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# Pipelines Plan

<b>Author:</b>	Joint Emergency Planning Unit on behalf of the Suffolk Resilience Forum
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<b>Version</b>	Issue 5

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**AMENDMENT RECORD**

Amd No.	Date	Amended by	Reason
Issue 3	Mar 16	AO	3 yearly review. Updated plan format, confirmation of pipeline infrastructure with NG.
Issue 4	Nov 18	ER	3 yearly review. Updated pipeline operators.
Issue 4.1	June 19	ER	Included guidance on reduced pressure gas pipelines
Issue 5	May 21	VW	3 yearly review. Layout rearranged. Updated Activation Flow Chart and Appendix C data. 5.2 Control Centres Cadent Gas Control Centre is now Distribution Network Control Centre (GNCC)

**DISTRIBUTION**

Health & Safety Executive

Public Health England

National Grid (UK Transmission)

Cadent Gas Limited

UK Power Networks

Suffolk Constabulary

Suffolk Fire and Rescue Service

East of England Ambulance Service

Environment Agency

NHS England East of England

West Suffolk Clinical Commissioning Group

Ipswich and East Suffolk Clinical Commissioning Group

Great Yarmouth and Waveney Clinical Commissioning Groups

Suffolk Joint Emergency Planning Unit for Suffolk County Council

Suffolk Local Authorities

Essex Local Resilience Forum

Cambridgeshire Local Resilience Forum

Norfolk Local Resilience Forum

## **GENERAL DATA PROTECTION REGULATIONS 2016/679 AND DATA PROTECTION ACT 2018**

This plan does not include personal, sensitive or special category data as defined under the General Data Protection Regulations. It does include data/information relevant to achieve planning arrangements and identifies how more specific personal data will be used during any emergency.

## **FREEDOM OF INFORMATION ACT 2000**

This document will be made publicly available through the SRF website. Where content has been redacted under the freedom of Information Act 2000 (FOI) in the publicly available version, the paragraph number will be highlighted to show there has been a redaction and the relevant section of FOI referenced.

## **ENVIRONMENTAL INFORMATION REGULATIONS 2004**

This plan presumes disclosure of all environmental information, under Environment Information Regulations. Where exemptions are claimed under Environment Information Regulation 12 (5)a, this will only be where one of the responder agencies has judged that the information may adversely affect either international relations, defence, national security or public safety. Where such content has been identified, the paragraph number will be highlighted and the paragraph text removed from public versions of the plan.

## **REVIEW**

This plan will be reviewed by Suffolk Joint Emergency Planning Unit on behalf of the Suffolk Resilience Forum at least every 3 years. Earlier reviews will take place if there is a change in working practices, legislation or new information from lessons identified following exercises or incidents.

## **EXERCISING**

The Pipelines Safety Regulations do not require this plan to be tested. It is good practise to exercise this plan at least every 3 years. The best method of doing so is via a Tabletop Exercise in liaison with Cadent and National Grid Gas Transmission. Participants should include the Emergency Services / Partner Agencies and the exercise aim / objectives should include assessments of plan activation procedures and trigger levels.

Glossary:

DNCC	Distribution Network Control Centre
EPD	Emergency Planning Distance
EPDO	Emergency Planning Duty Officer
FCP	Forward Control Point
FCR	Force Control Room
GNCC	Gas National Control Centre
HSE	Health and Safety Executive
HART	Hazardous Area Response Team (Ambulance)
JEPU	Joint Emergency Planning Unit
LA	Local Authority
MAHP	Major Accident Hazard Pipeline
MAPD	Major Accident Prevention Document
NGECC	National Gas Emergency Contact Centre
PHE	Public Health England
PSR96	Pipelines Safety Regulations 96
RCG	Recovery Coordinating Group
RVP	Rendezvous Point
RD	Resilience Direct
SCG	Strategic Co-ordinating Group
SFRS	Suffolk Fire & Rescue Service
SRF	Suffolk Resilience Forum
StratCC	Strategic Co-ordination Centre
TCG	Tactical Co-ordinating Group
UKOPA	United Kingdom Onshore Pipeline Operators Association

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## 1 INTRODUCTION

### 1.1 Legislation

1.1.1 This plan is written to discharge Regulation 25 of the Pipelines Safety Regulations 1996 (PSR96) which requires Suffolk County Council to prepare an emergency plan for each Major Accident Hazard Pipeline (MAHP) passing through their area. The requirement under these Regulations is for emergency plans which specifically relate to the protection of the health and safety of people, it does not cover environmental damage.

1.1.2 It should be noted that this plan covers pipelines that fall within the statutory requirements of PSR96; currently in Suffolk only gas pipelines fall within the statutory requirements of PSR96. Other gas and fuel pipelines run within Suffolk but are not covered by this plan. Where incidents occur in these pipelines, generic SRF response arrangements will apply.

1.1.3 A response to any MAHP emergency is likely to involve multi agency coordination; this plan has been developed and issued under the auspices of the Suffolk Resilience Forum (SRF) partnership. This plan builds on existing SRF contingency arrangements and provides specific arrangements to manage the risk posed by major accident hazard gas pipelines within Suffolk.

### 1.2 Wider Civil Emergency Arrangements.

The SRF develops plans to deal with high and very high risks as identified on the Suffolk Community Risk Register. The suite of plans cover generic plans which detail how the SRF responds as a multi-agency group to any incident in Suffolk; site specific plans; hazard specific plans and supporting plans which cover capabilities that could be employed as a result of any incident occurring. This particular plan links with other Suffolk Resilience Forum Plans which includes but is not limited to SRF Generic Emergency Response Plan, SRF Communications Plan and SRF Generic Recovery Plan. These plans are [publicly available](#).

### 1.3 References:

Statutory Instrument 1996 No. 825 - The Pipelines Safety Regulations 1996

HSE – 'A guide to the Pipelines Safety Regulations 1996' dated 1996

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HSE – ‘Further guidance on emergency plans for major accident hazard pipelines’ dated July 1997

UKOPA – ‘Major Accident Hazard Pipeline Emergency Plan Template dated April 2017

## 2 AIM

To minimise the consequences to the health and safety of people in the event of an emergency involving a major accident hazard pipeline.

## 3 OBJECTIVES

The objectives of the SRF Pipelines Plan are to:

- Identify the hazards associated with MAHP.
- Define levels of pipeline incident.
- Detail the activation and notification arrangements for pipeline incidents
- Detail ownership and contact information for MAHP.
- Describe the public information & media arrangements
- Show the pipeline routes and details

## 4 RISK AND HAZARD BACKGROUND

4.1 Pipeline Operators. There are two pipeline operating companies in Suffolk whose pipelines are covered by PSR96, National Grid and Cadent Gas Limited. Both have control centres to monitor technical data in respect of the pipelines, these are able to adjust content flows and remotely shut down isolation valves in the event of a leak. Both National Grid and Cadent Gas Limited will deploy personnel with specialist equipment to the site of any suspected leak in order to carry out technical checks and liaise with emergency services. A map identifying the pipeline owners is at [APPENDIX B](#).

### 4.2 Risk

The [Suffolk Community Risk Register](#) identifies the threat of an emergency involving a Major Accident Hazard Pipeline ( MAHP, H5 and H7) as **Medium** as it could have a significant impact on local communities.

4.2.1 Damage to a Suffolk MAHP that results in a pipeline puncture or rupture (a full bore pipeline failure) will result in a release of pressurised natural gas. The duration of the release will depend on a number of factors, including the size of the failure, pipeline pressure, the pipeline diameter and distance to nearest isolation valves.

4.2.2 It should be assumed that the gas release could potentially continue for some time and, in some cases, it may be a number of hours before the gas leak is isolated and the hazard completely removed.

4.3 Hazards. Some or all of the following consequences could result from a pipeline failure:



#### 4.3.1 Thermal Radiation

- The most significant hazard to people in the vicinity of a pipeline failure is the effect of thermal radiation (heat) should the contents subsequently ignite. The levels, depending upon the magnitude of the release, may be sufficiently large to cause injuries to those out of doors. People indoors will be shielded from the effects of the thermal radiation, but the thermal radiation levels, depending on the size of the release, may be sufficient to ignite structures
- If a release occurs that does not initially ignite, it is important to recognise that ignition of any product could potentially occur at any time. Steps should be taken to ensure that potential ignition sources do not exist or are not introduced into the area around the release, where gas could potentially be present in flammable concentrations
- The extent of the flammable cloud is difficult to predict, as it is dependent on the release pressure, size and orientation of the release and the prevailing atmospheric conditions. Gas is lighter than air, it is expected that the majority of failures will lead to gas jets that are orientated vertically upwards. The extent of the flammable gas cloud at ground level, for the majority of situations, would normally be expected to be well within the “emergency planning distance”.
- Pipeline operators will have equipment that allows them to detect where gas is present in flammable concentrations (within flammable ranges). This information will assist the risk assessment process undertaken by the emergency services

Note: Any risk assessment and exclusion zone shall also include the potential hazards to transport e.g. road, rail and especially aircraft.

#### 4.3.2 Thermal Hazard Distances

Emergency planning distances are calculated by the operator to provide a maximum emergency planning distance from the pipeline where it is calculated that people could come to harm as a result of a full bore failure.

The distance is based upon the Maximum Thermal Hazard Range which is usually the same apart from in more suburban areas where construction standards are significantly different and a full bore failure is not seen as a credible event.

Thermal Hazard Distances for Suffolk MAHP are listed at [APPENDIX C](#).

#### 4.3.3 Explosion

An explosion would not normally be expected to occur as a result of a pipeline failure. It can only occur if the released gas is confined in some way and present in flammable concentrations. This could occur for instance if the released gas was present within a building

#### 4.3.4 Noise

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- The release of high pressure gas creates significant noise levels, this may cause damage to hearing, albeit temporarily. In addition, high noise levels can be very disorientating and may cause unexpected behaviour in people affected in this way
- Responders must be made aware that standard issue hearing protection may not afford adequate protection. Advice should be sought from the pipeline operating company.

### 4.3.5 Blast effects and projectiles

The pressure-blast at the time of failure can be significant in close proximity to the pipeline but its serious effects may quickly diminish with distance. In the event of a major failure, the pipeline cover material, including soil, rocks and hard-core, will be thrown at high velocity into the air. There is also the possibility of considerable damage to window glass due to pressure waves

### 4.3.6 Medical Effects

- Asphyxiation - although natural gas is not toxic, a release of large amounts of gas or vapour at high concentrations could cause asphyxiation due to the exclusion of oxygen. However, these conditions are likely only to exist in close proximity to the point of failure.
- Narcotic - in low concentrations exposure to natural gas may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of coordination.

4.4 Safe Distances for FCP and RVP. Where emergency services set up an FCP or RVP to manage operational response, these should be initially located at a distance greater than twice the Maximum Thermal Hazard Range, see [APPENDIX C](#). When pipeline operating company personnel arrive on site they will be able to advise whether it is appropriate to reduce this distance.

4.5 Pipeline Emergency Definitions. The UK Onshore Pipeline Operators association define the following levels of pipeline emergency:

**Level 1: MINOR Emergency.** A minor incident that involves checks and corrective action by the Pipeline Operator only and has no immediate impact on the public or the environment and does not require the attendance of the emergency services.

**Level 2: LOCAL Emergency.** An incident being investigated by the Pipeline Operator, has no immediate impact on the public or the environment but may require the attendance of the Emergency Services to ensure it is dealt with safely.

**Level 3: Pipeline Emergency.** An incident requiring the attendance of the Emergency Services but does not put the general public or wider environment at risk. Any effects can be seen to be contained with no expectation of escalation.

**Level 4: Pipeline Major Emergency.** A MAJOR INCIDENT that requires the implementation of this SRF MAHP Plan as any effects are causing, or might cause, significant impact on public safety or harm to the environment\*.

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\*NB. This plan does not cover environmental damage.

## 5 PLAN ACTIVATION

5.1 Initial Notification. A failure may occur at any point along the pipeline route and notification could come from a number of sources:

- A member of the public dialing 999 for the emergency services.
- The operating company; when they have identified a MAHP emergency, either through the use of telemetry or by an operative deployed to check on a suspected pipeline leak.

It must be remembered that pipeline incidents can occur suddenly and with little warning. The immediate consequences of the incident, for example a fire or explosion, could be over before emergency services and pipeline operators arrive.

Alerting information for all Suffolk responder agencies and cross border LRFs are listed in the SRF Alerting Directory accessed via RD.

Notification flowchart is at [APPENDIX A](#).

### 5.2 Control Centre's

There are several high pressure gas transmission pipelines running through Suffolk operated by National Grid Gas Transmission and Cadent Gas Limited. Respective pipelines are monitored by Gas National Control Centre (GNCC) and the Distribution Network Control Centre (DNCC).

There is a single gas emergency telephone number: **0800 111 999**

This number is also used for reporting domestic gas escapes. **Local responders calling this number during a major pipeline incident need to make it clear that they are dealing with a potential high pressure pipeline emergency and ask to talk to a National Gas Emergency Contact Centre (NGECC) Duty Manager.**

During any incident, a member of a pipeline operator will be nominated as a single point of contact for local responders. Once this individual has been nominated and made known all further communications will be through this individual.

## 6 MAHP RESPONSE

### 6.1 Outline Response Table.

Level of MAHP Incident	Operator Response	Emergency Services Response	Multi-agency Response (SCG, Media Coord & TCG)
	✓	x	x

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Level 1 – Minor Emergency			
Level 2 – Local Emergency	✓	Possibly	✗
Level 3 – Pipeline Emergency	✓	✓	✗
Level 4 – Pipeline major Emergency	✓	✓ (FCP)	✓ - MAJOR INCIDENT

### 6.2. Operational Considerations:

- Emergency Services will identify suitable access routes, FCP and RVP based upon the safe distances at [APPENDIX C](#).
- Once at the RVP, initial responders will undertake scene assessment and put into place scene management and command, control and coordination arrangements.
- An on scene presence will be established by the pipeline operator by an Incident Controller from either National Grid or Cadent Gas Limited.
- Ignited gas should not be extinguished unless specifically requested by a pipeline operator representative at the scene or by the respective operators Incident Control Room.
- Evacuation of members of the public may be advised by either pipeline operator or undertaken by emergency services using safe distances at [APPENDIX C](#) if there is a direct threat to life. Evacuation should follow humanitarian assistance arrangements in Section 8 of SRF Generic Response Plan.
- The following organisations should be notified: Highways England, Suffolk Highways, Network Rail and the Civil Aviation Authority.

6.3. Coordination of Response. Multi-agency coordination of local response will follow the Suffolk Generic Response Plan. The pipeline operators should provide information to the emergency services as per the Methane Report [APPENDIX D](#).

6.4 Cross Border Coordination. Suffolk MAHPs cross county boundaries with Cambridgeshire, Essex and Norfolk. If an incident occurs in Suffolk with potential impact on a neighbouring county, Suffolk Constabulary and Suffolk Fire & Rescue Service will conduct initial liaison with the relevant Control Rooms. Once more formal multi-agency coordination structures are established in Suffolk, cross border engagement will be agreed as part of the strategic coordination process at the StratCC.

## 7 WARNING AND INFORMING

7.1. Prior Information. No prior information is required to be provided to the public for MAHP.

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7.2 Public Information following Incident. Timely and accurate public information must be issued to keep people informed about the incident and what they should do to protect themselves from the effects. Suffolk Fire & Rescue Service will be responsible for the initial coordination of public information messages. At first this may only amount to confirmation of an incident and basic (go in, stay in, tune in) shelter advice.

7.3 Media Coordination. Media management of any pipeline incident involving Suffolk local responders will follow the SRF Communications Plan. This plan includes an initial Press Release for a MAHP incident. During a Level 3 or Level 4 incident, it is important that local media management and national media activity by the pipeline operator are linked.

Media contacts are within the SRF Alerting Directory.

## 8 ROLES AND RESPONSIBILITIES

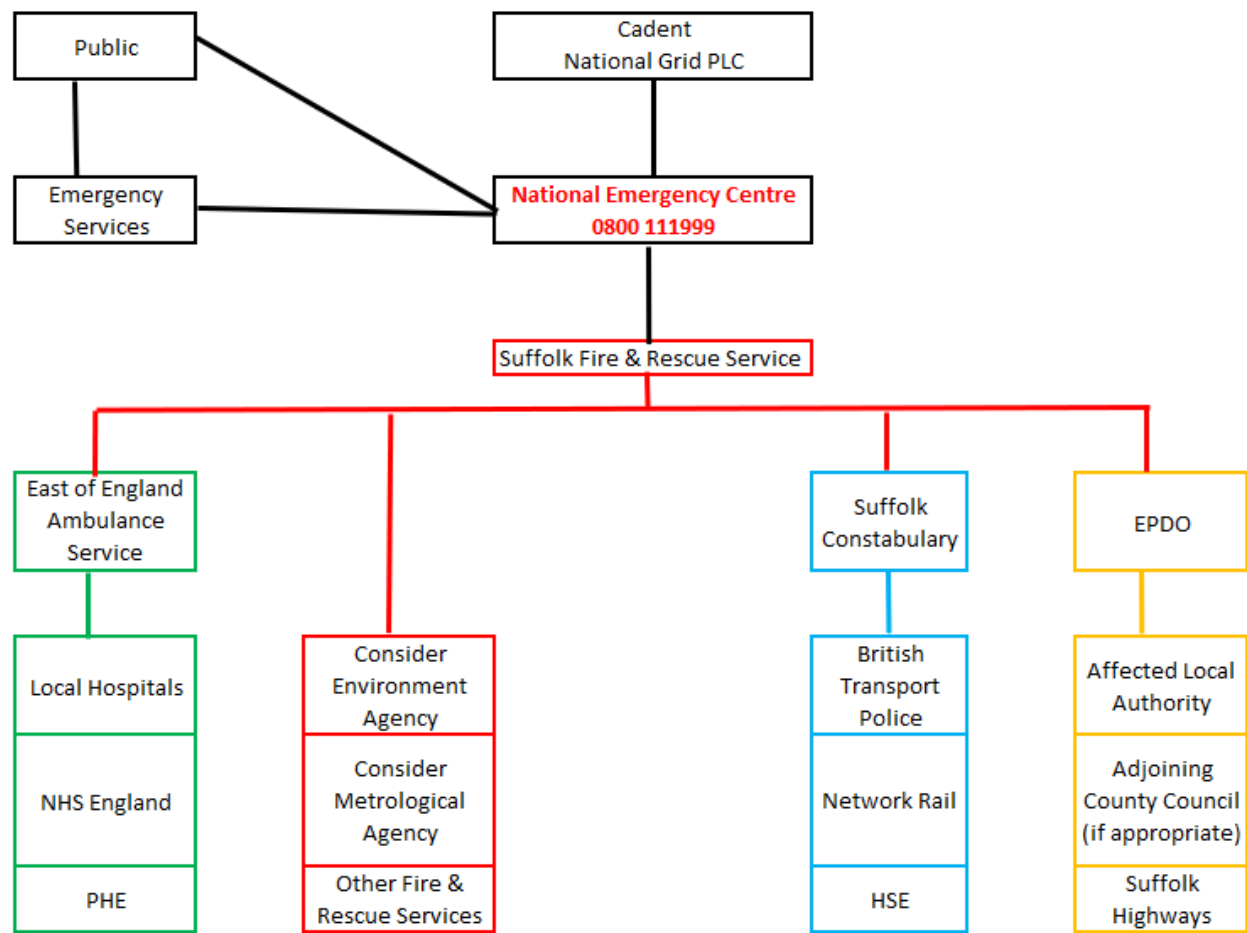
The SRF Generic Emergency Response Plan identifies the main roles and responsibilities of responding agencies.

## 9 RECOVERY

Recovery is an integral part of the emergency management process and starts in the response phase, with the formation of a Recovery Coordination Group. Recovery arrangements for a MAHP incident will follow the SRF Generic Recovery Plan. The operator will be invited to join appropriate recovery structures.

APPENDIX A - NOTIFICATION FLOW CHART

Irrespective of the origin of the information it is important that the notification flowchart given below is followed. This will ensure all responders are aware of the incident. This notification procedure will be coordinated by Suffolk Fire and Rescue Service.

































## APPENDIX D – METHANE REPORT

Time		Date
Organisation		
Name of Caller		Tel No.
M Major Incident	Has a Major Incident been declared? Declared by which service	<b>Yes / No</b>
E Exact location	What is the exact location or geographical area of incident	Supply map references / What3words if available
T Type of Incident	State type of incident in detail	It is important to include that it is a High Pressure Natural Gas Pipeline leak and whether it is alight or not
H Hazards and Wind Direction	What hazards or potential hazards can be identified? Wind Direction	e.g. Smoke, vapour cloud, heat flux sound, ignition sources  What Direction the wind is blowing <b>from</b>
A Access	State the safe access route and Rendezvous Points (RVP's)	
N Number of Casualties / Affected persons	Detail Casualty Numbers and types if known	
E Emergency Services	State which responders are required or should be notified	Include Category 2 responders e.g. Network Rail, BTP, HSE

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## **APPENDIX E- REDUCED PRESSURE GAS PIPELINES**

### **1. Introduction**

1.1 The likelihood of something happening to one of the Major Accident Hazard Pipelines which runs through Suffolk is negligible. However, an incident affecting a reduced pressure gas pipeline is more likely and will have considerable impact on communities, and potentially the economy and environment. There is not a requirement for Local Authorities or Local Resilience Forums to prepare emergency plans for these pipelines. The Pipelines Safety Regulations 1996 only requires Suffolk County Council to prepare an emergency plan for each Major Accident Hazard Pipeline (MAHP) passing through the County. However, experience has shown that gas outages and leaks affecting reduced pressure gas pipelines can have a big impact and guidance would help support those agencies involved in the response.

### **2. Notification**

2.1 Other than an incident affecting a Major Accident Hazard Pipeline no trigger points have been identified to alert partners of gas outages or leaks. Therefore, it is up to the discretion of the Gas operator to identify when they notify partners, or if they do notify partners.

### **3. Coordination of Response**

3.1 For a gas outage the pipeline operator will lead the response. If one agency is made aware of the incident, they must ensure that all SRF multi-agency partners have been notified.

3.2 For a gas leak the Fire Service and the operator will coordinate the response and will determine cordons and if an evacuation is required. In the event that the gas operator recommends that an evacuation is necessary the SRF Evacuation and Shelter Guidance will be used to implement relevant actions.

3.3 The operator will want to set up a Customer Care Centre and operational engineering hub ideally in separate locations but close to the incident. Both will ideally have a car park, kitchen and toilets. The JEPD Duty Officer or LA Officer can assist the operator with this task as they will have good knowledge of the area and potentially contact numbers.

3.4 In any utility outage the priority is always the most vulnerable. The operator will ensure that vulnerable people are getting assistance. They will use the Priority Services Register to do this, however the Suffolk County Council Social Care team and NHS Community Services should be deployed to the Customer Care Centre to cross check their lists of vulnerable people in accordance with the SRF Vulnerable People Data Sharing guidance. Local affected care settings, schools, hospitals and children settings should be highlighted to the operator. If any of these sites are impacted the responsible agency should be informed and the necessary arrangements made.

3.5 Engineers will first have to stop the leak and then repair the damaged pipe. To do this operators standard procedures require that properties in the affected area have the gas supply turned off at the meter by one of their engineers.

3.6 Residents and businesses will not be able to return to their premises until such time as the operators have completed all relevant safety checks to facilitate the reinstatement of the supply. Where possible those identified as vulnerable will be prioritised for restoration.

3.7 Depending on the time of year, weather and in conjunction with advice from UK Power Networks the operator will provide electrical appliances- hot plate for cooking, fan heater etc. The operator has a responsibility to provide food for immobile customers.

#### 4. Communication

4.1 The operator will lead on public messaging via a variety of media platforms including letters which will be delivered to all affected properties informing of the gas outage/ leakage and timescales. Communications team from partner agencies should be informed and repeat the operators message via all mediums.

**APPENDIX F    EMERGENCY CONTACT LIST**

See SRF Alerting Directory for full contact info
