0.1 volts cathodic polarization criterion and references RP -0169-96 for additional criteria for cathodic protection of aboveground storage tanks. One of our current rulemakings proposes to reference API RP 651 in 49 CFR Part 195 along with a

number of other industry tank standards. A notice of proposed rulemaking to reference the tank standards appeared in the *Federal Register* on May 21, 1998 (63 FR 27903). A final rule should be published by the end of 1998.

If you are unable to meet the -0.85 pipe-to-soil criteria, we suggest you adopt one of the other criterion contained in NACE RP-0169-96 to ensure acceptable protection. If you have any questions concerning this manner, please contact me at (202) 366-4565.

Sincerely,

Richard D. Huriaux, P.E.
Regulations Manager
Office of Pipeline Safety
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cc: DPS-1,2,10,20,Regions,TSI,StateMailing