

15th March 2013

Health and Safety Executive
Mercantile Chambers
53 Bothwell Street
Glasgow
G2 6TS

For the attention of Callum MacDonald – H. M. Inspector of health and safety

Dear Sir,

THE HEALTH AND SAFETY AT WORK ETC ACT 1974

Investigation into pipework failure at Scotgen 9Dumfries) Ltd on 6th August 2012

We write in response to your letter of the 1st March (Ref 4297247CM), the content of which is noted.

With response to your specific request in relation to your point 5 – *Written Scheme of Examination for Boiler 1*
– we can confirm the following:

The physical changes made to boiler 1 were carried out following consultation with both the original boiler manufacturer (Greens Power Ltd) and Alstom, both parties would, we believe, be considered as competent persons under the Pressure Systems safety Regulations 2000.

We have, further to your correspondence, contacted Allianz and informed them of the physical changes made to boiler 1. Specifically we have informed them that *“Following work with both Greens Power Limited and Alstom the top 4 rows of the primary evaporative section on boiler 1 have been removed and the header replaced. The replacement header was supplied and fitted by Greens with the external connecting pipework completed by Alstom. Lloyds Registry witnessed the subsequent testing and the boiler was returned to service”*.

We have not yet received any consideration from them in relation to any potential modification of the written scheme of examination. We will, as you suggest, inform you of any decision that is made.

Yours faithfully,



For and on behalf of Scotgen (Dumfries) Ltd

Dargavel Stores, off Lockerbie Road
Dumfries, Scotland
DG1 3PG

01387 240066
01387 270127
info@scotgenltd.co.uk
www.scotgenltd.co.uk

Greens Power Limited
Raines House
Denby Dale Road
Wakefield
WF1 1HR

Date 26th November 2012

Reference 4297247CM

Field Operations Directorate
Scotland Division

Health and Safety Executive
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H. M. Principal Inspector of
Health and Safety
Jim Young

For the attention of 

Dear Sir

THE HEALTH AND SAFETY AT WORK ETC ACT 1974

Investigation into pipe work failure at Scotgen (Dumfries) Ltd

I refer to the recent visit of my colleague Peter Dodd, H.M. Specialist Inspector of Health and Safety to your site. You will be aware that the Health and Safety executive is conducting an investigation into pipe work failure at Scotgen in Dumfries, which occurred on 6th August 2012.

In order to conduct a thorough investigation, I require to view copies of any letters or correspondence that you have had with Scotgen in relation to the said incident, including any matters with which you have raised concerns. This includes documentation that you have both sent to Scotgen and received from them.

Section 20(k)(ii) and 20(L) of the Health and Safety at Work etc Act 1974 provides the power for an inspector to request such documentation to assist with an investigation.

Please could you send any relevant documentation for my attention to the address at the top of the page?

If you have any questions then please contact me by telephone or the address at the head of the first page.

Yours faithfully

Callum MacDonald
H. M. Inspector of Health and Safety

GHA Livigunn
Livingston House
Tarvin Road
Frodsham
Cheshire
WA6 6XN

Date 26th November 2012

Reference 4297247CM

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H. M. Principal Inspector of
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For the attention of 

Dear Sir

THE HEALTH AND SAFETY AT WORK ETC ACT 1974

Investigation into pipe work failure at Scotgen (Dumfries) Ltd

I refer to the recent visit of my colleague Peter Dodd, H.M. Specialist Inspector of Health and Safety to Greens Power Limited where I believe you met with him. You will be aware that the Health and Safety executive is conducting an investigation into pipe work failure at Scotgen in Dumfries, which occurred on 6th August 2012.

In order to conduct a thorough investigation, I require to view copies of any letters or correspondence that you have had with Scotgen in relation to the said incident, including any matters with which you have raised concerns. This includes documentation that you have both sent to Scotgen and received from them.

Section 20(k)(ii) and 20(L) of the Health and Safety at Work etc Act 1974 provides the power for an inspector to request such documentation to assist with an investigation.

Please could you send any relevant documentation for my attention to the address at the top of the page?

If you have any questions then please contact me by telephone or the address at the head of the first page.

Yours faithfully

Callum MacDonald
H. M. Inspector of Health and Safety

Scotgen (Dumfries) Limited
Dargarvel Stores
Off Lockerbie Road
Nr Dumfries
Scotland
DG1 3PG
Date 1st March 2013

Reference 4297247CM

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H. M. Principal Inspector of
Health and Safety
Jim Young

For the attention of [REDACTED]
CC all employees

Dear Sir

THE HEALTH AND SAFETY AT WORK ETC ACT 1974

Investigation into pipe work failure at Scotgen (Dumfries) Ltd on 6th August 2012

Following the telephone call with you on 20th February 2013, I am writing to confirm the following points:

1. *Competent Persons for Health and Safety Matters*

In my letter to you dated 14th January 2013 I requested that you outline who you have appointed as a competent person to assist you in undertaking the measures you need to take to comply with the requirements and prohibitions imposed upon you by or under the relevant statutory provisions. In your response you explained that [REDACTED] had been appointed to this role and you detailed his training and experience. I note from your reply that [REDACTED] appears to have no expertise in relation to the safe operation of boilers and pressure systems. I also note from our conversation on the 20th February that you consult with Alstom for specialist advice when any changes are being considered to the operation of the boilers. I am concerned that the provision of a competent person or persons to provide health and safety assistance in respect of the boilers and associated systems is not clearly established. I am unclear on the scope of the role being fulfilled by Alstom or indeed Greens, the original boiler manufacturer. I expect health and safety assistance for this aspect of your undertaking to provide appropriate, specific applied knowledge and skills to advise on any health and safety implications that may arise from the daily operation of the boilers and related plant; as well as any changes in operating procedures that may be proposed or arise.

2. *Safe Operating Limits of the Boiler*

You should ensure that you have clearly established the safe operating limits of the boiler and that you have robust systems in place for monitoring your operation to ensure that you remain within these limits.

Since the top four rows of boiler tubes in the primary evaporative section on waste stream one have been removed, the temperature into the boiler should not be greater than 850°C. You should therefore ensure that you have systems in place to ensure that this temperature is not exceeded. In the event that the temperature is exceeded

then you should ensure that there are systems in place – that 'fail to safety' – which would promptly reduce the temperature.

3. *Temperature Sensors and Controllers*

It is clear from the evidence gathered following the pipe work failure that the temperature sensors and controllers that were fitted following the accident are safety critical devices. Therefore your maintenance and inspection regime must be appropriate to ensure the accurate ongoing function of these devices.

4. *Boiler Water Treatment*

I have reviewed the written reports from Nalco that you supplied me with. It is evident, particularly in the earlier reports, that there are occasions when Nalco are stating that work is required by you but this has not been undertaken. In order for you to operate the boiler within practical working levels as defined by the manufacturer and the relevant British and European Standards, you must ensure that you have the appropriate staff and equipment to reliably work with Nalco and their recommendations.

5. *Written Scheme of Examination for Boiler 1*

You have stated in your response to me on 25th January that no update to the written scheme of examination on boiler 1 has been made following the removal of the top four rows of tubes in the primary evaporative section. You are required, under the Pressure Systems Safety Regulation 2000 to notify a competent person of any of the following changes:

- i) Any physical change to the boiler, or one of its components
- ii) A change in competence of the operator or maintenance staff
- iii) A change in supervision or monitoring arrangements
- iv) A change in the environment in which the boiler is operating

I believe that you have appointed Allianz to conduct your thorough examinations and written scheme for the periodic examination. You should therefore inform them of the changes that you have made to allow them to consider if the written scheme of examination should be modified. You should then inform me of the decision that is made.

You should respond to me by 15th March 2013 detailing the actions that you have taken in response to point 5.

I am obliged by Section 28(8) of the Health & Safety at Work Etc. Act 1974 to provide employees with relevant information regarding health and safety. I have therefore enclosed a copy of this letter which you should place on a prominent notice board for the employee's attention.

If you have any questions then please contact me by telephone or the address at the head of the first page.

Yours faithfully

Callum MacDonald
H. M. Inspector of Health and Safety

Scotgen (Dumfries) Limited
Dargarvel Stores
Off Lockerbie Road
Nr Dumfries
Scotland
DG1 3PG
Date 14th January 2013

Reference 4297247CM

Field Operations Directorate
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H. M. Principal Inspector of
Health and Safety
Jim Young

For the attention of [REDACTED]

Dear Sir

THE HEALTH AND SAFETY AT WORK ETC ACT 1974

Investigation into pipe work failure at Scotgen (Dumfries) Ltd on 6th August 2012

Following the meeting with yourself and my colleague, Peter Dodd regarding the above pipe work failure and after further investigation undertaken by HSE; there are some matters that have arisen which require clarification:

1. At our meeting you informed us that immediately prior to the incident, an alarm (low or no flow) associated with the recirculation pumps was activating. Please advise:
 - a. what the conditions were that led to the alarm?
 - b. what measures have been put in place to prevent these conditions recurring?
 - c. if a similar situation arises, what measures are in place to ensure the boiler remains safe and within its operating parameters?
2. The bypass to the stack is a safety critical item that allows heat to be removed from the boiler in certain circumstances. As such the bypass should fail to safety, if for example there is a power failure. In this situation failing to safety would mean the bypass is in the open position; please confirm whether or not this is the case.
3. We understand that during soot blowing, the water level has to be maintained manually; please will you confirm whether or not this activity fails to a safe mode if for example the person undertaking the activity becomes incapacitated etc. In this situation failing to safety would mean no reduction in water level.
4. You indicated that following the incident, the venting procedure had been amended in consultation with Greens Power Limited; please will you provide details of the current procedure for venting the boiler.
5. Where substantial modifications / repairs are being considered, we would encourage the owner of the system to consult with a person who is competent to advise on the proposals. Greens Power Limited has indicated that they were instructed by you to modify / repair the boiler following the incident, which has included the removal of a

quantity of boiler tubes. Please advise what competent advice was obtained for determining this course of action.

6. The removal of the tubes has we understand resulted in a reduction in the operational gasification temperature from 1100 to 850°C. Please advise what actions you have taken with respect to the control system of the boiler following this reduction.
7. At our visit the boiler remained non operational, we assume from the timing of the visit that the written scheme of examination we examined related to the boiler as initially built and supplied, as opposed to the subsequent repaired / modified condition. Please will you advise what action you have subsequently taken with regard to reviewing the written scheme of examination.
8. At our meeting we briefly discussed boiler water treatment when you indicated that a contractor was providing this service for you. Please will you forward details of the water treatment regime required for the boiler as advised by the manufacturer and the regime you have in place, along with copies of the records of the treatment since the boilers were brought on line, and any results of sampling that has been undertaken.
9. Finally, Regulation 7 of the Management of Health and Safety at Work Regulations 1999 require that every employer shall appoint one or more competent persons to assist him in undertaking the measures he needs to take to comply with the requirements and prohibitions imposed upon him by or under the relevant statutory provisions. Could you confirm who you have appointed as competent persons? If you have appointed an individual within your company then you should detail the training and experience or knowledge that individual has.

If you have any questions then please contact me by telephone or the address at the head of the first page.

Yours faithfully

Callum MacDonald
H. M. Inspector of Health and Safety