



E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED

ENGINEERING DEPARTMENT

To: W. E. Ellis, L1317

From: G. M. Pierce, Vicon

Subject: Pre-Insulated Pipe & Equipment

See attached letter from A. D. Bedsole same subject. On May 20, 1976 we obtained insulation samples from Project 1295, OPI, pre-insulated columns. We removed samples from known or suspected wet insulation areas. M.F. Hennessey, Jr. inspected the metal surfaces prior to patching these areas.

In previous conversation with Jim Adams he told me to get my line-up from Chip Ross of Sabine River Works so samples and test results would be comparable between sites. Chip stated that you ran tests on Sabine materials. I am forwarding the Victoria samples by motor freight the week of 24 May 1976 for you to perform the same test for this site.

If you have any questions please contact J.W. Adams, Engineering Design Division or me at Victoria, Ext. 201.

GMP/lj
Attachment

PLAINTIFF'S
EXHIBIT
DUP-2239

In reply please use subject listed below.

Date: 24 May 1976

c.c.: D. J. Borders
A. D. Bedsole, Plant
J. M. Meeks, Jr.
M. F. Hennessey - Plant
J. W. Adams, L33W5

DU 015226

DUP 0827177

cc: J. T. Lowe
D. J. Logan
G. R. Ehrman
M. O. Denton
D. P. Newbern
J. W. Adams - Louviers
D. F. Rapp - Nemours
File P-1295 L-4, L-7

March 15, 1976

TO: G. M. PIERCE
PRODUCTION CONTROL SUPERVISOR
VICON

FROM: A. D. BEDSOLE *MB*
PROJECT LIAISON

QUALITY ASSURANCE

PRE-INSULATED PIPE & EQUIPMENT

Insulation on pre-insulated pipe which has been allowed to get wet has caused corrosion problems at both the Old Hickory Plant and Sabine River Works. Wet insulation on carbon steel can provide electrolytic action which results in corrosion. If insulation on stainless steel becomes wet the inhibitor can be leached from the insulation allowing residual chloride to cause stress corrosion cracking.

On Project 1295 and 1946 essentially no pipe has been pre-insulated and stored on wagons. Major pieces of equipment, however, have been insulated. Some equipment items in Op. 1A have been insulated since 1974. This area is not scheduled for T.O. and operation until 12B76 which represents a two-year period. While piping will not be pre-insulated and stored on wagons, there will be pre-insulation of piping in the bridge that could allow for a considerable time duration before system is energized, and in that light does represent pre-insulation and concern over potential corrosion problems.

On the original Adipic Acid Project (9098) equipment pieces were insulated and stored over twelve months before being placed into service. For various reasons, rainwater leaked into the insulation and caused corrosion problems. Being cognizant of this experience, Construction revised and improved the Insulation Weather-proof Sealing Procedure to be used on Project 1295 and 1946.

DU 015227

DUP 0827178

March 15, 1976

Even though an improved procedure has been developed and a bi-weekly inspection of all insulated items is being conducted, I feel that it would be prudent in light of Old Hickory and Sabine River Work experience to remove samples of insulation to verify adequacy of revised procedure and reassure integrity of insulation.

In my judgement, samples representative of typical single and double "Z" laps, sealed joints, end sealing, sealing over "T"-shaped stiffening rings, etc., should be taken from equipment and pipe which has been insulated for longest period of time. The Division Engineers in various areas of responsibility should be able to provide you with information regarding items insulated for longest period of time. Once the insulation has been removed, a metallurgical evaluation should be made to determine if any corrosion has occurred. This can be provided by ESD out of Beaumont. The remaining insulation and exposed surface should be adequately protected to insure integrity of insulated system prior to re-insulating over removed section. The removed insulation, jacket material, sealant, etc. should be analyzed to determine if any inhibitor has been leached. Assistance required to evaluate integrity of insulation will be provided and coordinated by J. W. Adams, Engineering Design Division.

If you require any assistance in determining pieces of equipment to be sampled or location to be sampled, contact D. P. Newbern.

ADB:pag

DU 015228

DUP 0827179