Ethics in Engineering Practice
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Lecture – 38
Key Questions – related to Engineers Rights and Duties & Ethics (Contd.)

Welcome back. We were discussing the very critical questions regarding employment situations of engineers, because this is a very critical area, where you find your professional responsibility is telling you something. Maybe as a person, you are thinking something, but your organization that you are working for or your immediate supervisor, your manager is asking you to do something different, you feel like you have a responsibility towards the public at large. So, this like sometimes who puts you in cross routes to understand like what is your part of responsibility, which are the things like, but what is your inner call regarding these type of issues.

And like sometimes like questions people in ponder on like why should I do these things, what is my personal benefit, what is my gain on in like risking my life, and maybe my job. And to like report about some bad news that is going to happen, maybe something which a professional like knowledge expertises given you like hint on. But, you may feel like in a situation of dilemma, like what is the incentive do I get by reporting about it.

So, why what am I why should I be concerned about it, because I will no longer remain with the organization, when these things are go happen will be going to happen or I mean move to another position also. So, what is the incentives, so of reporting of bad news. So, I said note, I am going to (Refer Time: 02:22) my own job or my own life, so why should I do it? So, these are some like practical questions, which comes to people mind. So, we try to deal with that question in the key question 3.

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So, what we see over here is we will discuss issue over here. So, a forestry service hydrologist finds that or predecessor boosted timber targets by violating forest plan standards designed for the protection of watersheds, and now many of the watersheds in the district are now in poor condition. The watersheds are healing, but could degenerate rapidly, if there is greater than normal precipitation in the coming years.

If bringing this bad news simply puts her in an unwelcome role, neither the hydrologist nor anyone else will want to pass it on. The hydrologist will not even want to recognize the danger herself. She has strong incentives to say nothing and simply hopes that drains will not be too heavy. So, this is the issue. Then if that is so, then why she is going to report about it, so because it may put her in a negative (Refer Time: 04:14) unwelcome role in the organization.

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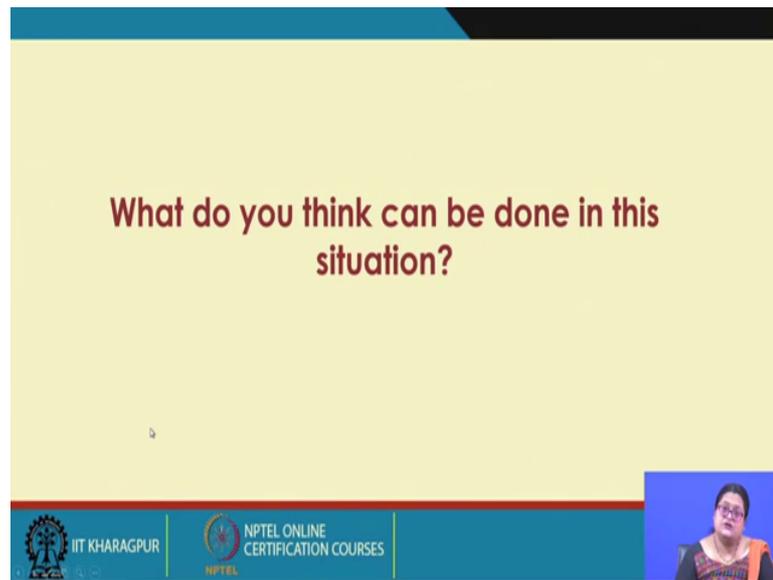
So, what can be done in this particular situation? What is the voice from within which is telling us to do? Like maybe if we understand like this, some people may have done it earlier (Refer Time: 04:36) maybe we are not going to blame the person for it. But, when we have recognized something is wrong which at present, which may have an implication of harm in future should we keep quiet or should we try to act on it, so that is what we will bring you now.

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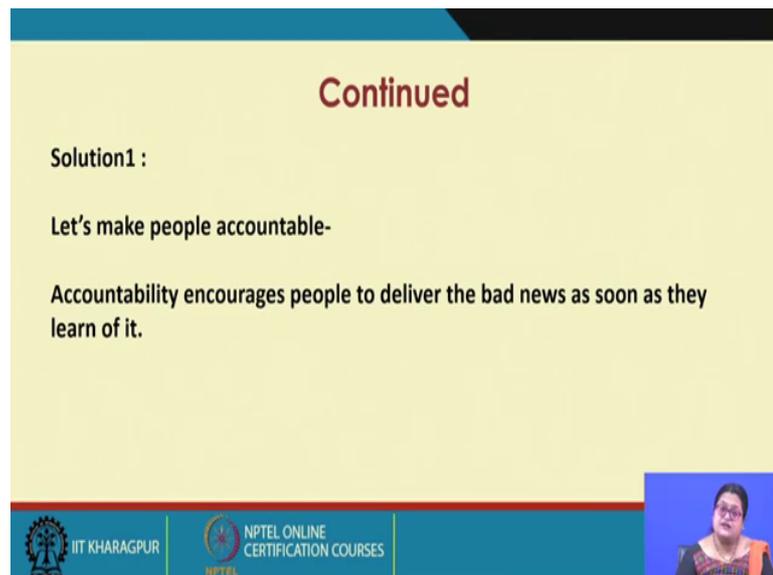
So, what we can do is solution 1 could be is to let make people accountable. So, accountability encourages people to deliver the bad news as soon as they learn about it.
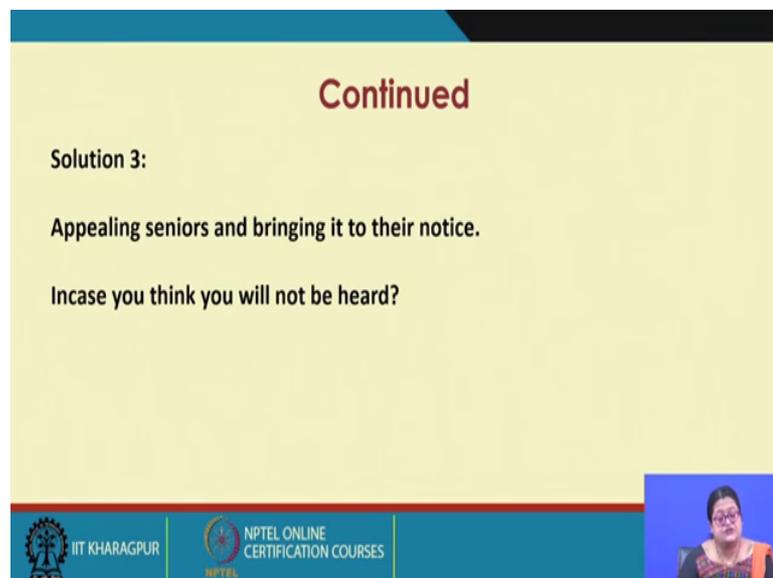
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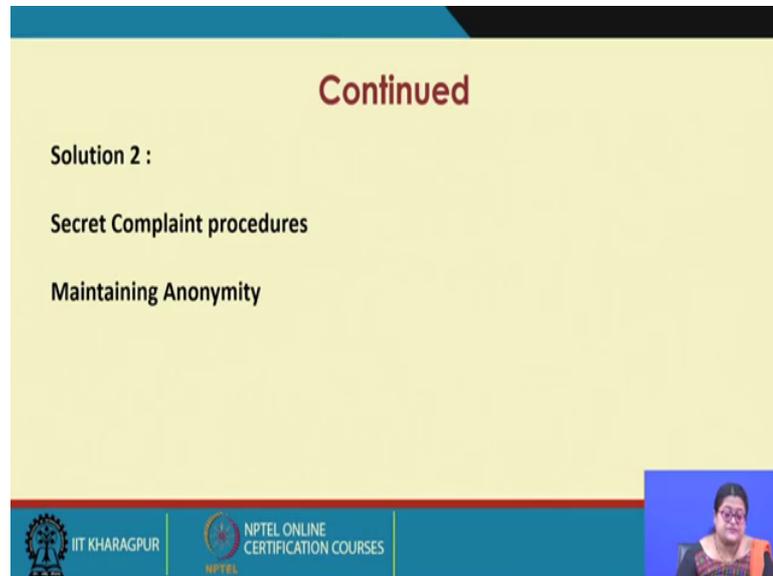
Solution 2 could be secrete complaint procedures, like maintaining anonymity.

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Solution 3 like appealing seniors and bringing it to their notice; so, but what in case if you feel like, you will not be heard?

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Which is the option is whistle blowing. But, we understand like it has repercussions and we have to question this to our self or we prepared for repercussions or not.

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So, if these four questions we are ready to answer like solution 1 is you complain, the 2nd is the procedure, then nobody is listening to it, and 4th is hinting towards the whistle blowing. Most important answer like, before we go on for this it is a series of steps, and like (Refer Time: 06:53) are we ready for the repercussions of it. If yes, then it requires courage for (Refer Time: 07:03).

So, if yes, we definitely move forward for it. And also like whether because the complaint may face all these questions in mind, we have to ensure as a company like there is enough of protection for the whistleblower given by the company. Otherwise, what happens many issues which will remain like or noticed which may have a long term implication on the company.

But, if like it is such like there is a complaint process and people are listening to it, and also whistle blowing means whistle blowing within the organization first, and then outside the organization, and then people do not get like reprimanded for it. And the company protects of whistleblower; then people will be able to bring out more like these type of integrated problems, which may have a long term effect on the maybe the society the environment that that we come to focus, and the company will be able to take like corrective measures before it is too long. But, we need to gives protection to the whistleblower also.

This, are we ready to face the consequence or not? This connects us to the key question 4. Like if you know that engineers at some facility have been retaliated against in the past for raising important ethical issues, what would it take to restore your trust that you could raise issues of a similar nature at a successor organization? So organizations that took over from the first time, why?

So, if you understand like if you see in previous examples, where like people with who tried to whistle blow have faced certain consequences, which were not very like happy consequences for them. So, like how do you restore your trust on the on your organization and like we put similar kind of issues, if it is there to its successor organizations. So, we will we again see that with a small case.

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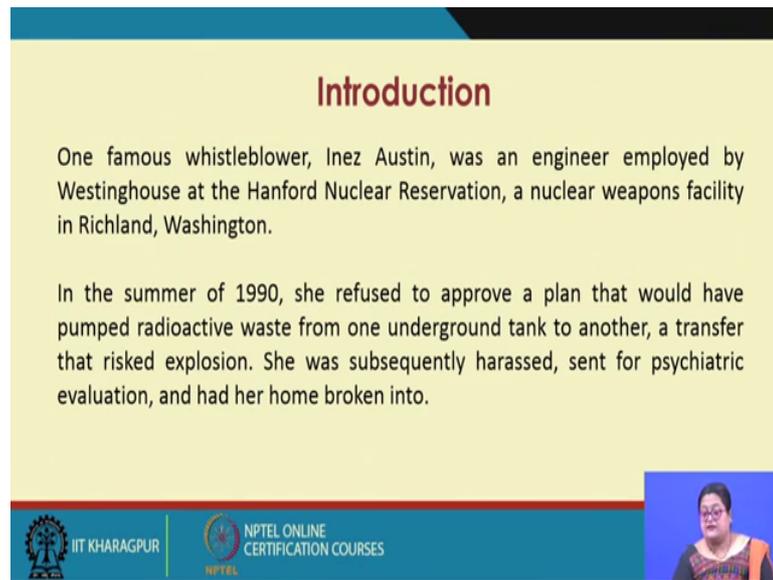
One famous whistleblower, Inez Austin, was an engineer employed by Westinghouse at the Hanford Nuclear Reservation, a nuclear weapons facility in Richland, Washington. In the summer of 1990, she refused to approve a plan that would have pumped radioactive waste from one underground tank to another, a transfer that risked explosion. She was subsequently harassed, sent for psychiatric evaluation, and had her home broken into.

So, these are the consequences that you find, the person who refused to approve a plan has that would have a radioactive waste, so faced. So, if similar kind of situation is happening, then would what would you do in this kind of case is will be a because we have seen, you have learned from experience like people have gone through these consequences would you be ready to face these consequences or not.

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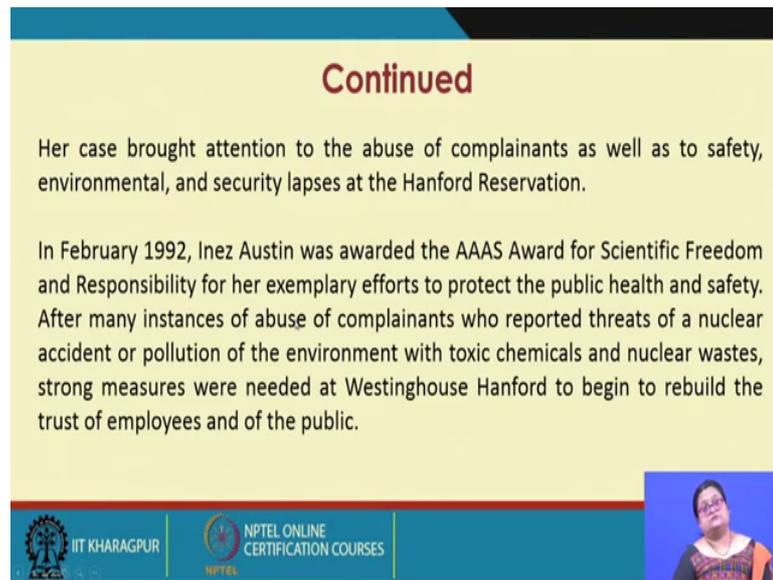
So, her case brought for attention to the abuse of complainants as well as to the safety, environmental, security and lapses at the Hanford reservation. So, in February 1992, Inez Austin was awarded the award for scientific like the AAAS award for Scientific Freedom and Responsibility for her exemplary effort to protect the public health and safety. So, after many instances of abuse of complainants who reported threats of a nuclear accident or pollution of the environment with toxic chemicals in nuclear waste, strong measures were needed at Westinghouse Hanford to begin to rebuild the trust of employees and of the public.

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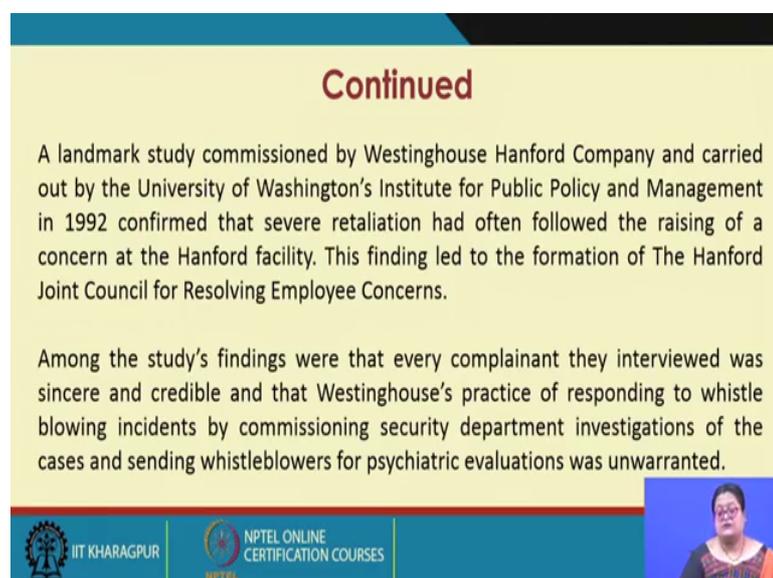
So, what was time was there a landmark study commissioned by Westinghouse Hanford Company and carried out by the University of Washington's institute for Public Policy and Management in 1992 confirmed that severe retaliation had often followed the raising of a concern at the Hanford facility. This finding led to the formation of the Hanford Joint Council for Resolving Employee Concerns. Among the study's findings were that every complainant they interviewed was sincere and credible, and that Westinghouse's practice of responding to whistle blowing incidents. So, by commissioning security department investigations of the cases and sending whistleblowers for psychiatric evaluations was unwarranted.

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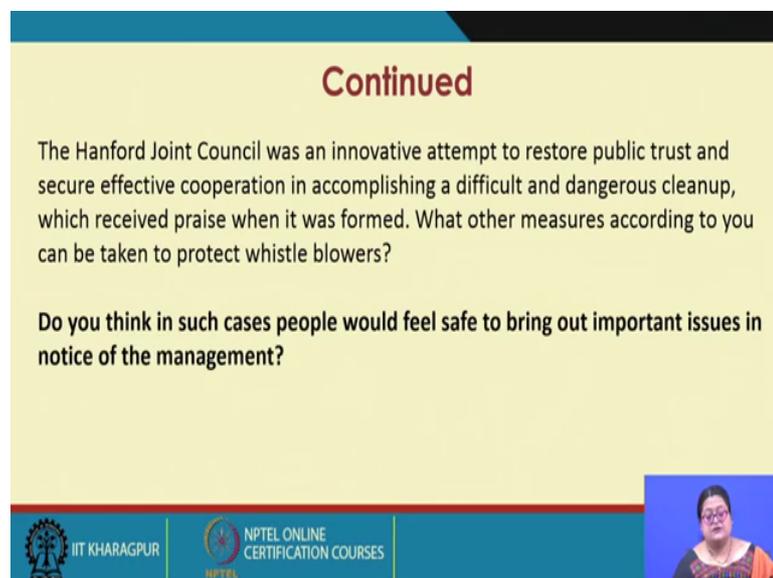
So, the Hanford Joint Council was an innovative attempt to restore public trust and secure effective cooperation in an accomplishing difficult and dangerous cleanup, which received praise, when it was formed. What are the measures like you feel could be taken up to protect whistle blowers? Another is do you think in such cases people would feel safe to bring out important issues to the notice of management? Because, you find in these cases who ever reported, where sent like for psychiatric treatment, so was it.

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So, what can we do like to restore trust? Taking strong actions against those who break the law leadership commitment to ensure safety.

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Independent auditing to make sure that the claims made are correct. This point is very important in the sense. In the earlier discussions, we find found like the sometimes the complaints are made maybe based on assumptions, maybe based on foresight and hindsight and thinking like, I knew it from the start, I (Refer Time: 15:40) like this is going to happen, but may or may not be very well founded on theoretical reasoning. So,

it is like the independent auditors to make sure the claims are correct. This step is really very important.

Independent, protected resolution systems for allegations of retaliation: so independent protected resolution system and formation of committees to conduct investigations. But, it is very important, who are the members of this committee, and whether they are neutral or not. So, do they have any personal interest vested in it? So, whether there were conflicts of interest for people who are forming the committees to conduct the investigation or not? So, those things need to be checked.

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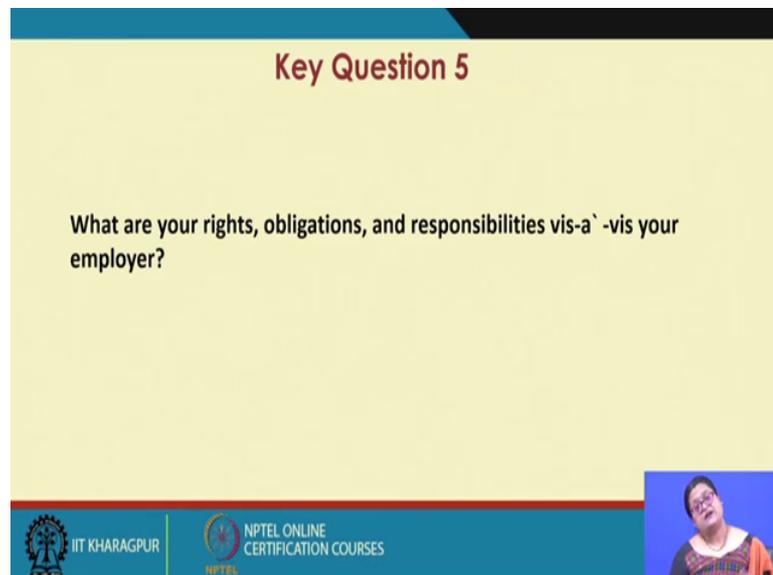
So, then we come to the key question 5. Then if we are talking of whistle blower, if you are talking of like whether we are going to do it, then if you are going to face the same consequences. And then if you are going to like see others have face the consequences, what you are going to do. And if you find like the joint (Refer Time: 17:20) committee is made to like listen to the problems take decisions, and we are talking of then like responsibility, then for them to be neutral and listen to it. So, in the next key question, what we are going to discuss. Then if we are talking of whistle blowing, then do not we have any responsibility, obligations towards our employers.

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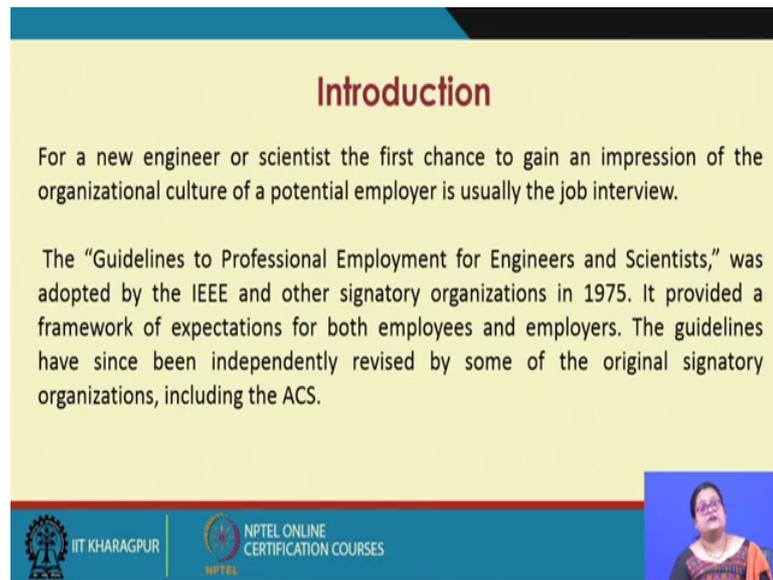
And there we find like for a, the first chance for any new engineer to get an impression of the organization (Refer Time: 18:09) of an organizational culture is through the job interview. So, the Guidelines to the Professional Employment of Engineers and Scientists, was adopted by I triple E and other signatory organizations in 1975. It provided a framework of expectations for both employees and employers. The guidelines have since been independently revised by some of the original signatory organizations, including the ACS.

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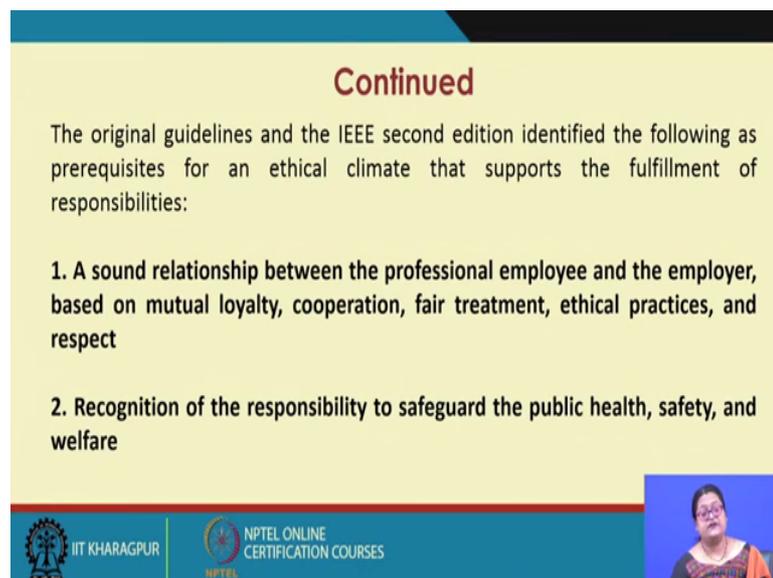
So, first because first impression is very important knowing about the organization culture is very important. So, these guidelines are also very important regarding an ethical climate the supports fulfillment of responsibility. So, it is it tells about the sound relationship between the professional employee and the employer, based on mutual loyalty, cooperation, fair treatment, ethical practices, and respect. Recognition of the responsibility to safeguard the public health, safety and welfare; so, what we find over there? It is a responsibility to safeguard the public health, safety, and welfare. It is a cooperation between the mutual trust and loyalty, fair treatment, ethical practices between the employer and the employee.

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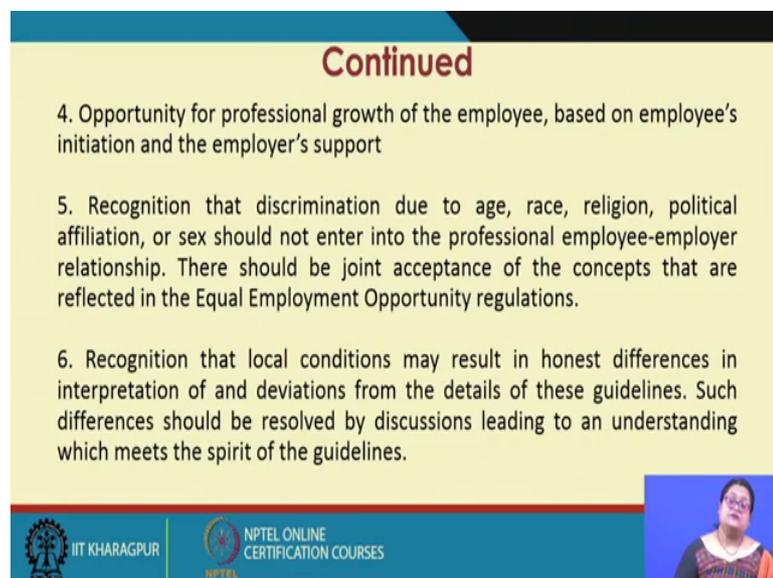
So, opportunity for professional growth of the employees, based on the employee's initiation and employer's support. Understanding that the recognition that the any discrimination due to age, race, religion, political affiliation or gender preferences could not enter into the professional employer-employee relationship. There should be joint acceptance of the concepts that are reflected in the equal employment opportunity regulations

So, recognition that local conditions may result in honest differences in interpretation of and deviations from the details of this guidelines. Such differences should be resolved by the company, it should be resolved by discussions leading to the understanding, which meets the spirit of the guidelines. So, there could be local deviations. So, case to case

deviations, so that needs to be sorted out by having like discussions, so that it is not away from the spirit of the guideline.

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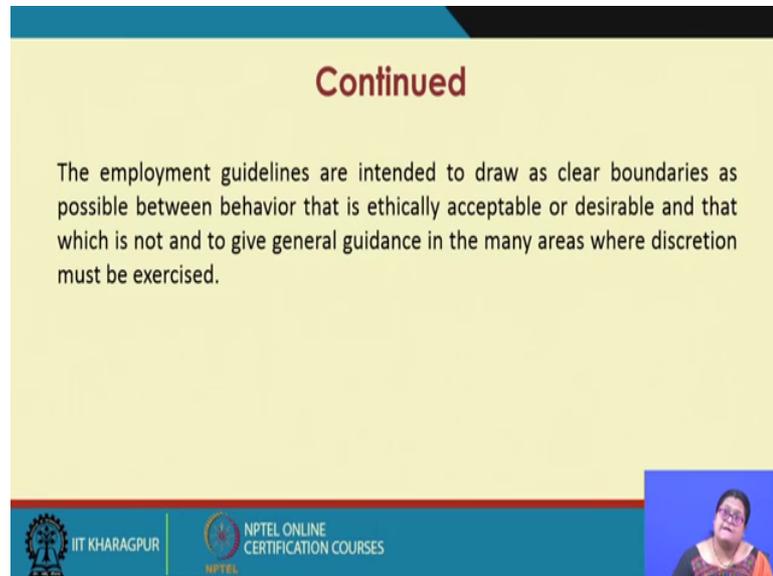
The employee guidelines are, is intended to draw as a clear boundary (Refer Time: 21:35) which is possible between behavior and ethically acceptable and desirable, and which is not and to give general guidance in many of the areas, which were discretion in where discretion needs to be exercised. So, what happens if there is a guideline, we can follow it? So, we can understand as for the perspective of this company, as for the perspective of the society, these are the behaviors, which are acceptable and desirable, and which needs to be repeated. And these are the behaviors, which are not acceptable. And if we have a general guideless, then it helps us to like understand that.

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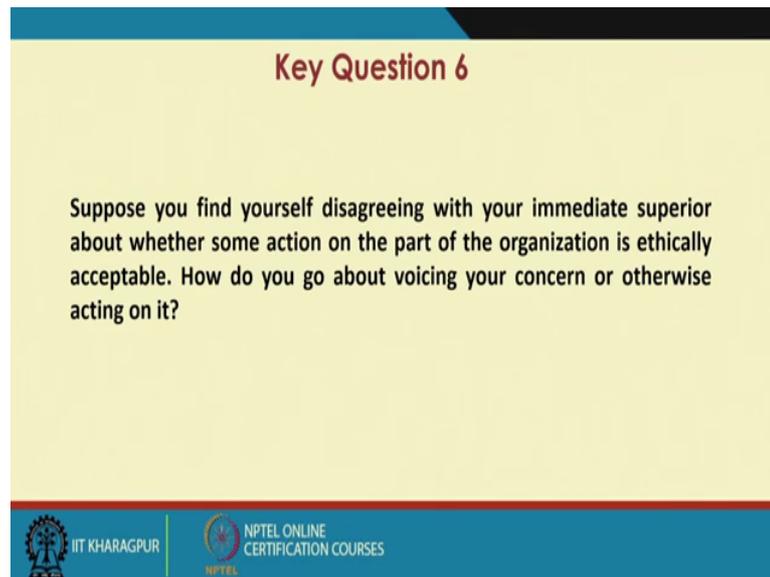
Next, we will come up in the key question 6, which talks of like though there are guidelines written. But still, what we find like if you have like a disagreement with the immediate supervisor, so about whether some action on the part of the organization is ethically acceptable. So, how do you go about voicing your concern? So, in key question 5 that we discussed like if there is a guideline regarding what to do what not to do something is written, then (Refer Time: 23:05) people can follow it, and try to understand.

But still, above those things also there could be certain areas, where people the manager and the engineer maybe interpreting the same thing in two different ways. So, if such things happen, then what you are like how would you go about voicing your concern or otherwise acting on it, because even if there are guidelines, even if you know like you understand like in past whistle blowing has led to certain consequences of someone. Taking all these key questions that we already have discussed, and there maybe organizational acceptable (Refer Time: 24:01) procedures.

So, given all these situations, when you find like you are not disagreement with your immediate boss and whether some action is ethically acceptable or not, and then you have to decide about something. So, how do you go about voicing for it? So, we will discuss with this like if you are having a disagreement with your immediate superior, so about some of the actions in your organization is ethically acceptable or not. So, and you

have like maybe both of you have interpreted the guidelines in different way, so how do you go about like voicing your concern or otherwise acting on it.

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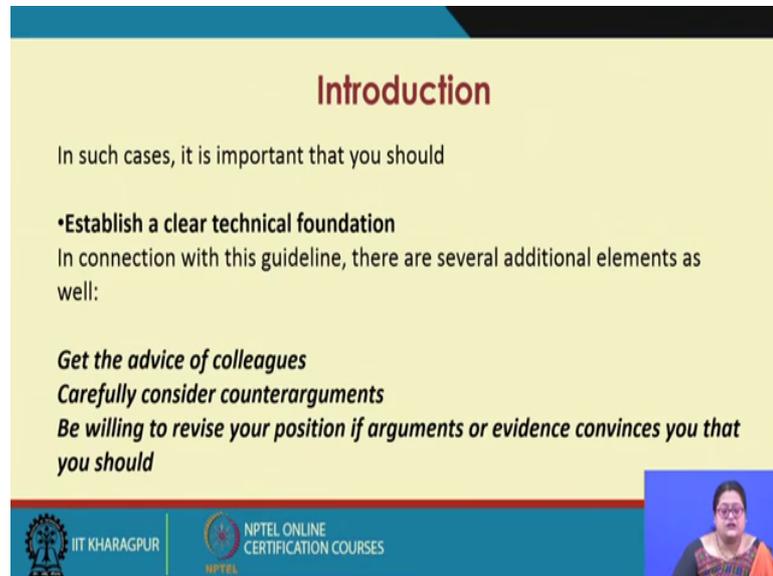
What we find over here is like it is in this connection like when you are seeing like when you have putting a perspective or discussing whether something is ethical or not, you should have a clear technical foundation about it. So, like they you should have a clear technical foundation. As a professional knowledge, you need to get advice of your colleagues.

Then carefully consider counter arguments, because there could be counter arguments. And you need to see if there are any relevant points in the counter arguments also, see we should not be blind towards our own perspective only. Others me when they are telling something, we need to understand their perspective also, and consider it. And if something learning needs to be done from there, we must be open for it also, so that is what the third point is very important like be willing to revise your position, so if the arguments or evidence convinces you that you should be doing it. So, it is not that one could always be correct; there could be some substantial point in the other person's argument also.

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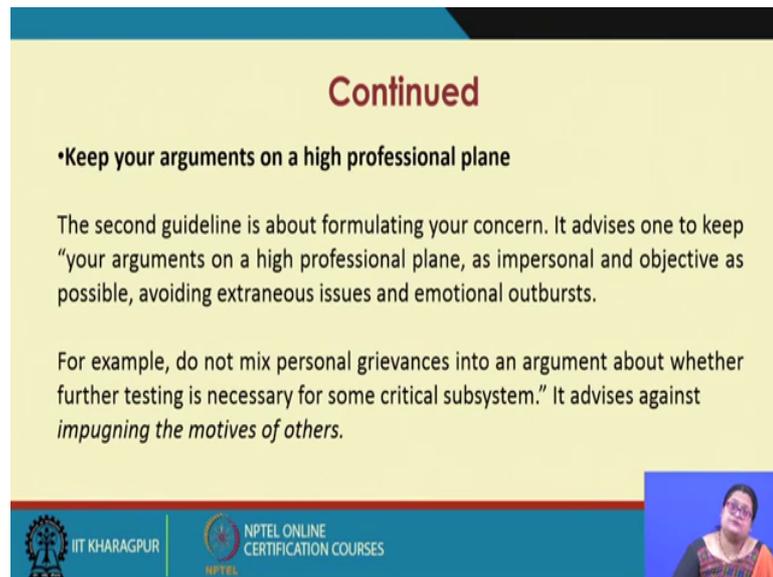
Next important point is the argument should be kept on a very high professional plane. So, the second guideline is about formulating your concern. So, it should be advice it is advisable like the argument should be kept on a high professional plane, as impersonal and as objective as possible, avoiding extraneous issues and emotional outbursts.

For example, we should not mix personal grievances into an argument about whether further testing is necessary and some critical subsystem. So, it advises against impugning the motives of others. So, we should not mix personal grievances. If some critical testing is truly required, then we should go for it. And if it is statistically proven, like this is required, we should be going for it. And it depends on the criticality of the issue also how important.

Like it is like if an error is found, what will be the impact of that error on the total system; we have discussed this cases earlier also. So, even if like can we overlook this error, like and we just go without testing for something, and if you are going for it, then what will be the impact of that on the total system. These things needs to be debated, these things needs to be considered before like we give a suggestions on it, decisions on it, but they should not be taken as personal grievances and arguments, it should be done at a professional and scientific level.

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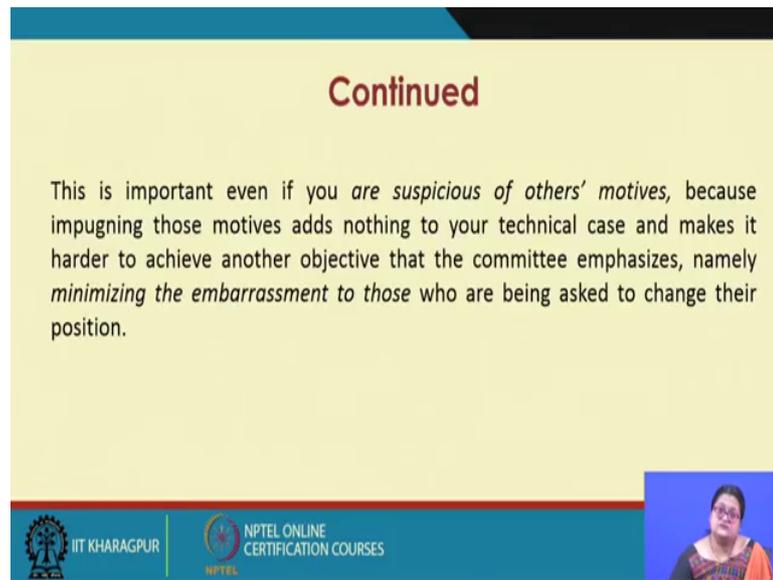
So, if it is this is important like if you even if you were suspicious of others motives, because impugning those motives adds nothing to your technical case and makes it harder to achieve another objective that the committee emphasizes, namely minimizing the embarrassment to those who are being asked to change their position. If somebody is asked to change their position due to the escalation of commitment, they may not be willing to do so, they may feel embarrassed to do so. So, what like before asking someone to change, so we should understand whether the change is truly required, and if required to what extent, and that needs to be explained very carefully in a professional way to the others, who are required to change their original standpoint.
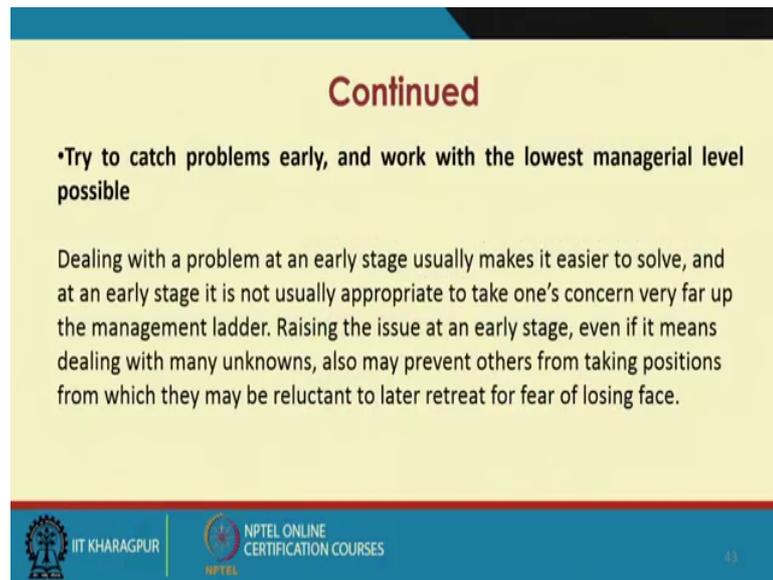
So, another important point over here is that we should try to catch the problems early, and work with the lowest managerial level possible. So, because like dealing with the problem at a very earlier stage is it makes it very easy to solve, and at an early stage it is not very usually appropriate to take one concerns very far up the management ladder. So, it helps in wondered sense, taking the problem very taking the issue at an early stage level like eating prevents others from taking positions from which later on they may not like to retreat, because of fear of losing face.

Because, if a problem is squat at an very early stage, it is easier to solve also, it can be solved at very maybe lower level. And then it does not like if you are involved with a solution for too long because of the sense of because of your commitment, because of the sense of ownership, mentally we take to take tend to take a position for it. And after that if the problem is detected, then it is sometimes people are reluctant to change to for fear of losing face, and that may affect the whole solution and the quality of the product. So, it is very like important to catch the problems early.
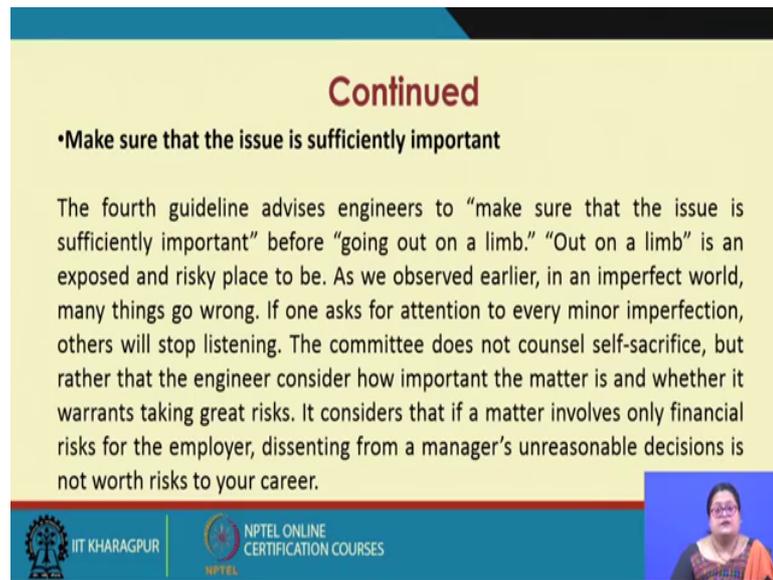
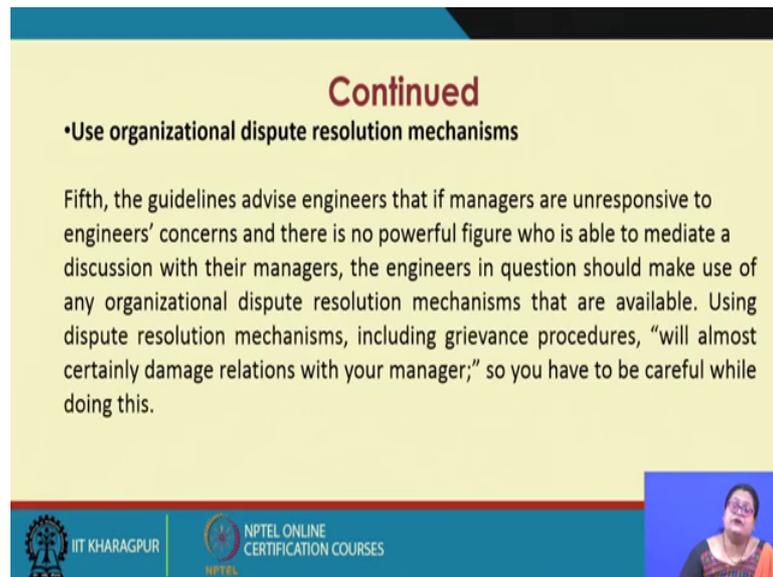To make sure like the issue is sufficiently important. So, the fourth guideline advises engineers to make sure that the issue is sufficiently important before going out on the limb. So, out of the limb is a very exposed and risky place to be. So, if you seen an imperfect world, so many things may go wrong. So, if one asks for attention to minor imperfections, so then others maybe will stop listening.

So, if what it is important to find out likes for (Refer Time: 32:12) issue really very important. So, we should be (Refer Time: 32:19) to judge how important the matter is and whether it warrants taking great risk. So, it considers that a matter if it involves only financial risk with the employer, dissenting from manager's unreasonable decision is not worth risks to your career. So, we have to take like decision of choice like whether the issue is sufficiently important, like if it involves only financial risk for the employer. So, because if you are challenging your manager's decisions and which brings risk to your career; then we should be go for it.

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But, if what if it is a challenge? If it is further greater like society something which is harmful to public health protection safety or not; so, should we go for reporting it, should we go for taking the risk, these are the questions that we need to ask our self, like how important the this thing is. And actually you get (Refer Time: 33:41) there is on, no such thumb (Refer Time: 33:44). Like this is important, this is not important.

Like if we talks of financial risk for your company, and if you truly feel like you know the way that I am doing, the way that I am feeling. And if you know the business processes well, then that is why you like the managing management courses are important for engineers. Like if you know the business processes well, you feel like you can do things in a different way, then your current manager is doing, then you will raise the concern about it. Because, you are an employee of that organization and it is a part of your responsibility to make the organization aware of it.

Use organizational dispute resolution mechanism. The fifth, the guidelines advise engineers that if managers are unresponsive to engineers concern and there is no powerful figure who is able to mediate discussion with their managers, the engineers in question should make use of any organization and dispute resolution mechanism available. Using dispute resolution mechanism including a grievance procedures, will almost certainly damage relations with your manager. So, you have to be careful while using it.

So, you know like first you have to if you are going to discuss something with your manager, first try whether you can solve it over there. Because, this like you going to a dispute resolution mechanism, means that you are adding a legal connotation to it. So, this is definitely going to damage your relationship to certain extent with your manager. So, you have to be careful while doing this. You have to understand, when to go for it and how. Like whatever you are trying to solve in this way can it be solve (Refer Time: 36:08). Have you reached that stage, where nothing can be done, but you have to go through this process only. So, this is again a decision that you need to take about yourself.

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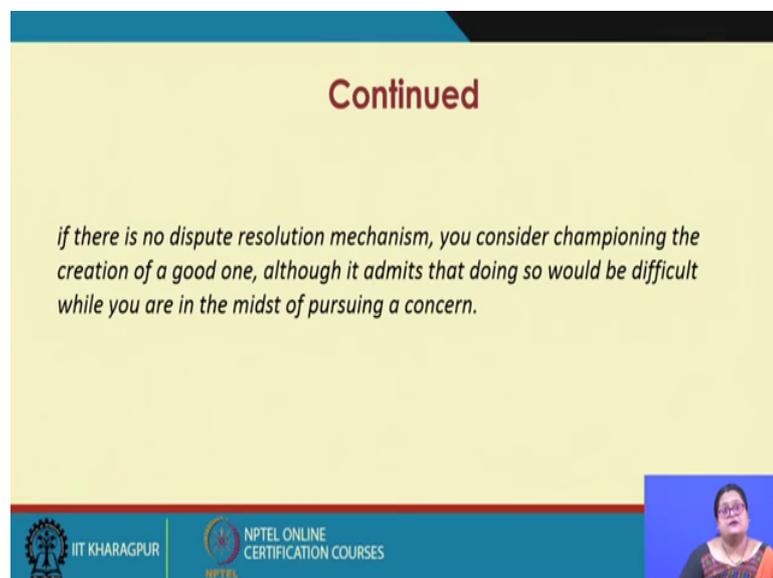
So, you like if there is no dispute resolution mechanism, you consider championing the creation of a good one, although it admits that doing so would be difficult while you are in the midst of pursuing a concern.
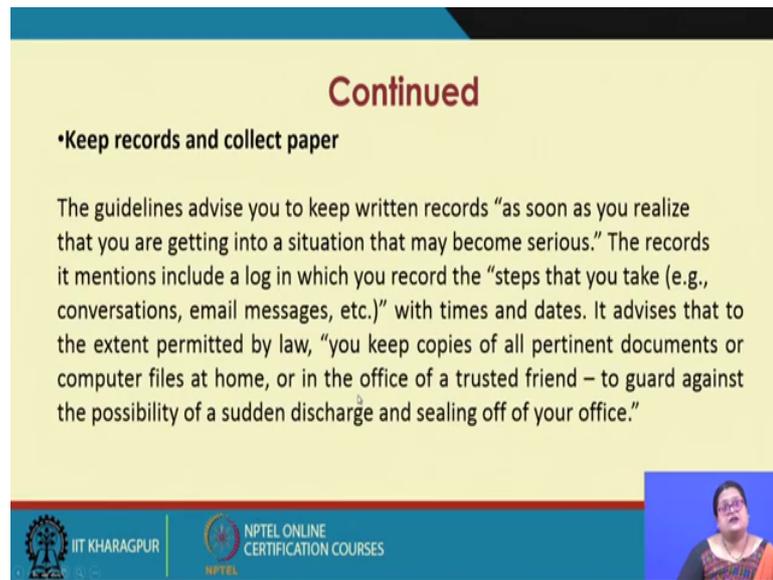
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So, you can start doing it, but you have to see how far you can move forward with it, because you yourself for having a concern and you need to express it. So, you need to keep records and collect papers. So, the guidelines each tells like you have to keep records as soon as you realize that you are moving into a situation, which may become serious. So, the records it mentions should include a log in which you record the steps that you take that is conversations, emails, messages etcetera, with time and date.

It advises that to the extent permitted by law, you keep copies of all pertinent documents or computer files at home, or in the office of a trusted friend to guard against the possibility of sudden discharge, and sealing off your office. Because, if you just see if you are thinking of like if this disagreement may go to certain high level, then though you can you should be ready to face any consequences, and you should be ready to safeguard yourself against these consequences also. And keeping records and collecting papers is one of those safeguard measures.

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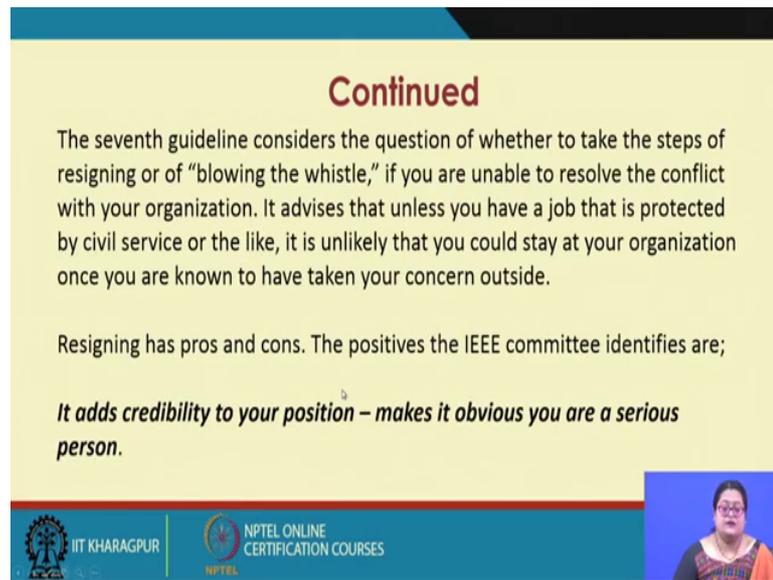
So, the seventh guideline considers the question of whether to take the steps of resigning of blowing the whistle, if you are unable to resolve conflict the, with your organization. It advises that unless you have a job that is protected by civil service or the like, it is unlikely that you could stay inside the organization once you know that you have taken your concerns outside. So, it has both pros resigning has both the pros and cons. The positives of that the, with the IEEE committee identifies is that; it adds credibility to your position makes it obvious like you are a serious person. You could not like maybe your personal values were not in tune with the organizational values like that is why you thought of resigning.

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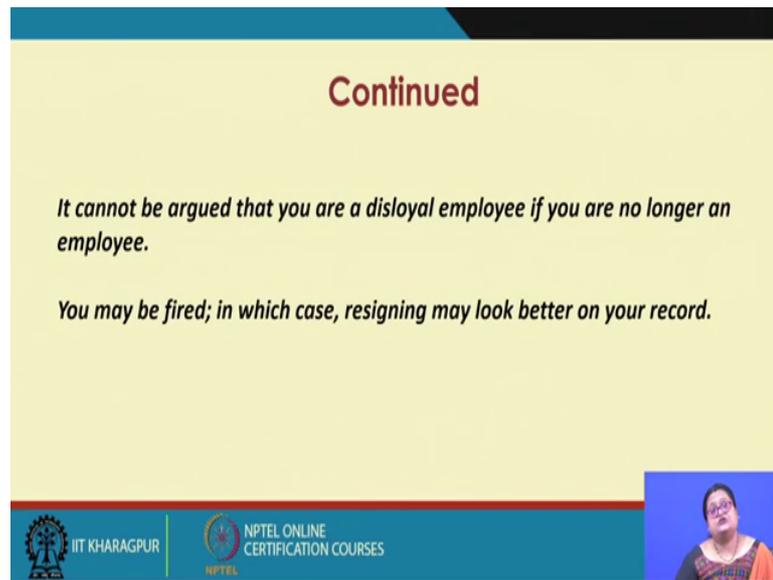
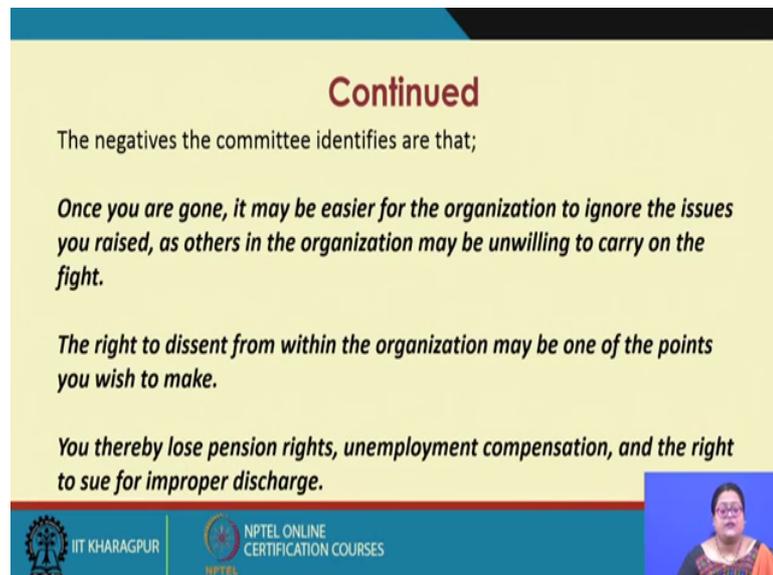It cannot be argued that you are a disloyal employee, if you are no longer an employee. You may be fired in which case resigning may look better on your record. Because, you were trying to raise your voice, like then maybe chances are that you get fired maybe on a wrong cause, so that is why resigning may look better in your records as an option.

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The negatives are like the if you see like once you are gone, it may be easier for the organization to ignore the issues raised, as others organizations may be unwilling to carry on the fight as others in the organization. So, the right to dissent from within the

organization like may be one of the points that you would wish to make. So, you therefore, then you may be losing pension rights, unemployment compensation, and the right to sue for improper discharge.

So, if you remain, so these are the things that which are there as a part of your rights; but if you are resigning, you lose pension rights, unemployment compensation, and right to sue for improper discharge. So, resigning has both positive and negative maybe like ways of saying things, and you like the effect on your carrier, and like working on some of your rights, and what happens with the like issue that you have raised, so and that may lead to a judgment again that you take.

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So, it is important that when people are voicing, there are issue risks associated with voicing. So, people may be viewed as complainers or troublemakers. So, they may receive a negative feedback or poor performance appraisal, may not be considered for promotion. So, these could be the consequences that you may face. But, again there could be chances for you to be a moral leader, and raise your ethical issues concerns. Try to solve that issue within the organization, take your company into your confidence; take your manager into your confidence, moveead. But, if something is not happening quietly in the in the way that you feel like which is good for the public at large, the beneficiaries at large, and your company is maybe in unresponsive to it, then you are you may be

going for whistle blowing, and maybe or you are resigning the different you are complaining.

So, you take different avenues for voicing your protest, and then and we know like you run a risk for something. But, again when you are committed to a cause, so whether it is your personal gain or which is more important to you or the cause that you serve. And the how the like all the stakeholders get benefited from it, though like they are definitely risk involved, we will tell what is the quality of moral leadership, which is they are present within you. We will take up key questions related to moral leadership in the next session.

Thank you till then.