

# Chernobyl.S01E02

---

What is the cost of lies?

谎言的代价是什么

Who is to blame?

该责怪谁

It doesn't matter.

也无所谓

It doesn't look right.

看起来不对劲

We taste metal.

我们尝到金属味儿了

I think there's graphite on the ground.

我认为地上有石墨

You didn't see graphite.

你没有看到石墨

You didn't because it's not there!

你没看到 因为根本没有

We seal off the city. Contain the spread of misinformation.

我们封锁城市 以防消息的误传

Secretary Gorbachev has appointed a committee

米哈伊尔·戈尔巴乔夫总书记设立了一个委员会

to manage the accident. You're on it.

来处理事故 你也是其中一员

You work too hard.

你工作太不要命了

- Where is everyone? - Oh, they refused to come in.

-其他人呢 -他们都不肯来

- Why? - It's Saturday.

-为什么 -因为今天是周六

- Why did you come in? - I work too hard.

-那你怎么来了 -我也工作不要命

It's boiling in here.

这里好热

Eight milliroentgen. A leak?

8 毫伦琴 是泄露吗

No.

不

It would've gone off before. It's coming from outside.

不然早响了 是外面飘进来的

The Americans?

美国人吗

Iodine 131.

碘 131

It's not military. It's uranium decay, U-235.

不是军用 是铀衰变 铀 235

Reactor fuel?

反应堆燃料

Ignalina. Maybe, uh, 240 kilometers away.

可能是伊格纳利纳 离我们大概 240 公里

Yes, this is Ulana Khomyuk

我是乌拉娜·霍缪克

with the Institute of Nuclear En--

我们是白俄罗斯核能...

Looking for--?

找...

- All right, stay calm. - Don't tell me to stay calm.

-好吧 冷静点 -别叫我冷静

They're at four. It's not them.

他们那儿才 4 毫伦琴 不是他们

Who's the next closest?

接下来最近的是谁

It's Chernobyl, but that's not possible.

切尔诺贝利 但那不可能

They're 400 kilometers away.

他们离我们 400 公里呢

That's too far for eight milliroentgen.

那么远不会有 8 毫伦琴飘过来

They'd have to be split open.

除非是反应堆暴露在外

Maybe they know something.

或许他们知情

- Iodine. - Could it be a waste dump?

-碘片 -会是废料倾倒吗

No.

不会

We'd be seeing other isotopes.

那该有其他同位素

Nuclear test? Uh, new kind of bomb?

核测试 新式炸弹

We'd have heard. That's what half our people work on here.

那我们肯定能听说 这里半数人就干这个

Something with the space program like a satellite or...?

会不会是太空计划 卫星什么的

No one's answering the phone.

没人接听

- Get everyone started on an IV. - We don't have enough.

-给所有人打点滴 -点滴不够了

- All the children then. - But we don't have enough!

-那就儿童优先 -那也不够

As many as you can.

那就有多少打多少

- Where's the old man? - He's set up a burn ward in 16.

-老头子呢 -他在 16 室设立了烧伤病房

What are you doing? What is that?

你干什么呢 那是什么

Milk. It's milk. Much better than water.

牛奶 是牛奶 比水好使

No, no, no. Stop. Stop!

不不 快停下

- What are you doing? - These are radiation burns!

-你干什么 -这是辐射烧伤

Their clothes are contaminated!

他们的衣服都污染了

Help me!

帮我

Get it all off.

都脱掉

We're taking it down to the basement.

拿去地下室

He was a firefighter from Chernobyl.

他是切尔诺贝利的消防员

Can you stop pushing, please?

你能不能别推了

We have our orders!

我们有命令

- Disperse! - Hey, there! Get him!

-回去吧 -抓住他

Why you keeping us out here?

你们为什么不让我们进

Professor Legasov?

列加索夫教授

Oh, no, not yet.

不 还没到时候

They're finishing up some other business.

他们还在处理其他事

It'll be a few more minutes.

还得要几分钟

- Can I get you some tea? - No, I'm fine. Thank you.

-要给您端点茶吗 -不了 谢谢

Would you care to read

您等的时候

Deputy Chairman Shcherbina's report while you wait?

想看看谢比纳副主席的报告吗

Certainly. Thank you.

太好了 谢谢

All right, Professor. They're ready.

好了 教授 你可以进去了

Professor Legasov?

列加索夫教授

You have my support.

我会支持你

Thank you all for your duty to this commission.

谢谢各位为本委员会尽责

We will begin with Deputy Chairman Shcherbina's briefing,

我们先听取谢比纳副主席的报告

and then we will discuss next steps if necessary.

然后 如有必要 再讨论接下来的行动

Thank you, comrade General Secretary.

谢谢 总书记同志

I'm pleased to report

我很高兴地汇报

that the situation in Chernobyl is stable.

切尔诺贝利的情况已稳定了下来

Military and civilian patrols have secured the region,

军事和平民巡逻队已确保了当地安全

and Colonel General Pikalov,

皮卡洛夫大将

who commands troops specializing in chemical hazards,

率领着专业处理化学性公害的军队



has been dispatched to the plant.

也已被派遣到核电站

In terms of radiation, plant director Bryukhanov

就辐射而言 核电站厂长布卡诺夫报告

reports no more than 3.6 roentgen.

辐射量不超过 3.6 伦琴

I'm told it's the equivalent of a chest X-ray.

我被告知辐射量相当于一次胸透

So if you're overdue for a check-up...

所以如果你很久没做体检了...

- And foreign press? - Totally unaware.

-外国媒体呢 -毫不知情

KGB First Deputy Chairman Charkov assures me

克格勃第一副主席余考夫向我保证

that we have successfully protected our security interests.

我们已成功保护了我方安全利益

Good. Very good.

很好 非常好

Well, it seems like it's well in hand, so...

看来我们已经控制了局势

if there's nothing else, meeting adjourned.

如果没其他事的话 休会

No!

不

Pardon me?

你说什么

Uh, we can't adjourn.

不能休会

This is Professor Legasov of the Kurchatov Institute.

这位是库尔恰托夫研究所的列加索夫教授

Professor, if you have any concerns,

教授 你有疑问的话

feel free to address them with me later.

可以晚点跟我说

I can't. I am sorry. I'm so sorry.

不行 抱歉 很抱歉

Page three, the section on casualties.

第三页 人员伤亡部分

"A fireman was severely burned on his hand

"一位消防员在反应堆厂房外

"By a chunk of smooth, black mineral on the ground,  
被地上一大块表面光滑的黑色矿物

outside the reactor building."  
严重烫伤了手"

Smooth, black mineral-- graphite.  
表面光滑的黑色矿物 是石墨

There's-There's graphite on the ground.  
地上有石墨

Well, there was a... A tank explosion. There's debris.  
发生了水箱爆炸 导致现场有碎片

Of what importance that could be--?  
那能有多重要...

There's only one place in the entire facility  
整个核电站只有一个地方

where you will find graphite: inside the core.  
有石墨 那就是堆芯里面

If there's graphite on the ground outside,  
如果外面地上有石墨

it means it wasn't a control system tank that exploded.  
就意味着爆炸的不是控制系统水箱

It was the reactor core. It's open!

而是反应堆芯 它被炸开了

Um, Comrade Shcherbina?

谢比纳同志

Comrade General Secretary, I can assure you

总书记同志 我向你保证

that Professor Legasov is mistaken.

列加索夫教授弄错了

Bryukhanov reports that the reactor core is intact.

布卡诺夫说反应堆芯完好无损

- And as for the radiation-- - Yes, 3.6 roentgen,

-至于辐射量... -没错 3.6 伦琴

which, by the way, is not the equivalent of one chest X-ray,

顺便说一下 这并不等于一次胸透的辐射量

but rather 400 chest X-rays.

而是相当于四百次

That number's been bothering me for a different reason,  
though.

不过我不是因为这个原因感到不安

It's also the maximum reading on low-limit dosimeters.

这也是低精度剂量计的量程上限

They gave us the number they had.

他们只上报了手里有的数值

I think the true number is much, much higher.

我认为真正的数值远比那高

If I'm right, this fireman was holding the equivalent

如果我没弄错 这位消防员手中拿着

of four million chest X-rays in his hand.

相当于四百万次胸透的辐射量

Professor Legasov, there's no place for alarmist hysteria--

列加索夫教授 不要危言耸听 歇斯底里

It's not alarmist if it's a fact!

如果这是事实 就不是危言耸听

Well, I don't hear any facts at all.

我完全没听到什么事实

All I hear is a man I don't know

我只听到一个我不认识的人

engaging in conjecture

妄加臆测

in direct contradiction to what has been reported by party officials.

且所说的与党官员所报告的内容截然相反

I'm, uh... I apologize.

我 我很抱歉

I didn't mean, uh...

我不是想...

Please, may I express my concern

能否允许我

as calmly and as respectfully as I--

冷静且尊敬地表达我的担忧

- Professor Legasov-- - Boris.

-列加索夫教授 -鲍里斯

I will allow it.

让他说

An RBMK reactor

RBMK 反应堆

uses uranium 235 as fuel.

使用铀 235 作为燃料

Every atom of U-235 is like a bullet

铀 235 每个原子都像一颗

traveling at nearly the speed of light,

以接近光速射出的子弹

penetrating everything in its path:

能穿透所经之处的一切事物

woods, metal, concrete, flesh.

木头 金属 水泥 肉体

Every gram of U-235 holds

每一克铀 235 中

over a billion trillion of these bullets.

有  $10^{21}$  颗这种子弹

That's in one gram.

一克而已

Now, Chernobyl holds over three million grams,

而切尔诺贝利的装载量有三百多万克

and right now, it is on fire.

现在正在燃烧

Winds will carry radioactive

放射性粒子会随风

particles across the entire continent,

散布到整个大陆

rain will bring them down on us.

然后随着雨水降落到地面

That's three million billion trillion bullets

那就是 3 乘 10 的 27 次方颗子弹

in the... in the air we breathe,

在...在我们的空气中

the water we drink, the food we eat.

饮水中 食物中

Most of these bullets will not stop firing for 100 years.

其中大多数子弹会持续发射一百多年

Some of them, not for 50,000 years.

而有些会持续五万年以上

Yes, and, uh, this concern

好 你的顾虑

stems entirely from the description of a rock?

完全基于报告中对一块石头的描述吗

Yes.

是的

Comrade Shcherbina...

谢比纳同志

I want you to go to Chernobyl.

我要你去切尔诺贝利



You take a look at the reactor, you personally,  
你要亲自查看反应堆

and you report directly back to me.  
然后直接向我汇报

A wise decision, comrade General Secretary--  
明智的决定 总书记同志

And take Professor Legasov with you.  
带列加索夫教授一起去

Forgive me, comrade General Secretary, but I--  
不好意思 总书记同志 但我...

Do you know how a nuclear reactor works?  
你懂得核反应堆的原理吗

- No. - No.  
-不懂 -不懂

Well, then how will you know what you're looking at?  
那你怎么能理解你所看到的情况呢

Meeting adjourned.  
会议结束

How does a nuclear reactor work?  
核反应堆的原理是什么

- What? - It's a simple question.

-什么 -这个问题很简单

It's hardly a simple answer.

答案一点也不简单

Of course, you presume I'm too stupid to understand.

当然 你觉得我太笨了 听不懂

So I'll restate: tell me how a nuclear reactor works,

那我换种说法 告诉我核反应堆的原理

or I'll have one of these

否则我就叫士兵

soldiers throw you out of the helicopter.

把你扔出直升机

A nuclear reactor makes electricity with steam.

核反应堆利用蒸汽发电

The steam turns a turbine which generates electricity.

蒸汽推动汽轮机产生电能

Where a typical power plant

常规发电厂

makes steam by burning coal,

通过烧煤来产生蒸汽

a nuclear plant...

而核电厂...

In a nuclear plant, we use something called fission.

核电厂中会利用裂变反应

We take an unstable element like uranium 235,

采用一种不稳定的元素 比如铀 235

which has too many neutrons.

原子核中的中子数量过多

- A neutron is, uh-- - The bullet.

-中子就是... -子弹

Yes, the bullet.

没错 子弹

So, bullets are flying off of the uranium.

子弹从铀核中射出来

Now...

然后

if we put enough uranium atoms close together,

如果将足够多的铀原子聚集在一起

the bullets from one atom will eventually strike another atom.

来自一个原子的子弹最终会击中另一个原子

The force of this impact splits that atom apart,

撞击产生的力量会使原子分裂

releasing a tremendous amount of energy, fission.

释放出巨大的能量 这就是裂变

- And the graphite? - Ah, yes.

-那石墨呢 -对

The neutrons are actually

中子的速度

traveling so fast-- we call this "flux"--

实在太快了 我们称之为"通量"

it's relatively unlikely that

相对来说

the uranium atoms will ever hit one another.

铀原子彼此击中的概率很低

In RBMK reactors, we surround the fuel rods with graphite

在 RBMK 反应堆中 燃料棒被石墨包围

to moderate, slow down, the neutron flux.

目的是调节 减慢中子通量

Good.

好

I know how a nuclear reactor works.

我明白核反应堆的原理了

Now I don't need you.

现在不需要你了

- Can you help me? I need to find my husband. - No. Not now.

-帮帮我 我找不到我丈夫 -现在没空

- Mikhail! - Lyudmilla.

-米哈伊尔 -柳德米拉

Take her.

带她走

Take her away from here, please.

带她离开这里 拜托

Get away from them! You want to get sick?

离他们远点 你想生病吗

Go!

快走

Please take her, please take her.

求求你带她离开 求求你了

Please take her, please.

求求你带她离开

Please! Please!

求求你

Please take her!

求求你带她离开

Excuse me, I am Vasily Ignatenko's wife.

对不起 我是瓦西里·伊格纳滕科的妻子

He's a fireman. Ignatenko.

他是消防员 伊格纳滕科

Ignatenko, Sixth Paramilitary Fire and Rescue Unit.

伊格纳滕科 军事第六消防和救援站的

I need to find him. Please.

我得找到他 求求你了

Ignatenko...

伊格纳滕科...

He's being transported by helicopter to Moscow.

他要被直升机转送去莫斯科

Hospital number six.

第六医院

Why, is he all right? Can I see him?

为什么 他不要紧吧 我能看他吗

You want to see him? Go to Moscow.

你想见他 那去莫斯科吧

But they're not letting us leave here.

但他们都不让我们离开这里

Tell them Major Burov allows it.

告诉他们布洛夫少校批准了

- Oh. When are they taking him? - Now.

-他们什么时候带他走 -现在

We're approaching the power plant.

我们正在接近核电厂

What have they done?

他们做了什么

Can you see inside?

你能看见内部吗

I don't have to. Look.

我不需要 看

That's graphite on the roof.

房顶上就有石墨

The whole building's been blown open.

整个厂房都被炸开了

The core's exposed!

堆芯已经暴露了

I can't see how you can tell that from here.

我不明白你怎么从这儿就能断定

Oh, for God's sakes.

我的天

Look at that glow!

看见那光晕了吗

That's radiation ionizing the air!

那是放射线离子化空气的结果

Well, if we can't see, we don't know.

眼见才能为实

- Get us directly over the building! - Boris,

-直接开到厂房上方去 -鲍里斯

- Don't you use my name! - if we fly...

-不许直呼我名字 -如果我们飞到...

...directly over an open reactor, we'll be dead within a week!

暴露的反应堆上空 我们一周内就会死

Dead!

会死



Sir?

长官

Get us over that building, or I'll have you shot!

飞到厂房上面去 否则我枪毙你

If you fly directly over that core, I promise you,

如果你直接飞到堆芯上方 我向你保证

by tomorrow morning, you'll be begging for that bullet.

明天早上 你会巴不得被枪毙

Perhaps if you came back another day.

也许你最好改天再来

Just wonderful.

太好了

Deputy Secretary Garanin.

格拉宁副书记

Ulana Khomyuk of the Byelorussian Institute for Nuclear Energy.

白俄罗斯核能研究所的乌拉娜·霍缪克

What a pleasure.

幸会

Let me introduce--

我来介绍一下

I'm here about Chernobyl.

我是为切尔诺贝利而来

Such a lovely time.

谈得太愉快了

- Visit again soon. - I will. Thank you.

-尽快再来吧 -我会的 谢谢

I must tell you, this is why no one likes scientists.

我必须告诉你 这就是大家不喜欢科学家的原因

When we have a disease to cure, where are they?

当我们需要治好疾病时 他们跑哪去了

In a lab, noses in their books, and so Grandma dies.

在实验室 埋头苦读 于是老太太就死了

But when there isn't a problem,

可是没事的时候

they're everywhere, spreading fear.

他们到处跑 散布恐惧

I know about Chernobyl.

我知道切尔诺贝利的事了

I know that the core is either partially or completely exposed.

我知道堆芯部分或全部暴露在外了

- Whatever that means. - And that if you don't immediately  
-鬼知道那什么意思 -如果你不立即

issue iodine tablets and then evacuate this city,  
发放碘片并组织撤离整座城市

hundreds of thousands of people are going to get cancer,  
数十万人会罹患癌症

and God knows how many more will die.  
而还不知道要死多少人

Yes, very good.  
非常好

There has been an accident at Chernobyl,  
切尔诺贝利确实出了事故

but I've been assured there is no problem.  
但我被告知绝对没有问题

I'm telling you that there is.  
我现在告诉你有问题

I prefer my opinion to yours.  
我更倾向于我的意见

I'm a nuclear physicist.  
我是核物理学家

Before you were Deputy Secretary,  
在你成为副书记之前

you worked in a shoe factory.  
你在一家鞋厂工作

Yes, I worked in a shoe factory.  
对 我之前确实在鞋厂工作

And now I'm in charge.  
但现在我说了算

"To the workers of the world."  
"敬全世界的工人"

Stable iodine will keep your thyroid  
碘片会避免你的甲状腺

from absorbing radioactive iodine.  
吸收放射性碘

Take one a day for as long as they last.  
每天服用一粒 直到吃完

And go east.  
而且向东走

Get as far from Minsk as you can.  
离明斯克越远越好

It's overkill.

做得太过火了

Pikalov's showing off to make us look bad.

皮卡洛夫在炫耀 为了让我们难堪

It doesn't matter how it looks.

看起来怎么样不重要

Shcherbina is a pure bureaucrat,

谢比纳是个纯粹的官僚

as stupid as he is pigheaded.

他既顽固又愚蠢

We'll tell him the truth in the simplest terms possible.

我们用最简单的语言把真相告诉他

We'll be fine.

我们会没事的

Pikarov!

皮卡洛夫

Comrade Shcherbina, Chief Engineer Fomin,

谢比纳同志 总工程师福明

Colonel General Pikalov, and I

皮卡洛夫大将和我

are honored at your arrival.

为您的莅临深感荣幸

Deeply, deeply honored.

非常非常荣幸

Naturally, we regret the circumstances of your visit,

当然 对于在此情况下会面我们表示遗憾

but, as you can see, we are making excellent progress

但如您所见 我们正在控制损失方面

in containing the damage.

取得卓越的进展

We have begun our own inquiry into the cause of the accident,

我们已经开始对事故原因进行调查

and I have a list of individuals

这里是一张名单

who we believe are accountable.

写着事故的相关责任人

Professor Legasov, I understand

列加索夫教授 我听说

you've been saying dangerous things.

你一直在说些危险的话

Very dangerous things.

非常危险

Apparently, our reactor core exploded.

据说我们的堆芯爆炸了

Please, tell me how an RBMK reactor core explodes.

请告诉我 RBMK 核反应堆堆芯怎么会爆炸

I'm not prepared to explain it at this time.

我现在还无法做出解释

As I presumed, he has no answer.

正如我所料 他不知道

It's disgraceful, really.

真是可耻 真的

To spread disinformation at a time like this.

在这种时候散播虚假信息

Why did I see graphite on the roof?

我为什么在楼顶上看到了石墨

Graphite is only found in the core,

石墨只在堆芯里才有

where it's used as a neutron flux moderator.

它被用作中子通量调节剂

Correct?

对吗

Fomin, why did the Deputy Chairman see graphite on the roof?

福明 为什么副主席在楼顶上看到了石墨

Well, that... that can't be.

这不可能

Comrade Shcherbina, my apologies, but graphite...

谢比纳同志 抱歉 但是石墨...

that's not possible.

这不可能

Perhaps you saw burnt concrete.

也许你看到的是烧焦的混凝土

Now there you made a mistake,

这你就错了

because I may not know much about nuclear reactors,

因为我可能不怎么懂核反应堆

but I know a lot about concrete.

但我对混凝土很了解

- Comrade, I assure you-- - I understand.

-同志 我向你保证... -我明白



You think Legasov is wrong.

你觉得列加索夫错了

How shall we prove it?

我们怎么证明呢

Our high-range dosimeter just arrived.

我们的大量程剂量计刚刚运到了

We could cover one of our trucks with lead shielding,

我们可以用铅屏蔽我们的一辆卡车

mount the dosimeter on the front.

把剂量计装在前面

Have one of your men get as close to the fire as he can.

让你的手下尽可能接近火灾现场

Give him every bit of protection you have.

给他足够多的保护

But understand that even with lead shielding,

但记住 就算有铅屏蔽

it may not be enough.

可能还是不够

Then I'll do it myself.

那我就自己去

Good.

很好

He's back.

他回来了

It's not three roentgen.

根本不是 3 伦琴

It's 15,000.

是 15000 伦琴

Comrade Shcherbina--

谢比纳同志

What does that number mean?

这个数值意味着什么

It means the core is open.

意味着堆芯炸开了

It means the fire we're watching with our own eyes

意味着我们肉眼可见的火灾

is giving off nearly twice the radiation

比广岛原子弹释放的辐射

released by the bomb in Hiroshima.

要高出将近两倍

And that's every single hour.

那还是每个小时的量

Hour after hour, 20 hours since the explosion,

一小时接一小时 爆炸已经过了 20 小时了

so 40 bombs worth by now.

现在已是 40 颗原子弹的当量了

Forty-eight more tomorrow.

明天又再加 48 颗

And it will not stop. Not in a week, not in a month.

而且它不会停下 一周或一个月后都不会停

It will burn and spread its poison

它会一直燃烧 扩散有害物质

until the entire continent is dead.

直到整个大陆都完蛋

Please escort Comrades Bryukhanov and Fomin

请护送布卡诺夫同志和福明同志

to the local party headquarters.

到当地的党总部去

- Thank you for your service. - Comrade--

-谢谢你们的服务 -同志...

You're excused.

你们可以走了

Dyatlov was in charge.

是迪亚特洛夫负责的

It was Dyatlov!

是迪亚特洛夫

- Tell me how to put it out. - We'll use helicopters.

-告诉我怎么扑灭 -我们用直升机

We'll drop water on it like a forest fire.

像灭林火那样浇水

No, no. You don't understand.

不行 你不明白

This isn't a fire.

这不是火灾

This is a fissioning reactor core

这是个裂变中的反应堆堆芯

burning at over 2,000 degrees.

以超过两千度的高温燃烧

The heat will instantly vaporize the water--

热量会瞬间将水汽化...

How do we put it out?

那我们如何扑灭

You are dealing with something

你所面临的是

that has never occurred on this planet before.

这个星球上从没发生过的灾难

Boron.

硼

Boron and sand.

硼和沙子

Well, that'll create problems of its own,

尽管那会产生其他的问题

but I-I don't see any other way.

但我...我不知道还有什么办法

Of course, it's going to take thousands of drops,

当然了 需要成千上万次的投放

because you can't fly the helicopters directly over the core,

因为你不能把直升机开到堆芯正上方去

so most of it is going to miss.

所有多数投放物会偏离目标

- How much sand and boron? - Well, I can't be--

-要多少硼和沙子 -我没法...

- For God's sake, roughly! - Five thousand tons.

-老天 大概就行了 -五千吨

And obviously, we're going to need to evacuate an enormous area--

而且 显然我们要疏散一大片区域

Never mind that. Focus on the fire.

不用管那个 集中精力灭火

I am focusing on the fire.

我是在集中精力灭火

The wind, it's carrying all that smoke,

风正卷着所有的烟

all that radiation.

所有的放射性物质扩散

At least evacuate Pripyat. It's three kilometers away.

至少疏散普里皮亚季 离这儿只有三公里

- That's my decision to make. - Then make it.

-那事由我决定 -那就决定吧

- I've been told not to. - Is it or is not--

-我被命令不能疏散 -你到底是不是...

I'm in charge here!

这里我负责

This will go much easier if you talk to me

如果你只和我讲你明白的事情

about the things you do understand

而不要谈你不明白的事的话

and not about the things you do not understand.

那一切都会简单得多

Where are you going?

你去哪

I'm going to get you 5,000 tons of sand and boron.

我去给你调五千吨沙袋和硼

There's a hotel.

有家酒店

I'd prefer one of those.

我想用那个杯子

Superstitious?

是迷信吗

Moscow?

莫斯科来的

Are you here because of the fire?

你是为火灾来的吗

Anything we should be worried about?

有什么我们需要担心的吗

No.

没有

We're in position. Approaching drop.

我们就位了 接近投放点

Clear to proceed.

开始

Copy. We'll go one by one in rotation.

收到 我们会一架一架地轮流投放

Remind them about the perimeter.

提醒他们注意距离限制

They cannot fly directly over the fire.

他们不能直接飞到火焰上方去

A minimum of a ten-meter perimeter.

至少保持 10 米距离

Ten meter perimeter. Copy.

10 米距离 收到



Lead one, err preflight, maintain minimum ten-meter perimeter.

L1 准备投放 至少 10 米距离

Copy that.

收到

Forty meters... 35...

40 米...35 米...

30...

30 米...

No, no, no! They're too close!

不行 他们飞得太近了

They can't get over the fire. How are they supposed--

他们不能飞到火焰上方 那要怎么...

The wind will have to carry it.

只能让风吹过去

Tell them, they cannot go over the core.

告诉他们 他们不能飞到堆芯上

Lead One is too close.

L1 太近了

I repeat, they are too close.

我重复一遍 他们太近了

Copy.

收到

Lead One, you are inside the perimeter.

L1 你已经飞进危险距离内了

Did not copy. Signal's breaking up.

没有收到 信号不良

Lead One?

L1

Do you copy?

你收到了吗

Lead One, do you copy?

L1 你收到了吗

Lead One, come in.

L1 请回话

Do you copy, Lead One?

你收到了吗 L1

Lead One!

L1

Sir? What do I tell the others?

长官 我怎么指挥其他人

Is there any other way, Legasov?

还有别的办法吗 列加索夫

Send the next one in.

派下一架飞机进去

Tell them to approach from the west.

告诉他们从西边靠近

Kurchatov Institute Laboratory Four.

库尔恰托夫原子能研究所第四实验室

Marina Gruzinskaya,

玛丽娜·古泽斯卡亚

it's Ulana Khomyuk from Minsk.

我是明斯克的乌拉娜·霍缪克

Oh, yes, how nice of you to phone.

是的 你能打电话来真是太好了

- It's been too long. - It has.

-我们很久没联系了 -没错

I was actually calling about our friend.

我打电话是想问问我们的朋友

- You know, the one in the country. - Oh, yes, of course.

-就是在乡下那个 -当然

I wanted to see how he's doing. It's so hot there right now.

我想问问他现在怎么样 那里现在好热

Yes, it's extremely hot,

是的 非常热

but his nephews are flying down,

但是他的侄子们正要飞过去

and they always bring cool weather.

他们总是可以让天气凉爽下来

Oh? Which nephews?

是吗 哪个侄子

Simka, who's 14, and little Boris, who's five.

西姆卡 14 岁 小鲍里斯 5 岁

Well, that's wonderful.

太好了

Though children can make you even hotter

不过孩子爬在你身上时

when they're crawling all over you.

会让你觉得更热

Maybe I should visit them.

也许我应该去看看他们

No, they don't want visitors.

不用了 他们不欢迎访客

I'm sorry, um, I have to get back to work.

对不起 我得回去工作了

It's very busy right now. Goodbye.

我现在很忙 再见

They're dropping sand and boron on the fire.

他们在往火上投放沙子和硼

It's what I would do.

要我也会那么做

Yes, I'm sure it is.

没错 我想也是

Where are you going?

你要去哪里

Chernobyl.

切尔诺贝利

It's been smooth. Twenty drops.

一切都很顺利 二十次投放

What?

怎么了

There are 50,000 people in this city.

这个城市有五万人

Professor Ilyin, who's also on the commission,

伊林教授 委员会成员之一

says the radiation isn't high enough to evacuate.

他说这点辐射用不着疏散

Ilyin isn't a physicist.

伊林不是物理学家

Well, he's a medical doctor.

他是个医生

If he says it's safe, it's safe.

如果他说安全 那就安全

Not if they stay here.

但他们留在这儿就不安全

We're staying here.

我们就留在这里

Yes, we are, and we'll be dead in five years.

没错 所以我们活不过五年

I'm sorry, I...

对不起 我

I'm sorry.

我很抱歉

Shcherbina.

我是谢比纳

Thank you.

谢谢

A nuclear plant in Sweden has detected radiation

瑞典的一座核电站检测到了辐射

and identified it as a byproduct of our fuel.

并分辨出是我们燃料的副产品

The Americans took satellite photos.

美国人拍了卫星照片

The reactor building, the smoke, the fire.

反应堆建筑 烟雾 还有火灾

The whole world knows.

全世界都知道了

The wind has been blowing toward Germany.

风一直吹向德国

They're not letting children play outside...

法兰克福 已经禁止孩子们

in Frankfurt.

去外面玩

Want a smoke?

想抽烟吗

There has been a nuclear accident in the Soviet Union

苏联境内发生了一起核事故

and the Soviets have admitted that it happened.

苏联也承认消息属实

The Soviet version is this.

苏联方面称

One of the atomic reactors

基辅市附近

at the Chernobyl Atomic Power Plant near the city of Kiev was damaged,

切尔诺贝利核电站内一处反应堆受损

and there is speculation in Moscow

莫斯科有推断称

that people were injured and may have died.

可能已有人受伤甚至死亡

The Soviets may have been fairly quick to acknowledge the accident



苏联如此痛快地承认了事故的发生

because evidence in the form of mild nuclear radiation

可能是因为证据已以轻微核辐射的形式

had already reached beyond the Soviet borders to Scandinavia.

穿越了苏联边界 到达斯堪的纳维亚

I said turn around. This is a restricted zone.

我说了掉头 这里是禁区

I'm from the Byelorussian Institute for Nuclear Energy.

我来自白俄罗斯核能源研究所

Do you have permission?

你有许可吗

Listen to me, I need to speak to someone urgently.

听着 事情紧急 我得找人谈谈

Turn around right now, or I'll arrest you.

马上掉头 要不然我就逮捕你

If you arrest me,

如果你要逮捕我

you should take me to the highest possible authority.

就带我去见最高负责人

We have to start a radiological survey.

我们需要展开放射性调查

Sector by sector, on foot, dosimeters in hand.

一个区一个区的来 徒步 手持剂量仪

Are you all right?

你还好吗

Of course.

当然

Comrades--

同志们

The guards arrested this woman at the south checkpoint.

警卫在南部检查点逮捕了这个女人

I'd have put her in a cell--

我本该把她关进牢房

But he thought you should know that I know.

但是他觉得你们应该知道我都知道

I know that your reactor core is exposed.

我知道你们的反应堆芯爆炸了

I know the graphite is on fire, the fuel is melting,

我知道石墨着火了 燃料正在融化

and you're dropping sand and boron on it,

以及你们在反应堆上方投放沙子和硼

which you probably thought was smart, but you've made a mistake.

你们可能觉得这很明智 但你们犯了个错

Ulana Yuriyvna Khomyuk, Chief Physicist,

乌拉娜·尤里伊芙娜·霍缪克 首席物理学家

Byelorussian Institute for Nuclear Energy.

就职于白俄罗斯核能源研究所

And you are Valery Alexeyevich Legasov?

你是瓦列利·阿列克谢维奇·列加索夫吗

Smothering the core will put the fire out,

覆盖堆芯的确能灭火

but the temperature will eventually increase--

但是最终 温度还是会增加到

Believe me, I'm perfectly aware.

相信我 我很清楚

But I estimate at least a month

但我估计至少需要一个月

before it melts through the lower concrete pad,

堆芯才会熔穿下部的混凝土层

- which gives us time-- - No, you don't have a month.

-这能给我们时间 -不 没有一个月

You have approximately two days.

大约只有两天

Yes, the fuel would take a month

的确 燃料需要一个月的时间

to reach the concrete pad here.

才能到达这里的混凝土层

But first... it's going to burn through

但是首先 在周二之前

the biological shield here by Tuesday.

就会熔穿这里的生物屏障

And when it does, it's going to hit these tanks--

一旦熔穿 燃料就会进入这些水箱

bubbler pools, reservoirs--

起泡池 蓄水池

Reservoirs for the ECS. I understand your concern,

应急冷却系统的蓄水池 我理解你的担忧

but I confirmed it with plant personnel.

但是我得到了工厂员工的证实

- The tanks are nearly empty. - No, they were nearly empty.

-水箱基本上都空了 -不 之前是空的

Each of these points here, here, and here

所有这些点 这里 这里 还有这里

all drain to the bubbler pools.

都将水排放至起泡池

I'm guessing that every pipe in the building ruptured.

我猜核电站里的管道应该已经全部破裂

And then there are those fire engines that I saw on the way in.

加上我来时看到的那些消防车

The fire hoses are still connected.

消防软管还连着呢

They've been gushing water into the structure this whole time.

他们一直都在向建筑物喷水

The tanks are full.

水箱是满的

The tanks are full.

水箱是满的

I have ten minutes, then I'm back on the phone

我只有十分钟时间 然后又得接着打电话

apologizing to our friends,  
向所有的友国致歉

apologizing to our enemies.  
向我们的敌国致歉

Our power comes from the perception of our power.  
我们的力量取决于自我认知

Do you understand the damage this has done?  
你们明白这次事故造成了多大损失吗

Do you understand what's at stake?  
你们明白这事关多么重大吗

Boris.  
鲍里斯

Professor Legasov will deliver our briefing.  
列加索夫教授将进行汇报

There is some good news.  
有好消息

The air drops are working to douse the fire.  
空投在有效地减小火势

There's been a reduction in radionuclide emissions,  
放射性核素排放量也有所减少

but the fire will not be extinguished

但火还要至少两周

for at least another two weeks.

才能被灭掉

There is also an additional problem.

另外还有一个问题

Nuclear fuel doesn't turn cold

核燃料就算没着火

simply because it is not on fire.

也不会冷却下来

In fact, the temperature will likely rise

事实上 其温度有可能会上升

as a result of the blanket of sand we've dropped.

因为我们投放了一层沙子

The uranium will melt the sand,

铀会融化沙子

creating a kind of lava

形成熔岩

which will begin to melt down through the shield below.

熔掉下面的保护屏障

You have made lava?

你制造了熔岩

I anticipated this.

这在预料之中

I believed there was time to reinforce

我本以为有足够的时间来加固

this lower concrete pad

下面的混凝土保护层

before the lava reached the earth

避免熔岩侵入地下

and contaminated the groundwater.

污染地下水

But as it turned out, I was worried about the wrong thing.

但事实证明 我考虑错了方向

It was my understanding that these large water tanks

因为我本以为反应堆下面的

under the reactor were essentially empty.

大型水箱几乎是空的

This is Ulana Khomyuk of the Byelorussian Institute.

这位是白俄罗斯核能源研究所的乌拉娜·霍缪克



Thanks to her insight, we are now aware

多亏了她 我们意识到

that the tanks are, in fact, full.

水箱现在其实是满的

Of water. Why is that a problem, professor?

装满了水而已 这有什么问题吗 教授

When the lava enters these tanks,

当熔岩进入这些水箱

it will instantly superheat and vaporize

水会立即过热并蒸发

approximately 7,000 cubic meters of water,

水箱一共有约七千立方米的水

causing a significant thermal explosion.

这会引起严重的热爆炸

How significant?

有多严重

Everything within a 30-kilometer radius

半径三十公里内的所有东西

will be completely destroyed,

都将被完全摧毁

including the three remaining reactors at Chernobyl.

包括切尔诺贝利剩下的三个反应堆

The entirety of the radioactive material in all of the cores

而堆芯中的所有放射性物质

will be ejected at force

都将被喷射出来

and dispersed by a massive shock wave,

被巨大的冲击扩散开

which will extend approximately 200 kilometers

最远至大约两百公里外

and likely be fatal to the entire population of Kiev

可能对整个基辅地区及明斯克部分地区人民

as well as a portion of Minsk.

造成致命性伤害

The release of radiation will be severe

核辐射的释放量非常巨大

and will impact all of Soviet Ukraine,

将影响整个苏联乌克兰

Latvia, Lithuania, Byelorussia,

拉脱维亚 立陶宛 白俄罗斯

as well as Poland, Czechoslovakia, Hungary,  
以及波兰 捷克斯洛伐克 匈牙利

Romania, and most of East Germany.  
罗马尼亚和东德大部分地区

What do you mean "impact"?  
怎么个影响法

For much of the area, a nearly permanent disruption  
对于大部分地区 几乎会永久破坏

of the food and water supply,  
食物和水的供应

a steep increase in the rates of cancer and birth defects.  
癌症和出生缺陷率急剧上升

I don't know how many deaths there will be, but many.  
我不知道具体的死亡数量 但肯定会很多

For Byelorussia and the Ukraine,  
对于白俄罗斯和乌克兰来说

"impact" means completely uninhabitable  
影响意味着该地区至少一百年

for a minimum of 100 years.  
完全不适合人类居住

There are more than 50 million people  
有超过五千万人

living in Byelorussia and Ukraine.  
居住在白俄罗斯和乌克兰

Sixty, yes.  
六千万人 是的

And how long before this happens?  
我们还有多少时间

Approximately 48 to 72 hours.  
大约 48 到 72 小时

But we may have a solution.  
但是我们也许有办法

We can pump the water from the tanks.  
我们能抽出水箱中的水

Unfortunately, the tanks are sealed shut by a sluice gate,  
但是水箱被阀门封死了

and the gate can only be opened manually  
只能从管道系统内部

from within the duct system itself.  
手动开启

So we need to find three plant workers

所以我们需要三名工人

who know the facility well enough

了解工厂内部的工人

to enter the basement here,

进入地下区域

find their way through all these duct ways,

顺着管道系统

get to the sluice gate valve here,

来到这边的阀门

and give us the access we need to pump out the tanks.

好让我们抽干水箱

Of course, we will need your permission.

当然了 我们还需要你的允许

My permission for what?

我的什么允许

Uh, the water in these ducts,

管道中的水

the level of radioactive contamination--

污染等级很高...

They'll likely be dead in a week.

他们很可能一周后就会死亡

We're asking for your permission to kill three men.

我们需要你的允许 杀死三个人

Comrade Legasov...

列加索夫同志

all victories inevitably come at a cost.

所有胜利都有不可避免的代价

And open the sluice gate valve... here.

然后打开这里的...水阀

The valve will be difficult to operate,

水阀很难操作

so we'll need three men

所以我们需要三名工人

who will need to know the basement layout.

熟知地下区域构造的工人

And, of course, any volunteers will be rewarded.

当然了 自愿的人会有重赏

A yearly stipend of 400 rubles.

每年四百卢布的津贴

And, uh, for those of you working in reactors

如果是本来就在一号和二号反应堆

one and two, promotions.

工作的人 还能得到提拔

Why are reactors one and two still operating at all?

为什么一号和二号反应堆还在工作

My friend was a security guard that night,

我的朋友是那晚的保安

and, uh, she's now dying.

她现在快死了

And we've all heard about the firemen.

我们也都听说了那些消防员的事

And now you want us to swim underneath a burning reactor?

现在你要我们游到一个燃烧着的反应堆下方

Do you even know how contaminated it is?

你知道污染有多重吗

I... I don't have an exact number.

我...我给不出具体的数字

You don't need an exact number to know if it'll kill us.

不需要具体数字也知道这会要了我们的命

But you can't even tell us that.

但你甚至都不敢告诉我们

Why should we do this? For what, 400 rubles?

我们为什么要这么做 为了四百卢布吗

You'll do it because it must be done.

你们要这么做是因为别无选择

you'll do it, because nobody else can.

因为其他人都做不到

And if you don't, millions will die.

否则会有上百万人死去

If you tell me that's not enough, I won't believe you.

如果你们说这个理由还不够 我不信

This is what has always set our people apart.

这是我们民族一向不同于其他人的地方

A thousand years of sacrifice in our veins.

我们血液中流淌千年的牺牲精神

And every generation must know its own suffering.

每一代人必须面对他们的苦难

I spit on the people who did this,

我唾弃这起事故的元凶



and I curse the price I have to pay.

我诅咒我需要付出的代价

But I'm making my peace with it,

但我在接受事实

and now you make yours.

现在轮到你们了

And go into that water.

游到那水下

Because it must be done.

因为必须有人去做

Ananenko.

安纳楠科

Bezpalov.

拜兹帕罗夫

Baranov.

巴拉诺夫