

Interview with

Jose Garcia

By

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and

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**Dr. Lipartito:** September 30<sup>th</sup> 2004 in his home and Mr. Garcia we start with a little bit of your background, your personal history, your your, how you came to work at Kennedy, your educational background, various positions you may have held at Kennedy

**Mr. Garcia:** Ok, I, uh, we moved to Florida in 1957 and shortly thereafter there started hearing about Sputnik on the news and what not. And when I graduated from high school I went to a Junior College in Fort Pierce Florida and graduated in '62. And from there I went to the University of Florida and majored in electrical engineering. And at the time I had two things, We had always bounced around a lot when I was a kid. I wanted to, two things, one, have a a good job, something that I really enjoyed and the other thing was not, I always wanted to be like everyplace I go there were people that were born there and were still there and I was always bouncing around, I was the new guy everywhere. Although that has some advantages you never have any roots. And I felt that was very important and if I was going to raise a family I wanted them to have some some roots.

**Dr. Lipartito:** Where did you come from before uh

**Mr. Garcia:** New York

**Dr. Lipartito:** New York

**Mr. Garcia:** Yeah, the south Bronx, we got in a little bit of trouble and dad (laughter), I thought he was crazy at the time. You kind of have blinders on

**Dr. Lipartito:** Hm, hm

**Mr. Garcia:** You don't know what the rest of the world is like, you just know you've been brought up in and where you're at and and I think back now and I for the life of me, how could I have been so stupid not to see I'd have been in Jail or dead right now if my dad hadn't moved us out of the South Bronx and at the time I thought he was nuts. But he saw it, he

was a Chef at the Waldorf Astorian and and said "That's it, I'm not raising my family here" and he quit his job and packed up and we came to Florida and then he looked for a job.

**Dr. Lipartito:** Did you move to Fort Pierce?

**Mr. Garcia:** No, we we went down to stay with a friend of his that use to be a Chef. It's funny, because we got down to Miami and we stayed with his friend and he went, he left that after, we got in that morning, we had lunch and he left. When he came back he had a job as a Chef at the Fountain Bleu at Miami Beach. And so he worked there and we were there that summer and then he was looking for someplace, a little restaurant or something, where to move. And they found this little restaurant in Fort Pierce and so he, we packed up, he quit his job at the Fountain Bleu, he worked there three months, I think. And we came up and we, my mom and my brother stayed home and my dad and me and another brother took off went up and got the furniture and drove it down, whatever. And that's how we ended up in Fort Pierce

**Dr. Lipartito:** How old were you?

**Mr. Garcia:** I was fifteen

**Dr. Lipartito:** Fifteen

**Mr. Garcia:** And we got in, geez. You know, we were the good kids up North and we were really the bad ones down here. It was all relative, you know, just the things, just the environment.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** But anyway I thought he was nuts when he took us and looking back now, like I say, I just can't. I, we went back to New York in 19; I hate to side track you, in '64 after I got married. I got out of school and I had a hundred dollars. They gave me back the deposits. Say, my God, I'm rich, even though I owe money. I call NASA up and said, "Hey, I

can't come to work for you." They say, "Why not?" So "Well I can't come, I need another month" and they say, "Fine, whenever, come a month later," gave me another date. And we took off, I wouldn't go out to dinner with a hundred dollars, we took off and went to New York, with a hundred, the wife and I, with a hundred dollars

**Dr. Lipartito:** Right.

**Mr. Garcia:** to see the worlds fair

**Dr. Lipartito:** Ohh.

**Mr. Garcia:** and while we were there, in '64 they had the worlds fair there. And we went and saw the neighborhoods that we used to live in and we bounced around

**Dr. Lipartito:** Right

**Mr. Garcia:** and there was about ten different neighborhoods, places that we had lived and all of them had been condemned and and and knocked down. There was only one of them that was condemned, and I tore down the the, they had it all roped off and I tore down and took her upstairs

**Dr. Lipartito:** Is that right?

**Mr. Garcia:** and showed her the apartment that we lived in and stuff. All the others, some of them had been in, since 57 to '64 they'd taken the whole block. No doubt in my mind that if my parents and people like them had still lived there, those apartments would be there today.

**Dr. Lipartito:** Right.

**Mr. Garcia:** No doubt in my mind

**Dr. Lipartito:** Oh

**Mr. Garcia:** Ok, but from '57 to '64 they'd torn them down and put four big high rises

**Dr. Lipartito:** Right.

**Mr. Garcia:** Low income housing and give it away and they had like a park around it with swings for kids and stuff and when we got there in '64 they were condemned. They gutted them, they, they gutted; the people that lived in there would tear out the stoves and go. They gutted the place. It it, again, they give you something for nothing; you treat it that way I guess. But the places were condemned

**Dr. Lipartito:** Wow

**Mr. Garcia:** in that much time they'd torn down the old and put up new and the new was already condemned.

**Dr. Lipartito:** Yeah, that's a very famous story about the South Bronx. Cause they, weren't they building like freeways and

**Mr. Garcia:** They were building freeways

**Dr. Lipartito:** Yes

**Mr. Garcia:** Yeah

**Dr. Lipartito:** Robert Morris, yeah, the builder of modern New York.

**Mr. Garcia:** I remember him

**Dr. Lipartito:** Yeah, yeah, that's good

**Mr. Garcia:** But anyway so we came down in '57. I went to high school in Fort Pierce, graduated, in 60. Graduated from the Junior College. It's funny, again a story, he just retired a couple of years ago, the president of Brevard Community College, Dr. Maxwell King, the King center down in,

**Dr. Lipartito:** Oh

**Mr. Garcia:** and stuff is all named after him. Well he was the assistant principle

**Dr. Lipartito:** Uh huh

**Mr. Garcia:** At Dan McCarty High School. It was an all white high school.

**Dr. Lipartito:** uh huh

**Mr. Garcia:** And like I said, I used to get in trouble. We were integrated up North and I just never thought anything of it and of course the whites and the blacks didn't mix down here and when I saw something and said that looks interesting and I dove.

**Dr. Lipartito:** Right

**Mr. Garcia:** Well I walk in and the place would get quiet and there was nothing but blacks there. You know, what's the big deal? And I would whatever. But anyway, he was the assistant principle and between my sophomore and junior year, that summer the principal had a heart attack and when we came back, when I came back as a junior he was the principal, Ok. But anyway, he was, lucky for me because we were; I guess he saw potential or whatever. Whatever he saw I don't know but I know that he knew how to deal with me. He knew my family wouldn't put up with any, even though I got in trouble, what I didn't want is for my parents to find out because then I was really in trouble. And I remember, if they did it today they would probably get sued. I'd get in trouble and get sent into the office. And the very first time I got into a fight and got into the office he closed the door and grabbed me by the shirt and put me up against the wall and he was a big, pretty big guy like six one, six two,

**Dr. Lipartito:** Right

**Mr. Garcia:** my feet were dangling. (laughter) And he was in my face and "Listen here you son of a bitch. This is the way it's going to be and I want to know, if not I'll go up and talk to your parents and throw you out of the" "Yes Sir!" I mean he got my attention and from then on. He said, you're going to go out for football, you're going to do this, he laid down and laid down and said, "This is what you're going to do" and I said, "Yes Sir." But anyway, and then, when I graduated from, I wasn't much of a student. I spent more time conning young ladies

**Dr. Lipartito:** Ahhh. Ok.

**Mr. Garcia:** to do my work for me than I was a student. If I'd a spent half, I could have spent half the time than I spent trying to get someone else to do my work for me and and and gotten more done and learned more

**Dr. Lipartito:** I tell students about that all the time.

**Mr. Garcia:** And and it's the truth. You spend all this time and you don't realize that if you just spent a little effort

**Dr. Lipartito:** Yeah

**Mr. Garcia:** But anyway when I, I was walking down the hall my Senior year, near the end of the year and Dr. King stopped me and said, uh, called me Joey, he said "Joey, were are you going to school?" I said "Say what? Me?" I mean I'm barely getting out of high school. So, he said, "Where are you going to school?" and I said, "I'm not going to school." He said, "The hell you're not. What do you mean you're not going to school?" He said "Your mom and dad home?" I said, "They'll be home, yeah, mom's there, but dad will be home tonight". He said, "Fine, I'll be up." So he comes up to the house and he sits down with my parents and I'm listening and I'm wondering who in the hell is he talking about? Cause he's telling my parents,

basically he tells my parents that he doesn't care who the valedictorian is, he doesn't care who's got the grades and who doesn't, if he had to put his money on somebody it would be me.

**Dr. Lipartito:** Wow

**Mr. Garcia:** You know it would be a crime if this boy doesn't go to school. I'm thinking, I'm thinking who in the hell is he (laughter) Whatever, to make a long story short, went to the Junior College and uh, I had worked, you know full, I'd played ball, gotten in shape and I was, oh I thought I was a big stud, you know, and and, worked one summer between my Junior and Senior year for a roofing company, I couldn't find another job and I was working and I mean, I thought I would die. I mean lunchtime would come and I'd lay I'd lay down and they would wake me up to go work again and there were just things like they'd give you buckets to to

**Dr. Lipartito:** Right

**Mr. Garcia:** you know, like we were doing a commercial building, you'd have to get pea rock after they'd put the tar up there and all that. Well hell, I'm in shape right? Well I was in the middle and a guy was up here and a guy was on the truck and he'd fill them up and he'd hand me this five gallon bucket full of

**Dr. Lipartito:** Right

**Mr. Garcia:** and I said, "Boy I could handle this" (laughter). About ten minutes later I was saying "Hey, don't put so much in the bucket. If you put that I'll kick the shit out of you, don't put so much in the bucket." Pretty soon he's saying "Hey, the bucket's empty" and I can't lift the bucket. Anyway, everything I did it was just so demanding and so exhausting, you know, that when he in essence talked me into going to school, I had in essence made up my mind. I know, in my mind I know I can't make it. I've never been a student, you know. And I

would go in the classroom and look at my papers and say geez am I in the right class? I'd have a test or something and I didn't even recognize the questions and stuff, you know

**Dr. Lipartito:** Right

**Mr. Garcia:** And so I was always long necking it. But anyway, they,

Dr. Butler Thanks

Mrs. Garcia Coffee

**Dr. Lipartito:** Thanks

**Mr. Garcia:** You can have royal water, whatever you like, coke. Anyway, so I made up my mind I'm going to go to school. I know I don't have the ability. When I don't make it and I'm working on that roofing company, I'm never going to look back and say if only I had tried back then, I wouldn't be here. I'm going to be here because that's all that I can do.

**Dr. Lipartito:** Right

**Mr. Garcia:** And that's in my thinking, Ok. So I go to Junior College; they gave a test. And my worst subject was always English, math and even history was Jesus, I'd go and be talking to you and listening to somebody and say you can't watch a movie and tell me what the movie was about? History is you read something or you hear it and you tell them what, you know, who can't do that? You know, that was, you know. And I'd get in trouble a lot of times, I'd be doing this and the teacher would be lecturing

**Dr. Lipartito:** Right

**Mr. Garcia:** And it was "Ok Mr. Garcia tell me what I said," and I'd turn around and said tell her exactly what she said. Then she'd go ballistic. You know, now she'd be embarrassed and throw me out of class. Because she figured I wasn't listening and I'd be. Well I knew what she'd said, I can walk and chew gum, you know. I watch three TVs at one time and

I'm bored, you know. But anyway I went and it's for the first time I started studying and I should drop dead if I'm exaggerating, I went in for my first test. First of all they gave an English exam to get in, nothing else,

**Dr. Lipartito:** Right

**Mr. Garcia:** You know, in the junior year, I made the worst test, the worst score on that test of anybody that took it and there was like 340 people that went to the Junior College that year and I made the worst test. So they made us take, I called it the dumb English class, the teacher would go ballistic, she'd say "It's not the dumb English class, we're" and what they did, which I kind of liked looking back. I don't like this phasing and you know phase 1. We all took the same thing, the guys, the people that did well on the test went 1 hour three days a week to class. We covered the same material except we went every day for an hour and a half. We went five days a week, we had English class and the teacher drilled us and

**Dr. Lipartito:** Right

**Mr. Garcia:** ok, whatever. We went in and I was the worst. In one semester they gave the same test again and I had the highest grade in Junior College in the, you know, the ones who were good in English were still good, but obviously I learned a lot.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Which everybody else didn't learn too much, but I learned. In fact I know a lot of kids who said the English class was easy. Well I didn't think it was easy. I had to bust my hump.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** I'll never forget going in. I started studying--first time in my life. I walked into an English test and I opened the test. "I know this!" "Sh." "I know this!" "Sh." I, I

I'm saying "Holy crap, I know" I says "I know all this stuff." Well it was the first time I ever studied. I know all this stuff. Anyway, I graduated from the junior college and went to University of Florida, graduated from the University of Florida and, like I said, took off, got a job, which I was telling you before, I wanted roots, which I thought working for the government would would give me, that working for NASA. Plus I followed the space program

**Dr. Lipartito:** Right

**Mr. Garcia:** from sputnik and being in Florida, the papers carried, the TV

**Dr. Lipartito:** Well you came down just in time.

**Mr. Garcia:** just in time and and but had I been in New York I probably would not have been exposed

**Dr. Lipartito:** Yeah

**Mr. Garcia:** to quite as much and would not have had the interest that I did. So working for NASA on on on the space program did everything for me from giving me a stable job that I felt thirty years later would still be there.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok and and kept me close to my family which my family was in Florida now, so it kept me close to my family and and working on something I would really enjoy working on, and I, there's been good times and bad times, you know, obviously Challenger and 204, I was on station for the fire

**Dr. Lipartito:** Right.

**Mr. Garcia:** and so forth, none of that, but there was a lot of highs. Let me tell you,

**Dr. Lipartito:** Sure

**Mr. Garcia:** you now.

**Dr. Lipartito:** Oh Yeah.

**Mr. Garcia:** A few lows but there was a lot of highs and it was very rewarding for me anyway.

**Dr. Lipartito:** What was your first job for them?

**Mr. Garcia:** I came, I came down and interviewed and I must have interviewed fifteen or twenty different places in NASA.

**Dr. Lipartito:** Oh really.

**Mr. Garcia:** And now looking back I know that was safety this was quality,

**Dr. Lipartito:** Right.

**Mr. Garcia:** this was unmanned, uh, electrical group as unmanned, GSE group. I know at the time they all sounded the same to me, I didn't know the difference. Fifteen or twenty groups I interviewed with, well I got an offer from all of them. Ok, so you say which one did you pick? Well I did it scientifically. Of all those interviews, which they all to me all roughly the same.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** Ok. One guy the boss wasn't there and so one of the guys interviewed me. And his name was Don Nelson. He's since passed away, like a long time ago. But he was a a tackle for the University of Oklahoma under Buck Wilkinson and played in the Orange Bowl and stuff, and I was a football nut.

**Dr. Lipartito:** Right.

**Mr. Garcia:** and when he happened to say "Yeah, I went to the University of Oklahoma," and I said, "Yeah, you know Buck Wilkinson" and he said "I played for Buck

Wilkinson" and we talked about football (laughter) and and to be honest with you that's the reason I ended up taking that specific job as compared to all the others, you know. Now, they're like night and day,

**Dr. Lipartito:** but back then they all sounded the same.

**Mr. Garcia:** So I ended up going to work uh of all the places that you don't want to be is where I picked.

**Dr. Lipartito:** Oh, is that right?

**Mr. Garcia:** Yeah, and that and no body, no body officially will admit it but Ground Systems suck hind tit.

**Dr. Lipartito:** Really.

**Mr. Garcia:** Oh yeah, the elite work on the vehicle.

**Dr. Lipartito:** Oh.

**Mr. Garcia:** And when you, and mind you you can't give off the God damn ground without the without the ground systems. It's so integrated a part. I can't launch without them ground systems. Ok, but the bottom line is the guy who works on the vehicle gets, has the higher grade or used to at least, got promotions easier, got the recognition, that type of thing which which I didn't know. But on the other hand is is that you learn a lot on the Ground Systems and I ended up working instrumentation

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** And in order to work instrumentation, for example, we had all the ground stations on the Gemini. I came right at the end, the Apollo, the Mercury program was just phasing out. And they had T.M. Charlie and T.M. Able that were ground stations, instrumentation ground stations,

**Dr. Lipartito:** Uh huh

**Mr. Garcia:** you know what instrumentation is? Ok.

**Dr. Lipartito:** Basically, yeah.

**Mr. Garcia:** Well basically it is, when you're in your car, you look, you look down and say I'm going fifty miles an hour, the batteries ok, the temperature is so much, you've got your instruments telling you exactly what you're doing. Well in on on a vehicle you you've got instrumentation except that in a lot of instances you've got to do this remotely. Your not there in the car driving it, the car's driving itself so to speak, although in the manned vehicles we do have some people there but still they don't see a tenth of what's available

**Dr. Lipartito:** Ohh.

**Mr. Garcia:** to engineering

**Dr. Lipartito:** Right

**Mr. Garcia:** Ok, they only see very little, it's very limited. Ok, so, anyway, what basically to summarize it in a nutshell, you take a physical phenomena and you turn it into an electrical signal and in most cases you digitize it. You you you transmit it to the ground, ok, although in some instances it might be on a meter or on some display in the vehicle, but you transmit it to the ground. Ok, and then you've got to undo that process, take that digital signal and turn it back to an analog signal so that you know what that voltage is, or what that temperature is, or what that velocity is, so so what you do on the vehicle you undo on the ground. So when you learn the ground part, you really know what the vehicle is, it's just the opposite.

**Dr. Lipartito:** Hmm

**Mr. Garcia:** So you know when like we use to have the PCM systems and stuff you had to understand that PCM wheel, how you encode and how you you, I call it the wheel,

they don't do that anymore, but it was very graphic when you, when I give you a wheel and tell you that that each one of these is a sample

**Dr. Lipartito:** Right

**Mr. Garcia:** And then I put another little wheel out here with four quarters in it, well this one is one fourth the sample rate that the big one is, so this one is let's say one sample a second and this is a quarter of a sample a second.

**Dr. Lipartito:** Hm hm.

**Mr. Garcia:** And if I put one out there with fifty, it's a fiftieth of a sample a second.

**Dr. Lipartito:** Right

**Mr. Garcia:** You know, then that's the way, you put the the things that don't change very rapidly, like a voltage, for example you would put it on a low sample rate

**Dr. Lipartito:** Hm hm.

**Mr. Garcia:** but if you were trying to transmit an EKG that was all, then you would have to, usually a PCM system or a digital system is very inefficient for that so back then we used to have FM systems

**Dr. Lipartito:** Ok

**Mr. Garcia:** It was a a a frequency based telemetry system instead of a time based telemetry system

**Dr. Lipartito:** Right

**Mr. Garcia:** ok and it handled high frequency things. As a matter of fact all the development flights always have, all the DFI was at F mainly FM systems, because it's the

vibrations the stresses and stuff, you just couldn't get as many measurements for the same bandwidth.

**Dr. Lipartito:** Right.

**Mr. Garcia:** but it was very efficient for for EKGs or or or vibrations or an acoustic measurement

**Dr. Lipartito:** Right

**Mr. Garcia:** or something like that it was very efficient. So I anyway we had the ground stations and and

**Dr. Lipartito:** So you're, so you're responsible for the equipment that's potentially receiving the

**Mr. Garcia:** at the time that I came the receiving, that was receiving and displaying it

**Dr. Lipartito:** Right

**Mr. Garcia:** for those that I interfaced with, with the instrumentation with the will talk Gemini. With the Gemini instrument on board instrumentation engineer, I interfaced with him cause my, if we had a problem, is it a problem on the vehicle or my GSE?

**Dr. Lipartito:** Right.

**Mr. Garcia:** the anomaly. See, so we would work very closely together and it didn't take long till they recruited me to come work on the flight side. So I must have been there maybe two years

**Dr. Lipartito:** Uh huh

**Mr. Garcia:** and they recruited me to come work on the flight side and then I worked Gemini instrumentation on board the vehicle

**Dr. Lipartito:** Uh huh

**Mr. Garcia:** And I worked Apollo instrumentation, I worked LEM instrumentation, I worked the ALSEP, they had problems and the boss said "Would you go over and do whatever it takes to, you know what the ALSEP way?" Apollo Lunar Surface Experiments Package. When the Apollo landed on the moon.

**Dr. Lipartito:** Oh Oh

**Mr. Garcia:** It looked like a spider, they had a an radioactive thermal generator and they'd put a slug in there that heated and generated power, but but they would take these experiments, it looked like a spider out there and they had different experiments on and they left them on the moon

**Dr. Lipartito:** Right

**Mr. Garcia:** and they transmitted to ground. Ok

**Dr. Lipartito:** So, ah, so you, so you're, so about '66 or so

**Mr. Garcia:** I went to work in flight

**Dr. Lipartito:** in flight but you're work

**Mr. Garcia:** still working instrument, still instrumentation

**Dr. Lipartito:** so the other side of what you had to do

**Mr. Garcia:** Right

**Dr. Lipartito:** Now this raises an issue because one of the things we picked up on from talking to people is the difference between people who worked on the space craft versus launch vehicle. Did you?

**Mr. Garcia:** Well I'll get to that. Yes, yes, the. I'll get to that. We're not there yet. because

**Dr. Lipartito:** Oh, fair enough.

**Mr. Garcia:** They they did something that I thought it was a mistake because of the culture that you're talking about

**Dr. Lipartito:** Ok

**Mr. Garcia:** I worked and I'll get to there in a minute. I worked, like I said LEM instrumentation, the LEM and the CSM after Gemini. And then I worked ALSEP and then about the time I got ALSEP going decently the boss asked me to go over that the Skylab was in trouble that all the pay, as a matter of fact I worked payloads on, obviously those were payloads the ALSEP was a payload and a few payloads, for a long time it was all scientific missions, not scientific just flying trying trying to keep your nose above water.

**Dr. Lipartito:** Uh huh

**Mr. Garcia:** There was very little science. Ok

**Dr. Lipartito:** Uh, huh, this would probably be the post Apollo

**Mr. Garcia:** Early. Gemini, early Apollo there was very little science.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Toward the end of Apollo ok I was on ALSEP, ok.

**Dr. Lipartito:** Ok

**Mr. Garcia:** And then Apollo, I forget I was on there for Apollo 11 through, well a couple of flights the ALSEP GSE and checking it out in that procedure and installing it in the vehicle. It was all kind of routine and stable, we'd written all the procedures and everything was working smooth. It was horrible when I got there. I mean I had to lie and cheat and do whatever it took to and even my boss knew I'd do that. I mean the power was so bad in that building that I had to bring a generator and and bring and without the generator we would never

have been able to run the GSE, it would kick off line, you know, but uh, anyway they took me off of that and asked me to do, he said that the the J Mission experiments were in trouble

**Dr. Lipartito:** Huh

**Dr. Butler:** Who was your boss at this time?

**Mr. Garcia:** Bill Stellges [phonetic]

**Dr. Butler:** Ok

**Mr. Garcia:** Anyway. He lives in Cocoa Beach now, retired a long time ago. To do J Mission experiments. And the J Mission experiments, they flew on 15, 16 and 17, the last three missions

**Dr. Lipartito:** Right

**Mr. Garcia:** And the if you're familiar with the Apollo, they had the command module and the Service Module, well they took one quarter of a pie shape in that whole command module and they they they redid it so that all of the hardware that was in there was stuffed somewhere else and they left that for experiments and they had gamma ray spectrometers, alpha ray spectrometers, mass spectrometers, lunar mapping camera, a panoramic camera, ok. And we had to get those, and this was new for us. I'd done ALSEP but we had not dealt with payloads before. And again, they were in trouble and the boss asked me to go do whatever the hell it took to get it working.

**Dr. Lipartito:** Right

**Mr. Garcia:** So I went and talked to all of the people, actually on the phone the first time, the payloads people and found out what they needed and what not and promptly started building a lab.

**Dr. Lipartito:** Huh.

**Mr. Garcia:** And we had to build a lab in order to bring those payloads down here because I knew that you can't check them out at the factory, ok, and bring them down and launch them. You'd better get them here and work on them. For some reason the buck stops here and they've never been successful building something, I'll give you an example, the ALSEP. I'm regressing on you but just to make a point.

**Dr. Lipartito:** That's alright, this is great.

**Mr. Garcia:** The ALSEP, ok, ship and shoot

**Dr. Lipartito:** Right.

**Mr. Garcia:** We're going to check it out and we're going to ship it. And I said "Guys, you know, we need to, you know, it needs to interface with the vehicle, transmitter interfaces. Nope we're just shipping it. You know, it's got to, it's got to transmit back through the Apollo and back there, there's interfaces we need to check." "Nope, Nope." So they wouldn't have nothing to do with it. So I was at a launch party and ran into one of the astronauts and said, "Hey guys you're back up." I don't remember his name now, but "You're the back up on one of the missions, aren't you?" He said, "Yeah." He wasn't scheduled and I don't think he flew on Apollo. It was a back up on one of the missions. I said, "Listen guy, you know you guys work with the simulator?" "Oh yeah we work the hell out of that simulator." "I says well let me tell you, I said, you worked the hell out of that simulator and you've trained and you know exactly how to do everything." I said, "Guess what's going to happen when you go and get this brand new one. When you go to turn a knob it's not going to be like the one you turned because it's stiffer, it's the first time it's ever been turned almost."

**Dr. Lipartito:** Right

**Mr. Garcia:** "You know, the other ones been worked so much because you guys practice with it, wouldn't you like to go out and put the ALSEP here and put the Simulator there and run your procedure. Run it here and then go do it over there see what it feels like on the real one. Go do it here and then go." He said "God that's a great idea." I said, "Could you give me a requirement to do that?" He said, "You got it." So I had to go in the back door to get them to give me a requirement. You see.

**Dr. Lipartito:** Right. You know that's exactly the same story with the Space Station

**Mr. Garcia:** Same

**Dr. Lipartito:** almost word for word.

**Mr. Garcia:** Let me tell you, the bottom line when it was all over. A hundred and twenty three discrepancies

**Dr. Lipartito:** Uh, huh

**Mr. Garcia:** Ok, twenty-five of which would have been catastrophic. And for example they had this little hockey stick, it looked like a hockey stick and they held the part that hit the, that hit the ball, the puck and the other end was like a key and these things, these experiments, were, you know, they couldn't bend over and do it and they were on ribbon cables. Ok, so you'd stick this hockey stick into the key end,

**Dr. Lipartito:** Right

**Mr. Garcia:** the other end of the hockey stick in the key and turn it

**Dr. Lipartito:** Right

**Mr. Garcia:** Ok and it locked and he popped the experiment off and then he'd pull it and the ribbon cable would come out and then he'd come to the other end put it down and

unlock it. A lot of the things they did because they couldn't bend over with these things. Well, one of them, they couldn't have checked it, he puts the the thing in, he turns it, he lifts it up and the God dang experiment goes crash to the ground. It wouldn't lock. Now how in the hell could you have checked that. That to me is catastrophic. That happens on the moon and that experiment lays there

**Dr. Lipartito:** Right, right. Interesting.

**Mr. Garcia:** Ok

**Dr. Lipartito:** So let me ask you a question

**Mr. Garcia:** Yeah

**Dr. Lipartito:** You know this is very familiar from, you know we haven't heard about the ALSEP?

**Mr. Garcia:** The ALSEP, yeah.

**Dr. Lipartito:** You know we've seen it again and again with payloads. In Shuttle, you know, where did this, I mean, is this like inherent in the way design engineers approach things? They just don't believe that (both talking)

**Mr. Garcia:** It's, well, I don't know how to explain it, but we always felt it was because the buck stops here. You know what I mean? If you're the one that if you don't hold on to the kid he falls in the water and drowns

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** somehow the guy that's back there telling you the procedure how to do it, ain't as

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** he just doesn't pay as much attention to detail. And doesn't do the checks. Like we check things and the checks and balances which is one of the things you talked about in the letter

**Dr. Lipartito:** Right.

**Mr. Garcia:** Damn it that's the way we've been doing business. Yes it's expensive.

**Dr. Lipartito:** Right.

**Mr. Garcia:** But having you do the job and nobody look at it or like they did under Goldin he'll do the job and he'll check his own work. Well Jesus Christ if I did it right I I, If I did it wrong I wouldn't have done it. The guy does it and he knows mentally well how well does he check it? Well I just did it and I know I did it right. So does he really check it as well as if I check it when you do it?

**Dr. Lipartito:** Right.

**Mr. Garcia:** Well he doesn't, I don't care what Goldin said. "It'll be safer." Well bull shit, it'll be safer. You know, and that kind of thing and somehow it's just traditionally. And are you saying those people don't give a damn? I'm not saying that, but somehow I'm telling you that if you're going to ship something and you're going to launch it and you gonna and you want it to work, your best odds are sending it to KSC. The buck, they're use to the buck. This is it, if we don't get it right it don't work.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And they're use to that and to me it was the culture, the checks and balances. A lot of times I go to the factory and they were so much looser than we were. They

didn't, you know, it was, they were just so much looser. They just didn't do business the same way we did.

**Dr. Lipartito:** Well by the checks and balances, right, you use that term. Others We've seen that term. Do you mean the idea that civil servants and contractors working together?

**Mr. Garcia:** Well, yeah. To me that's, and that's that's the way we always do business and I was going to get to that in a minute because of the culture.

**Dr. Lipartito:** Right.

**Mr. Garcia:** That's the way we always did business and it was on the manned spacecraft side. Ok. If you read my letter, you'll notice that I said hey I've talked to the Air Force guys

**Dr. Lipartito:** Hm hm.

**Mr. Garcia:** and I don't know if you've got the the data sheets that went with it.

**Dr. Lipartito:** No, I don't

**Mr. Garcia:** It had charts that went with it.

**Dr. Lipartito:** Oh, ok

**Mr. Garcia:** It showed launch rates. Ok. And I called the Air Force guy and I said, and I called the unmanned guy. I called each one, ok, and said hey, you guys have got a a ninety two percent launch rate a ninety-four percent launch rate, but we can't afford, we need a hundred percent launch rate is what we've got to shoot for. Look at our rate. Our launch rate is ninety-eight, ninety-nine percent, whatever our rate was at the time, ok, the way we are doing business. And their answer was oh yea, we we we knew that, we know that. To put in the redundancies, to put in the checks and balances that you guys do is very expensive and we find

it's cheaper to tell the contractor to build me two of those instead of one, knowing that every now and then we're going to lose one and we'll launch the spare.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And sometimes we'll even launch the spare and you got it for nothing.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And if, Do you see what I'm saying? But it's cheaper doing that than it is being as stringent as you are. And I said "That's fine when there's no people on board, when there's people on board I can't afford that attitude."

**Dr. Lipartito:** Right.

**Mr. Garcia:** And for your job, you're making the right decision, but don't Mr. Goldin tell me, "Look how they're doing it, we're doing to do it the same." And and and no matter what his words and he is, "We're going to do it like them, except safer." Well shit, we're going to do it like them and never have an accident. I, what do you want me to say? Words come easy.

**Dr. Lipartito:** Right.

**Mr. Garcia:** But the facts are we've been doing business a certain way and we in terms of checks and balances and working on the manned launches and you've been doing business a certain way and it's been more successful than anyone else in the world. Now, I don't give a damn who you are, when you come down here, you look at what I do and, if you did, you said "Hey guy have you thought about changing this a little bit and see if it didn't make it better?" and I'd say, "That's a good idea. Let's try that and see what it does." But don't come down and say "Throw this out, we're going to do business the way he does and his, I can show

you what his rate is. I said, my God, I've did, I've spent my whole career. We're in the risk management business out at Kennedy. I'm serious. We're trying to minimize risk. Launching is a risky business. It's very complex hardware, state of the art hardware, very sensitive hardware and we're trying to minimize the risk to those astronauts. And that's what I've done my whole life. Goldin comes along and tells me screw them, they're expendable. I'll do business. Well you just told me to do business a way that's riskier. I can't be a party to that.

**Dr. Lipartito:** Alright.

**Mr. Garcia:** You see what I'm saying. You're telling me to to do it to where you're more. Are you going to lose. Well you're going to lose another. I didn't say you're going to lose the next one. But the odds are that that we're going to lose the next vehicle sooner doing business your way. And and the thing that's always got, it's always and I can't put my, I wish I had an answer, is that that we had the 204 fire. And I wish, if I was out at work, I'd have all those files and I'd show them to you. But you have the 204 fire. Somebody comes out and looks and says guys, you made all kinds of compromises. Well they were the budget

**Dr. Lipartito:** Right.

**Mr. Garcia:** Politics, all these influences that forced us to go a certain route and we killed three astronauts.

**Dr. Lipartito:** Right

**Mr. Garcia:** Now we've got time to go back and do it right and change so that that doesn't happen again. Ok. And you put it in and you're doing business, checks and balances and doing it like you should. And you're going along and the next thing you know, budget constraints, politics. And you start; you start "well we're not going to check that as much, we'll

check this less." Guys, you know, I can make. And we were, by the way making, before Goldin came along, we had taken the the taken and made changes. We used to have PET teams

**Dr. Lipartito:** Right

**Mr. Garcia:** Process Enhancement Teams

**Dr. Lipartito:** Sure

**Mr. Garcia:** And what we were doing was what I told you. That that if someone came in

**Dr. Lipartito:** Right.

**Mr. Garcia:** and said. We would look at a process and we'd get the people in that knew it and said "Guys, this is taking two weeks to do. What, and we'd get the low, at every level, What would if you, without risking safety or the checks and balances and you'd be surprised, the guys would step up and say "Well, you know, if we did this first and that second, if we changed this, we really could get this done in a week and not have given anything up. Or we really don't have to check this because it gets checked as part of that or telling you so. They all come up with ideas and the bottom line is we had reduced about thirty percent in the man power and about fifty percent in the time of processing the Shuttle through these process enhancements and not giving up saying I'm not doing the checks and balances and saying I'm doing the best I can for the risk management on that vehicle. Ok But along comes someone like Goldin. What I was going to tell you is after 204 the same thing happened. Massive changes because of budgets. They were going to bring all the subsystem managers to Kennedy. They were going to turn the operation over to the contractor and this was before Challenger.

**Dr. Lipartito:** Ahhh

**Mr. Garcia:** Ok, and I was screeching back then saying guys you can't, this is ridiculous, you can't make these massive changes, oh yeah, it's going to be safe, the same words back then. Well then Challenger happened

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** and then I was there in a bunch of meetings

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** where I sat like this with Dr. Feynman. I don't know if you know one of those Nobel prize winning scientists,

**Dr. Lipartito:** Oh yeah.

**Mr. Garcia:** he's dead now. Dr. Feynman, yeah. And he looked me in the eye and said, "How could you guys have been so God damn stupid to have made the changes when you had a system that was working. Look at what you guys were doing." He said it wasn't Kennedy's fault, because it wasn't, the O-rings and stuff, but if Ken, if that hadn't have happened you were going to kill one down the line because of this. I said, "Sir, you're preaching to the Choir." Well their report came out and again we went back to doing business the right way. Guess what, Goldin comes along and we we had Challenger. You get seven, eight years later; they're pushing the same way to do the same thing. Columbia happens now, their saying the same thing. How in the hell could you be doing, making those changes. You need to get back to where the checks and balances. Yeah, but, you know, it's the politics, it's the, it's the monetary constraints whatever it is and I I looked Goldin in the eye and said, "I'd rather not launch, I'd rather lose my job today than to not do the best I can. This isn't a piece of hardware; I'm talking about somebody's life, somebody's husband, father. I'd rather lose my job than not do the best I can. And we know it's a risky, we all know there's a risk involved."

**Dr. Lipartito:** Right.

**Mr. Garcia:** But if we're doing the best we can and something happens, I can live with that.

**Dr. Lipartito:** Right.

**Mr. Garcia:** I was there during Challenger and during 204,

**Dr. Lipartito:** Right.

**Mr. Garcia:** but I can't, I couldn't stand it the way they were pushing us.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok. And that's why. And I came home to my wife and I said "Honey I can't do, I could lose my job." She said "You do whatever you have to."

**Dr. Lipartito:** Let me ask you a couple of questions. Because you, You know, obviously you put your finger on the big issues.

**Mr. Garcia:** Yeah

**Dr. Lipartito:** and I can see you feel very passionately about it.

**Mr. Garcia:** Well it's, it's people's lives that are on the line.

**Dr. Lipartito:** Alright, I know, it's even with Columbia, it's obviously you know losing a crew is a major

Mr. Garcia Oh yeah

**Dr. Lipartito:** national tragedy

**Mr. Garcia:** Yeah.

**Dr. Lipartito:** But, one question is, the real, I mean the part that really bothers you is the sense that the changes in terms of using contractors and not having NASA kind of

directly involved. It didn't, all the changes that came before that, because, you know, Honeycut talks about all the improvements and reducing that.

**Mr. Garcia:** We did that, we were all, contractor and NASA worked on that together. We were doing that.

**Dr. Lipartito:** That wasn't what you, that didn't bother you?

**Mr. Garcia:** No, no, we were doing that was good.

**Dr. Lipartito:** Right.

**Mr. Garcia:** All of that was good.

**Dr. Lipartito:** Ok.

**Mr. Garcia:** And we would have done more. I guarantee you under the same process we'd have we'd have gotten better and better at it.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Without, You know what I mean.

**Dr. Lipartito:** Yeah, you can see the numbers and actually I got some of the figures from, I forgot who gave them to us, but they cover both before and after the SFOC. I guess they're the ones that they used to measure and, you know, most of the improvement comes up to about '95. After '95, '96 now some of it is because of flight rate changes, external factors,

**Mr. Garcia:** Yeah

**Dr. Lipartito:** but, but there's a very consistent decrease and, I cannot see a lot of big improvements. You know, I mean, if turning it over to the contractors is going to drive down the costs more, drive down the hours.

**Mr. Garcia:** I told them it's not going to drive down anything.

**Dr. Lipartito:** Yeah

**Mr. Garcia:** All it's going to do is make it less safe.

**Dr. Lipartito:** Why, you know, or did you make it your concern yourself with this? I know you have to have to ask Dan Goldin, I suppose, ultimately, but what do you think was behind this

**Mr. Garcia:** I think it's, it's uh, You want to know the honest,

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** my honest opinion?

**Dr. Lipartito:** I think it would ideal.

**Mr. Garcia:** I think somebody's getting paid off

**Dr. Lipartito:** Ahh.

**Mr. Garcia:** I'm serious.

**Dr. Lipartito:** Really?

**Mr. Garcia:** There's no way that you can come in and tell me that the contractor doing it is going to be cheaper than NASA doing it,

**Dr. Lipartito:** Right.

**Mr. Garcia:** if you understand what I'm saying. There's no way that it, that it's going to be cheaper. Ok, now several factors involved here in my opinion. Number one, is when I'm in it for profit, ok, when I'm in it for profit. You look now, like the contract now. Well first of all, when we went to the SFOC contract, I guess you would, not, was it SFOC, we went SPC.

**Dr. Lipartito:** SPC

**Mr. Garcia:** When we went SPC or was that what the term, maybe I'm using the wrong term. The first time when Lockheed took over the contract.

**Dr. Butler:** That's SPC.

**Mr. Garcia:** SPC, my acronyms are getting, my age is creeping in. When we went SPC ok, if it wasn't for NASA you wouldn't have launched or you would have killed somebody. Ok, Rockwell lost the contract.

**Dr. Lipartito:** Right

**Mr. Garcia:** Lockheed took over the contract. Rockwell's bitter. They take all their best employees, give them big raises and move them somewhere else. So now you've got the the intermediate and the worst and the intermediate ended up being the boss. We had some systems that were dead in the water. They had nobody. They had raped them, Rockwell had taken all and you had nobody. And NASA, if you didn't have NASA there to train them and carry them through the first couple or three launches, until they came up to speed.

**Dr. Lipartito:** Right

**Mr. Garcia:** Ok. You'd have been dead in the water. That alone, that insurance policy alone that the contractor doesn't have me by the gonads calling the shots; that no matter what happens I can change contractors, and I, and we proved that then and they probably nobody at the higher levels admit it, the contractor's would never, but I'm telling you we would not have launched if it wasn't for NASA there to train. Ok. A lot of NASA guys took an early out and went to work for the contractor, Ok. And those factors, NASA being there is the only thing. Had NASA been a just sign your paycheck and look at results, you couldn't have changed contractors because Rockwell takes their best people and now you're, you're going to kill somebody or you're never going to make it.

**Dr. Lipartito:** So at that point,

**Mr. Garcia:** Ok

**Dr. Lipartito:** people like you are actually still doing hands on

**Mr. Garcia:** We were still doing hands on, ok. And see I've always been a firm believer. It makes no difference, the checks and balances is a, and a lot of times it gets you through a, first of all I can help, we would go out to work, I'd say ok, let's send the new guy with the experienced, the new contractor with the experienced NASA guy and we'll send the new NASA guy with the experienced contractor guy. So, we'd work together on shifts so we'd never have the two new guys

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** there at the same time. Ok. And you trained them that way. So you had a way of getting around these weaknesses. Ok. And the other thing was when you got to a, nobody likes to admit this, but when you got to a time, like hey, we need to make this launch, we got all this work to do, and like at the end of the Apollo program. Well my God, they were cutting back and Rockwell was cutting back, ok. And at the end of the Apollo program and they were short handed, ok. So the bottom line was, well I knew all of these guys. In fact a couple of them worked for me in NASA later on. But these were great troops, but they were just, they didn't have enough time.

**Dr. Lipartito:** Right.

**Mr. Garcia:** So what's the difference in checks and balances, of course your management would never, if you write it and I check it or if I write it and you check it. Instead of taking, if something were to take eight hours, we could probably do it in five. If I write and you check and you write and I check. You know, you do one procedure and I'll do another. We were in there writing procedures and I'll get you the guy and you can ask him what the. And they would balk, NASA's. Hell yeah NASA's doing work, any body work for me, roll your God damn sleeves up. You're a team. The contractor doesn't fail, we fail. You do whatever the hell

it takes to get the job done and get it done right. If there's a problem you flag it, but you roll your sleeves up you're a team. Your working you fail together.

**Dr. Lipartito:** Right

**Mr. Garcia:** It's a team but it's still a checks and balance. You know that there you're looking and making sure that things are right. You have redundancies; you have checks and balances at every level. Never ceased to amaze me that we had some systems that a the NASA guy or the Rock, the contractor would write the procedure. NASA would review it to make sure it was right. We'd put the procedure on the floor. The technician would come out. you need to change that?

**Dr. Lipartito:** Yeah

**Mr. Garcia:** Go ahead. A technician would come out and do the work and you'd have a contractor quality there watching it and would check to make sure and then on the critical items a NASA guy would check. A NASA

**END TAPE 1 SIDE A.**

**Dr. Lipartito:** Um, What I'm seeing when I look at like whose in what part of the organization uh, or looking at the contract under the SPC era, the 80s and early '90s is that there's NASA and the contractors are kind of interlocked

**Mr. Garcia:** Yeah their working as a team.

**Dr. Lipartito:** Right

**Mr. Garcia:** Ok

**Dr. Lipartito:** Right

**Mr. Garcia:** And and even though we rate them and we

**Dr. Lipartito:** Right

**Mr. Garcia:** if they don't whatever, but still you're working as a team.

**Dr. Lipartito:** Right

**Mr. Garcia:** They're just, Really they're in charge of getting the work done and we're in charge of making sure they do it right.

**Dr. Lipartito:** Right

**Mr. Garcia:** That's the checks and balances

**Dr. Lipartito:** Right

**Mr. Garcia:** Ok

**Dr. Lipartito:** Got it.

**Dr. Butler:** If you're involved in doing the hands on work and and they're getting evaluated on how well the hands on work is completed and you're doing the evaluation, how objective can that be?

**Mr. Garcia:** What happens is it's a tightrope. Ok. See what happens is this, ok, I don't know how much you've worked with other people, it don't take me long to know who the doers and who the good ones are and who the useless ones are (laughter)

**Dr. Lipartito:** Universal laws (laughter)

**Mr. Garcia:** I'm telling you it doesn't take me long I would hope it doesn't take you long. So I come along

**Dr. Butler:** As a professor, as a professor, I know.

**Mr. Garcia:** You know, I guarantee you, you know and I'm not there. So what happens is now, I know what it takes to handle this ten pound blivet, ok. I'm saying you two guys can't get it done, no matter how good you are and I know you're good, you see what I'm, you boss is good. and by the way, when I write em up, I what I just told you, when I have to

write one and you write one, I check yours and you check mine. You're under manned. It's not because you're useless. Now when it's somebody that yes, say you need to improve, you need more, you need more training for your people, you don't have enough qualified people, whatever. Because that's the case. But when it's the case that I've got the feeling, oh God, you're in bed with these guys. Yeah, to get the job done. But when I write them up, I'm writing up the management. You do not have enough people to get the job done. The job is not going to get done one of these days because you're lucky you got. I don't tell them, hey, I did your job for you, but I'm writing them up negatively by not having enough manpower to do the job and do it well. And tomorrow, you're gonna fail and it's really yesterday you would have failed if I didn't bail you out, ok, so I'm bad mouthing their management but not the troops. If you see what I want to say. It's a tight rope. They don't get a good evaluation, even though we got the launch off. and I, when I had to do have the work and not that I minded doing it, but when I had to do it, you as a contractor haven't done your job.

**Dr. Lipartito:** So you're saying that it's precisely because you're so close that you have not, as opposed to looking at a measure ten steps back,

**Mr. Garcia:** Exactly.

**Dr. Lipartito:** you know if it's because they're not good enough or their [both talking] or they don't have a number of factors under control.

**Mr. Garcia:** Exactly, Exactly. Hey let me tell you. You talk about that and I'll give you an example. I'm sitting in there and guys come in. Say guys, I talked to the boss and we've got to get this job done. It's behind and we got to get this job. I want you in here for changes. They come in here for change of shift. My engineers and they've been out monitoring the jobs. And the contractor guys are there. Ok. I said "Hey, how's it going? We gotta get this

done. Now what's the problems, I'll help you with whatever I can. Whatever?" They say "Well this and that we did this, we did that with this. Second shift guy, uh, whose the tech on second shift. Oh Billy Bob. Boss we're not getting the job done. But if they give me this guy, they're not getting the job done. We've got too many blind connections to make. We won't get this job done. I want Johnny and Billy. If I get Johnny and Billy, take it to the bank, the job will be done in the morning when you come in." I call the contractor, "I want Johnny". "But we," "Johnny and Billy or I'm going to the President." "Ok, we'll give you Johnny and Billy." They give me Johnny and Billy and the job gets done. You go to the guy and he says, "Are you saying my?", "No I'm not saying your guys aren't any good." But I'll give you an example. We can all hit a baseball, we're going to go out and we're going to hit a baseball and we're going to train and do this. And when we're finished we're going to say do you want Babe Ruth hitting for you or do you want Jose hitting for you? Now Jose did the same training that Babe, well those blind connections, there's people that have a feel for it. And they can and the guys know who the, and to me a good boss says, hey you go do that that you can handle and you do the one that you're good at. And I wouldn't people in, well Babe, everybody's the same. Well you have this ramrod, my troops knew, when I put the muscle on them and told them we needed this job done; he said "Who's the tech." The instant they told him who's the tech, he said "Sorry boss the job ain't done. I can guarantee you no matter what you do the job." "Well what do you need for this?" "I need these two guys and the job'll get done." Guess what, the job was done. And I guarantee you he was right, if they hadn't changed them the job wouldn't have got done, and through no fault of the guy. He didn't hit the homeruns that Babe Ruth hit he he tried and did everything he could; he just didn't have the ability. And you can't convince anybody out there that different people have a knack for doing different things, that they do them easier and they do them better

than the other orangutan he's got big old fingers. He's tried the best he can. It's not that he's any good. It's not that he doesn't care. It's just that he's not as good at hitting the ball as the other guy.

**Dr. Lipartito:** Right. And that again comes from

**Mr. Garcia:** The experience he has of being there and knowing who the good ones are and knowing, you know, and come again, I was saying a minute ago that Goldin took it from, from uh, in a lot of cases to the extreme, from the contractor engineer writing the paper, NASA engineering checking the paper and both of us watching when it was. Yeah, here, have some more coffee [coffee is offered] Uh, both engineers a lot of time when it was critical watching the job.

**Dr. Lipartito:** Right.

**Mr. Garcia:** NASA. You've got to undo it a little bit. There you go. Uh, NASA quality and the contractor quality watching the job. So the guy gets finished doing the job and the contractor quality is watching him. He checks to see whatever. And they stamp and you know, the step in the book They check to see that the torque wrench was validated. All the little details that that sound nit picking, but the bottom line is you'd be surprised how many times it's not right. Ok.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And then the NASA guy, quality guy checks and and on the critical things, Ok. It went to Goldin's idea of why, What have you got all these people there? Why they guy who knows how to do it is the tech, we'll just let the tech by his own work. Oh oh oh please. So it went from. They backed NASA engineering out so I didn't have to sign the paper.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And then the tech took that paper and worked it and then he checked his own work and bought it.

**Dr. Lipartito:** Right.

**Mr. Garcia:** So it's only two guys it took to get that job. And you're waiting to kill somebody. Because he doesn't give a shit? No! It's just the nature of the beast. The process I described on something critical is expensive and time consuming, but I've got results that are proven.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And when I do like what I just described now, the Air Force does it. I can show you what their rate is of success

**Dr. Lipartito:** Ahhh.

**Mr. Garcia:** And their rate of success is not bad, when I wrote my letter I told them had I been doing business the way the Air Force is doing, which is what Mr. Goldin wants us to do, we would not have a Shuttle fleet at this moment in time. There would not be one Shuttle vehicle left.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Are they doing wrong? No. For what they're doing they're doing the right way, but, I can't do business that way when for me the critical aspect is zero, I can't afford, so I've got to be striving for perfection, even though you know you're not going to get there, but that's what you ought to be doing is striving for perfection.

**Dr. Lipartito:** Well I know, you know, I know where Goldin is coming from because these are ideas that circulated in American business management at the same time which is that you can use numbers rather than kind of your eyes

**Mr. Garcia:** Yeah.

**Dr. Lipartito:** unless it's bought and you can provide people motivation. We're not going to tell you how to do it, but this is how much you're going to get paid, and if you do it well you'll get paid more and if you do it badly you'll get paid less. Figure out the best, it's up to you, figure out the best way to do it. Your incentives are to be more and more efficient.

**Mr. Garcia:** All of that is theory and theory sounds great. When you have, when you have people's lives on the line, I'm telling you, it does not work. Ok. And the other thing is no matter what they tell you about the incentives and all of that, obviously when you, when you have a failure like we just did,

**Dr. Lipartito:** Right.

**Mr. Garcia:** it might not have been these guys fault, but they took a big hit.

**Dr. Butler:** Sure.

**Mr. Garcia:** So that's when they take the hit

**Dr. Lipartito:** Right.

**Mr. Garcia:** on something that I can't, you know, I can't stand. That's unacceptable.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Columbia and Challenger are unacceptable, so I don't want to get there to give you the hit. ok

**Dr. Lipartito:** Right.

**Mr. Garcia:** So you come along, I lost my train of thought now. These ideas

**Dr. Lipartito:** Well his ideas about how you motivate and

**Mr. Garcia:** Ok, how you motivate. There you go.

**Dr. Lipartito:** yeah.

**Mr. Garcia:** Ok, I'm sorry but you can say what you want. If you look at what they're doing, you come along and you say "How do they make money? I'm the contractor, how do I make money?" ok. There's only so much money to be had.

**Dr. Lipartito:** Hmmm

**Mr. Garcia:** I do it for less, I make more money. Give me a billion dollars, how do I make it? I'll do it with less people. Obviously I'll get a bonus if I do it in less time, but that's minimal compared to the money I make that if instead of ten thousand people, I do it with seven thousand. ok. Ok, so we'll see, how do we get that job with seven thousand people? This is the contractor. Ok, that leaves, that makes me a pretty penny. So now I look, and they do this all the time by the way, holy shit, look at these engineers, their making eighty, ninety thousand dollars a year. A fresh out only makes thirty-five. Why don't we start weeding out whatever and and having more fresh outs. You're getting at the bottom. Well you need some of that, but you're doing it not to replenish, you're doing it to keep payroll costs down. Instead of the average cost per engineer being sixty thousand, I can make it be fifty thousand. That's big money in my pocket. And I look at it and say guys, the places that not only the procedures that you've put in place are flawed. You took away the checks and balances, but then you give, the motivation you've given this person to get the job done or to make a profit, which is what he's in there for. Obviously if he did the job and did it exceptionally well and did it in half the time, I'm

not going to question. But he's not going to get that done. But but the place that's the big money for him is not in getting the launch off earlier.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Obviously he won't do anything on purpose to jeopardize the launch. But he's got to make a profit and the bigger profit he makes, the better off he's going to be. So what he does is he cuts in those, mainly in those two areas. The number of people doing the job and and and what I'm paying per person. And guess what, what you end up with is a weaker and weaker workforce.

**Dr. Lipartito:** Interesting. So that incentive is not one that NASA controls, that's totally under the control of the

**Mr. Garcia:** When you turn it over to the contractor, you, you, you've backed away and said get the job done.

**Dr. Lipartito:** Right.

**Mr. Garcia:** You can't nit pick him and say wait a minute. Why did you let that guy go and hire this guy here? But, what you got to. But that's what they're doing.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And you're looking at results and if you look and it's holy shit, I'm getting closer and closer to the edge. I'm going, the water's going to come up and I'm going to have a Challenger or a, or a Columbia.

**Dr. Lipartito:** Right

**Mr. Garcia:** I'm closer to there and it's because of those factors.

**Dr. Lipartito:** Let me; let me ask you another question. Let's go back a little bit in that you know, one of the theories, hypotheses about the taking over by the contractor is that

this is something that is, that comes out of a mentality more of the Johnson tradition. You know, Honeycut comes from Johnson, Goldin's obviously the, is the [both talking, unintelligible]

**Mr. Garcia:** Actually, he came around quite a bit. I can't mention names.

When I wrote my letter, they had ample opportunity to tell me not to put the letter out. I gave them that opportunity. I said, "I work for you."

**Dr. Lipartito:** Oh really.

**Mr. Garcia:** and I mean from, from the bottom to the highest astronauts. That letter went out and I put my neck on the line. But I'm telling you people that told me Please do it, if I just said one word, I'd never fly again and they were intimidated. I'd lose my job.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** And you go you go do. For example Honeycut said, his words to me were, "Jose, you do what you feel you have to." When he could have said, "Jose, you work for me

**Dr. Lipartito:** Right

**Mr. Garcia:** and you can't put that."

**Dr. Lipartito:** Right. Interesting.

**Mr. Garcia:** You see. But he didn't. And I mean, a lot of others, I'm not mentioning names that you would recognize, encouraging me to please. They all agreed, but none of them willing to step up

**Dr. Lipartito:** Right

**Mr. Garcia:** because of the consequences.

**Dr. Lipartito:** Right. Well why don't you tell me what were the consequences?

**Mr. Garcia:** Oh the consequences were an astronaut would never fly again. If he'd go sign that letter with me he'd never fly again. If it was one of the managers, one of the SES's he'd be fired.

**Dr. Lipartito:** Really

**Mr. Garcia:** Honey, I mean Goldin; you'd take it to the bank.

**Dr. Lipartito:** So what happened, so you had told people?

**Mr. Garcia:** Honeycut kept him from firing me, I'm telling you that right now.

**Dr. Lipartito:** Is that it?

**Mr. Garcia:** Yes sir. Honeycut told him, I guarantee you. He never told me this, but I guarantee you he had to tell him that the negative publicity you'd get, you just ignore it. If you, if you make an issue of it and take any repercussions against him, although I new my career was finished, and it was, but, but, but at least they didn't fire me.

**Dr. Lipartito:** Right

**Mr. Garcia:** Ok, and if I had to go up to the ass kissing that goes on, I can't live that way. I like telling it like it is and to get up to those levels you've got to be a yes man. There was nobody, that would tell Goldin anything he didn't want to hear,

**Dr. Lipartito:** Right

**Mr. Garcia:** because it would cost them.

**Dr. Lipartito:** That's true in every organization [both talking. Unintelligible]

**Mr. Garcia:** But you see to me that's criminal. I'd have a meeting at my level and I was like a division chief. Guys came in and when it's something critical, I'd say ok, you guys are for and you guys are against. Go back and come back in two days and and I want to here the arguments and when we pick an position and go forward with it, if I hear one thing that I

haven't heard from the nay sayers or the yes or the yes men if I hear, I'm not making, we're making and I better not hear one thing that we haven't talked about in advance and had an answer to. So whatever it is, you go try and shoot it down, I mean I'd force it. And I don't, and the instance I'd get to where I found you start hearing people that, you know, even though I'm encouraging it, I'm kind of loud and intimidating at times so I would have to force it. Stop right now, you you and you and you're going to say nay and you already know I think we should do it, but I don't ever want to get up to management or whatever and them pull a rabbit out of the hat on the negative side. And when you come back you say "holy shit, I didn't know" and it's happened by the way, I didn't know that. Maybe we ought to rethink this and go a little bit this way.

**Dr. Lipartito:** All right.

**Mr. Garcia:** The natural think is not to

**Dr. Lipartito:** Yeah, challenge.

**Mr. Garcia:** challenge the boss and go against the boss.

**Dr. Butler:** Can you give us an example?

**Mr. Garcia:** Oh Jesus.

**Dr. Lipartito:** Well tell me what you were doing about the time. Specifically what was your position about the time?

**Mr. Garcia:** I was a technical assistant to the electrical and telecommunications division when I wrote this.

**Dr. Lipartito:** Ok. And that's in?

**Mr. Garcia:** Shuttle, uh, Shuttle Engineering.

**Dr. Lipartito:** Shuttle Engineering. Ok. So and had you, we might as well get the rest of the career story, so after.

**Mr. Garcia:** I worked ALSEP and then I went J-Mission Experiments

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok and I set up a lab and wrote contracts and I brought University of Texas, Univ, uh, A.S. and E, up in Boston had one of the payloads. The Air Force had some of the cameras, they were spy cameras and stuff that we were using. Uh, I built the lab for them with all of the things that they needed to check their equipment. Wrote the contracts, told them I needed a technician and an engineer. This is more complex, I need two engineers and a tech. We'll supply the quality and then the lab just had NASA quality. So we did that and then the lab was running. See we did some things. Tell you a story, put your neck on the line. This is one I remember. Some of those other things, I I I, there's so many of them, you don't, there's not one that sticks out. We get in and everything's got pedigree. I mean we've got pedigree on everything. Ok, and uh, we check everything out and it comes and the night before we got to install the J-Mission experiments, the pan camera has little batteries that went in it, I forget what the function was, but it didn't work without them.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** Ok. We start to put the batteries in. Up at the plant they just put the batteries in. I said, "No no, before we put, we check every battery. I don't care what the pedigree is, the last thing we do, if we need that to work for the experiment or work, we check the battery."

**Dr. Lipartito:** Right.

**Mr. Garcia:** Not one God damn batteries worked, not one (laughter) We called the plant. We don't have any more. They're out. We sent you all of them that have been bought. by the way I don't know how to explain it. I've seen this happen. I need screws that meet this government spec. Ok. And I can buy a screw, fifty of them for a penny. You write this government spec and all of a sudden, the the the price is a thousand dollars a screw, because they got to meet. But guess what, they check one of these screws, they check two, they check all of the screws and say Holy Shit, every one of these meets the spec. (laughter) It's a thousand dollars! Ok. Well the same thing with these batteries, my my quality guy, a guy named Buck Rodgers, an old Navy guy

**Dr. Lipartito:** Ah, ok

**Mr. Garcia:** Ok, He was a Navy technician and now he's a quality for NASA. He says and we I Holy Shit. I told the guy, we're going to have to fly your tray. And the guy was going to cry,

**Dr. Lipartito:** The guy was

**Mr. Garcia:** the principal investigator, Ph.D. I forget their names now. Anyway, he was about to cry. My quality guy says "Jose. Uh I think these are the same batteries, I'm looking at them, and you can buy these at Eckards. They go in hearing aids and they go in." I said, "Are you kidding me?" He said "No, I think if you go take one." I said "Let's go," I grabbed a battery and we took off. We went and we went to Eckards and I'll be God Damn, I mean not a, the identical battery, same numbering same everything.

**Dr. Lipartito:** Same everything.

**Mr. Garcia:** I mean, it was built to government specs, it was like I told you with the,

**Dr. Lipartito:** Right.

**Mr. Garcia:** with the screws, ok. We bought every battery they had, which was about time and a half what we needed.

**Dr. Lipartito:** Alright.

**Mr. Garcia:** Ok. We came back; I bought it out of my own pocket. We came back. We checked every battery and every battery was good. "Your call. I'll put my job on the line. Do you want to fly as ballast or do you want me to put untested, you know this isn't flight you know

**Dr. Lipartito:** Right.

**Mr. Garcia:** verified, flight." He said, "Oh please, would you?" I said, "You got it. Make these official, Buck." Buck, chonk chonk chonk, made them all official. We went and put the batteries in. I got letters, "Oh Thank You! We wouldn't have," you know. And that's putting your, that's your, you know,

**Dr. Lipartito:** Right.

**Mr. Garcia:** but to me that's common sense. Same thing on uh, on uh, uh, what the hell was the experiment. It was on Skylab. I was doing Skylab. And the uh, I didn't know much how the experiments worked because all I was in charge was putting them in and they would come down and I would go over the procedures but I didn't know the science and all that stuff. But I got a little bit of common sense. They come down with this big elaborate thingy. Ok. And they got their payloads way up there on their piece of GSE and they shine down through mirrors and stuff and their, and their doing a. I'm there watching their procedure and I'm thinking. And you would have done the same thing by the way. They were so close to it. What the hell are they doing? It's like saying, you know I'm look, this experiment looks here and I

mean it gives you a real precise and you're looking at it and you're saying wait a minute, how can it be giving you a real precise. I mean, I'm looking at it and it's looking that way. And their doing their calculations and their doing. Everything's perfect. And I told the guy, "Hey guy, something's wrong here." He says, "What do you mean?" And I says, "I'm looking at what you're doing here and and you're, you're, it looks to me like you're looking, you looking that way. It's not, it's not, something's wrong." He said, "Oh no, let me show you the figures." I said, "I don't give a damn about the figures, forget about the figures." Finally I said, "Go get me a ladder that will get me up there." You see, they couldn't get one so they brought this, a little cherry picker. They drive around. We get there and they put some plywood on there. We raised him up. He looks through this and says "Oh, my God, we're ninety degrees off." (laughter) They've had calculations for six years with it ninety and doing it. And they had a cosine instead of a sine; I forget what he told me that he had. And everything looked good and they were off ninety degrees and obviously when they got up there, the data would be useless.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok He's up there he tries to adjust it. He can't adjust it. It won't go ninety degrees. So I said, "Let me look." They brought the thing down and I looked at it. I said, "How how much calibration do you got to do." He said "We can cal," I said "We've only got twelve hours." He said "Oh, in six hours we can do it." I said "Fine." I take a hack saw and cut this right here. This is your payload. We get everybody out of here so nobody gets in trouble but me if it gets found out. I take a hack saw and cut this end off so we can turn this to the ninety degrees

**Dr. Lipartito:** Right.

**Mr. Garcia:** And then at least get it as close as you can. Either that or you fly as ballast, cause you know it's not going to work. He says, oh please, please. So we sent everybody out, I took a hacksaw, cut it, we as best we could. We put it back up, they had one count with a sine instead of a cosine Properly and I got letters, oh thank you we would have never flown. And I put my job on the line but to me it is common sense. You're going to fly it as ballast. You know it's not going to work. But that's illegal. If I had to wait to get management permission, to get everybody together, it would have flown as ballast, we had to put it in or not. Those are. I don't know why I'm telling you these war stories, but anyway.

**Dr. Butler:** It's important.

**Dr. Lipartito:** Well you're telling us, it comes back to what you've said, what others have said, that you know, at Kennedy

**Mr. Garcia:** It stops here. It stops here.

**Dr. Lipartito:** it stops here, yeah. Right. It's a lot different when it's like it's going to go in x number of hours

**Mr. Garcia:** and and your backs against the wall.

**Dr. Lipartito:** yeah.

**Mr. Garcia:** Up there it's, "Yeah, We can't ship it for another week" and they play it.

**Dr. Lipartito:** right.

**Mr. Garcia:** Somehow there's not the urgency.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** And it's not that they're not good people, believe me.

**Dr. Lipartito:** Right.

**Mr. Garcia:** and it's not that they don't care, but somehow,

**Dr. Lipartito:** Right.

**Mr. Garcia:** if you had something and it counted and it really needed it,

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** you ought to be saying, I want it checked last at Kennedy before it goes installed.

**Dr. Lipartito:** Hmm.

**Mr. Garcia:** Cause your chances are the best.

**Dr. Lipartito:** I'm trying to, I'm trying to figure this out and that makes a lot of sense because I thought if it had something to do with the different training of people who do, or designing stuff versus operating stuff, but maybe it's not.

**Mr. Garcia:** I think it's the it's the

**Dr. Lipartito:** I mean it's

**Mr. Garcia:** It's the, comparing the mechanics that change your tire out out there when you go by a new set of tires to the guys who do it for Ehrhardt at a pit stop. The guys there can't afford no error.

**Dr. Lipartito:** Right.

**Mr. Garcia:** You know every now and then you hear of a tire falling off. Here it's the guys, do you understand?

**Dr. Lipartito:** Heard? I've seen it.

**Mr. Garcia:** The buck stops there and they're and they've got to do it in a hurry. And they got their procedure down and I guarantee you you just can't put anybody in there to change that tire and to get that car

**Dr. Lipartito:** Right.

**Mr. Garcia:** They've got people who are good at it and are trained and somehow, the other guy changes the tire and it could fall off on the way down here. (laughter)

**Dr. Lipartito:** Well, You know, it happened to my brother-in-law

**Mr. Garcia:** You know

**Dr. Lipartito:** They were driving down the road and a guy pulled out from Tire Kingdom or one of those places and front wheel right into the wind shield of his car.

**Mr. Garcia:** And and, I compare it to that. Somehow, and if the guy at Tire. I don't know. I just know

**Dr. Lipartito:** Alright.

**Mr. Garcia:** that at Kennedy you're trained. You know there's no second chances.

**Dr. Lipartito:** One of the other things that Orv and I have been talking about is the difference between, you know, like being in the field, if you think of this as like a field operation versus again like being back in

**Mr. Garcia:** Yeah, we call it the ivory tower. You guys back in the ivory tower lose touch with reality and here on the front lines

**Dr. Lipartito:** Right.

**Mr. Garcia:** you know, is where everyday you're fighting those battles

**Dr. Lipartito:** Right.

**Mr. Garcia:** and you get good at it and you try and tell the guys back there 'Hey, what you need to do is" and they say "Oh no, we got it all calculated. You say, guys,

please, I'm here on the front lines. I'm having to get the job done. Listen to me. Get your ass down here and you do it a while." See.

**Dr. Lipartito:** Do you detect, when you, like, you could probably make this argument with Columbia, that if someone here says well I think this is wrong or or implies that maybe it wasn't designed right or built right

**Mr. Garcia:** Oh, they take insult

**Dr. Lipartito:** they take insult

**Mr. Garcia:** they take insult. It's very difficult, you see

**Dr. Lipartito:** You don't know because you're just, you know, whatever

**Mr. Garcia:** Yeah, what do you know? Yeah we got a lot of that and I, one of the things I looked for when I hired and one of them is an astronaut now by the way, is a black young lady named Joan Higgenbotham [phonetic]. I hired her

**Dr. Lipartito:** really

**Mr. Garcia:** and of all the, after Challenger, the boss called me in and said "hey, we're going to be hiring. We're going back to doing business the way we use to.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** Which is what happens each time after an accident and five, six, seven, eight, nine ten years later they start

**Dr. Lipartito:** Right.

**Mr. Garcia:** going back the wrong path. Accident happens they look and say dumb shits. And we go back to doing. It happens every time.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Why, the money and the politics and all of that crap, it drives you to making dumb decisions. And Sometimes Goldin, yes man, is going to do. The boss wants privatization. Well, you tell him this ain't a fucking cafeteria,

**Dr. Lipartito:** Right.

**Mr. Garcia:** and it ain't an airplane. Oh, it's just like an airplane. It'll never be an airplane. It was born an R&D vehicle and it will die an R&D vehicle.

**Dr. Lipartito:** Yeah, that's what you said in the letter.

**Mr. Garcia:** Oh did I? ok.

**Dr. Lipartito:** I have an idea that quotation's somewhere in the book.

**Mr. Garcia:** Anyway, what was I I was telling you something?

**Dr. Lipartito:** They're going back after Challenger, you hired

**Mr. Garcia:** Oh yes I was hiring and he came and said, "I don't want," I was always involved in little league and coaching football and baseball and that. And I like kids, I like youngsters, I like young people and I can relate to them and I can remember what it was like. Ok. And he says, "I want you do to the hiring for us. I don't want personnel doing the hiring. I want, we need good people." And see personnel looks and what's the chief, oh, 4.0 great. A 4.0 might be great in a lab and useless down here. I need personalities that deal with people. Nobody does anything by themselves down here. You've got to be able to deal with people. You got the contractor to deal with, you've got quality, safety, the technicians' world, you've got to deal with people. Nobody's inventing stuff by themselves and coming up with great ideas. Very few of those. Ok. And that not to say that a 4.0 can't do that but the odds are against you. But see and I'm not, I didn't discriminate for high GPAs but when I went out, that's all they looked at. That's not what I looked at. I looked at everybody and I put the GPA aside

and when I got finished, if you two guys say these two guys are about the same and they really impressed me. And you got a 4.0 and you got a 2.0, I'm hiring you. But GPA is the last thing I look at that's not the most important thing. If you've gone through the rigor of getting an engineering degree, you've got the tools necessary to work at Kennedy. Now do you have the personality and and the get up and go to get out there and mix with it. Well it didn't take me long. First of all right away they knew I wasn't a personnel person. They say you come in at 6 in the morning and if there were people to interview, I was there at twelve at night. They give me a key to lock up. Personnel comes in at ten, takes a long lunch and leaves at two. They don't give a damn, I've got so many and that's it, see. Well I would take my wife. I went one time and said, "This ain't going to work." I found out what was going on and I said, "Honey you're coming with me on every recruiting trip." I paid for it out of my own pocket. Ok. Every recruiting trip I went on I took her with me.

**Dr. Lipartito:** Where did you go?

**Mr. Garcia:** I went to Mexico, University of Florida, Miami; Alabama, Southern Illinois. All over the country. Universities everywhere. Everyplace I went I called, and said, I want a meeting with every, I didn't have enough time in half an hour to to to tell you what I felt you needed to know about Kennedy and what the work was like and so forth.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And then and then find out what I need to know about you. So I called them up and said we're having hotdogs and sodas and potato chips. Uh, bring, I want everyone that's going to be there and bring your spouses, better halves or their girl friends or whatever. Ok. Well I would go and I'd get up and spend however long answering questions and

telling them what it's like. What I would have normally told them one on one, I told them only one time.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** And I told them all. And then I got up and said for those of you my wife's going to tell you what it's like to live at Kennedy Space Center and shopping and schools and answer and afterwards we'd sit down and go around and people would come up and do this. We're drinking a coke and asking questions and the girls would. And tomorrow, when you come to the interview, my wife's going to be out front. If your wife or girlfriend didn't make it or if she has any questions have her come and or him, whoever it is, and come and talk to her. She'll answer any questions. When I had the interview I'd spend the whole half hour.

**Dr. Lipartito:** Oh, Alright

**Mr. Garcia:** And a lot of it was jousting. I would, for example with a girl; I might slip on my own and say a naughty word or something. And you'd say "Why would you?" Just to see their reaction. You go out there with those techs. Guess what. I'm sorry, as much as I'd like to make this environment perfect it's not and they're going to say things, they're going to do things. And in spite of it. And I'm not talking about you should let anybody harass you. We'll kick their ass.

**Dr. Lipartito:** Alright.

**Mr. Garcia:** But the fact that you got to learn to work with those people and they're a little cruder than you're use to in the university environment. You. And I would purposely and this Joan Higgenbothem, she took everything I gave to her and gave it back to me. I mean she handled and of all the, and I must have thousands, that I interviewed, she she was the number one and mainly and she had great GPA and and a great personality and I mean I'd given

her the business and she'd give it back. And I mean she handled herself, she was looking for a job from me and she held her, and I said "God damn she's good, she held her own." It was not only finding out what technically they're interested in and all that, but in the middle of it, I'm seeing how are you going, can you handle the job at Kennedy? I did that and hired Joan. And when we came back, I told all the supervisors and told them who I recommended and all, but then all the rest of it went in to personnel and I'd get calls from all, I got kids all over the center. Towards the end of my career I use to have to work longer hours than I ever did and the reason was I'd have to go in at six, between six and eight get my work done because in the middle of the day, there was nothing but, and I didn't have it in my heart to say, I'm sorry but I don't have time for you, and these guys worked for other people and they'd come to me because they felt like I'd hired them even though that other supervisor had hired them. From all over the center would come to me with problems, work problems, personal problems, whatever, they'd come to me and I didn't have it in my heart to send them away. And when four o'clock came and everybody went home, I stayed till six or seven to get my work done. So I worked longer hours in the end of my career than in the middle of it mainly because of not having it in my heart to turn these youngsters away. And I interviewed a lot and I'd say a good sixty percent of the work force that was hired in that era were people that I interviewed and recommended.

**Dr. Lipartito:** Well.

**Mr. Garcia:** Yeah, and Joan is an astronaut now and I could have told you she was going to be successful no matter what she did.

**Dr. Lipartito:** Right.

**Mr. Garcia:** She's going to own the joint. (laughter). She is one sharp cookie.

**Dr. Lipartito:** Is that right.

**Mr. Garcia:** I don't know if Joan, if Honeycut uh talked about her or not, but I sent, he asked for a, he called it a Bubba, somebody to come and see what it's like, like a tag along, a hey boy, or whatever, He called em his Bubba. go along with him and uh, she was the first one. They called me and I said "I've gotch you." And they said, "I'm not sure a girl you know Honeycut," and I said "God damn it Ed," Ed was helping. Ed Weber. I said "Ed, I'll put my reputation on it, you take Joan, she'll have that sonofabitch eating out of her hands." (laughter) He said, "Jose, you know he's a." I said "Ed," He took her; he said "Boy, Honeycut loves her." (laughter) I said I knew he would. She's sharp, she's just super. In fact he put her in for astronaut.

**Dr. Lipartito:** Oh really

**Mr. Garcia:** In fact she always wanted to do that so I told her, hey, Honeycut has an in, One of his best buddies is

**Dr. Lipartito:** That's right.

**Mr. Garcia:** head of the astronaut corps

**Dr. Lipartito:** head of the astronaut corps

**Mr. Garcia:** So you go and every chance you get you let him know you'd really love to be an astronaut. So she dropped the hint and sure enough he put her in. Said, "Here fill these papers out."

**Dr. Lipartito:** Really.

**Mr. Garcia:** Turned her in. Yeah.

**Dr. Lipartito:** Well what

**Mr. Garcia:** Anyway

**Dr. Lipartito:** Let me

**Mr. Garcia:** One other thing, because you mentioned it and we got sidetracking you with war stories here, I apologize.

**Dr. Lipartito:** Oh no

**Mr. Garcia:** But I worked, I guess we were talking about Lunar Surface, J Mission experiments.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And after that I worked the the sky, they did the same thing. It's in trouble. "Jose, would you go take overall." Of course there was a bunch of pissed off engineers because they were working it and the boss thought it was Fall and he put me over them when I didn't know nothing and so I had to work with some pissed off engineers but they came around eventually, whatever, you know. Ok, we got that job done. And then after that I went to work on the as a engine. They wanted me to work payloads. Ok, now, let's start, that's why I'm telling you this. They came along after Skylab and they said we're going to reorganize. Instead of having Launch Vehicle and the Space Vehicle we're going to have the Shuttle and we're going to have Payloads

**Dr. Lipartito:** Right.

**Mr. Garcia:** And they the hierarchy in payloads is going to be the Launch Vehicle hierarchy and the hierarchy in Shuttle is going to be the Manned Spacecraft hierarchy. But the engineers we're going to take and mix that culture so that everybody learns from it. I thought "Oh, you dumb shit." Well they were under the old Germans and it was hup to three four. I don't know how to explain it, it was almost like fear. When he spoke it was HUP DANG, you did it. Bull shit, Your going to hear my side of it and I'll do what you want, but not, not

when I think you're wrong and without telling you I think you're wrong and we should do it this way.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok, so anyway, uh, came along and they said that's what they're going to do. And I thought it was a mistake. And they said, ok, the thing came out, and I was in payloads. "You work payloads. They want you over there." "Well fine you go tell them, that I ain't going over there. I found a job, you tell them, I found a job when I got this one and I'll find another one. But I ain't going to work for those son-of-a-bitches. I'm use to working and I've dealt with those people and I don't do business that way." They'll they don't realize that if I don't quit, they'll fire me, because I ain't going to blindly go the way they do business. It was a different culture. Not necessarily wrong or I'm not judging. It's, I'm not use to, I don't like doing business that way. I don't, I can't survive in that environment. I'm not a yes man and I'm not use to somebody saying. I would not make it in the military. You don't tell me to jump and don't give me good logic. Ok. I'm not use to that. That's not, I've always gotten into trouble with that. I want you explain it to me and I want to understand it and I'll go give you a hundred and fifty. Even when I disagree, I'll say "Do you understand that we really I think we ought to do it this way." You say "I understand that but but take my word the boss, we need to go this way." I'll give you a hundred and fifty percent. But don't tell me go do it and my not tell you "boss?" You'd have to; You'd have to sew it shut. You you see what I'm saying. And that didn't fly in that. It was a different culture.

**Dr. Lipartito:** So even even in the nineteen, you know ten years after the Germans were gone.

**Mr. Garcia:** Even after the Germans were gone the people that were left behind, it was their culture and they were very uh, how can I put it, they were very hup two three four, follow that procedure, follow that, you see. And in terms of my operation procedure, my boss use to say "Jesus Christ those books are that God damn big. You go out and use good engineering sense."

**Dr. Lipartito:** Hm.

**Mr. Garcia:** And when you come up against a stumbling block like quality says "Geez, you can't do that." you say "Fine, where does it say I can't?" You go read and guess what I learned that book that way by going and doing it. But the other guy makes you memorize the book. My boss said you go out there use good common sense and when you have to you go reference that book, but I want you using good common sense when you do something.

**Dr. Lipartito:** I mean, would you characterize that when you were working on the Apollo Spacecraft that that was the way it was done.

**Mr. Garcia:** Apollo Spacecraft yes, it was, even though I felt we were checks and balances and very strict, and don't think I'm talking about being loose with the work we did

**Dr. Lipartito:** Right.

**Mr. Garcia:** But it was good, everything that I just told you that I did and whatnot, I did while working on the manned spacecraft side of the house. They would fire me if they even heard a rumor. Now my boss found out what I did.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And he said good job, he couldn't come out and say, you see I got an award and all, but it never really said "He hack sawed the damn experiment." or it, but he knew it because I told him.

**Dr. Lipartito:** Right.

**Mr. Garcia:** but I didn't want him to be accountable for my and I told him "you disavow all knowledge when the time comes if the shit hits the fan but you ought to know what we had to do to get that." He said "Good job. Way to go." Same thing I would have done. Shit the German? I go tell him, he'd fire me.

**Dr. Lipartito:** So it's a much more rigid culture.

**Mr. Garcia:** A much more rigid, they're hup two; you know goose stepping all the time. It was a, it was a.

**Dr. Lipartito:** The only way to do things.

**Mr. Garcia:** This is the way to do, and the only way to do them. I said God Damn, there's more ways to skin a cat and give a guy and that's not taking away the checks and balances.

**Dr. Lipartito:** Right.

**Mr. Garcia:** That's not short cutting something that's critical, I would never do that. But to me that's using good common sense. Do I fly this as ballast or or or do I put a band aid over it and and at least you've got a chance.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Your going to fly it as ballast, if you. That's not putting an astronaut's life in jeopardy; I'm not putting the vehicle in jeopardy, to me that's just using good common sense, but on that other side of the vehicle that would not fly at all. ok. And that was the culture the way they did business. And every one of those guys who came over to our side, I would say ninety-nine percent of them loved it. Every one of our guys that end up over there, I can't tell you. Gene Thurston (phonetic), Morty Sabine [phonetic], I hired back out of there, I

hired back. I took back, the I can't stand it over here, we got, and the good ones, Jackie Smith, they all came back to our side of the house.

**Dr. Lipartito:** Take another tape. I want to uh, I want to follow the story up what happened when you went to Shuttle. So you were assigned into the Shuttle layer

**Mr. Garcia:** I was assigned, but they changed their mind. I did

**Dr. Lipartito:** Ok

**Mr. Garcia:** I refused to go. My like Marty and Jackie, they were unhappy. They were all very unhappy over there but they went over and did the job and they said, "My God," and I said, "Well stand up and be counted. They told me to go and I said no, they told you to go and you said yes sir and left, you know. (laughter) You lost your pitcher rights." But anyway I ended up hiring some of these people back.

**Dr. Lipartito:** Where did you end up?

**Mr. Garcia:** I ended up on the Shuttle side and I ended up in charge of DFI. There were OFI and DFI, Operational Instrumentation

**Dr. Lipartito:** Oh, ok.

**Mr. Garcia:** and Developmental Flight Instrumentation. I had all the Developmental Flight Instrumentation which was supposed to fly on four launches

**Dr. Lipartito:** Right.

**Mr. Garcia:** and then get removed.

**Dr. Lipartito:** Ok

**Mr. Garcia:** Ok. So I had that. In the middle of of uh, after the first Shuttle, I forget where it was exactly, but I was working DFI, and I brought no let me think. There were

payload experiments but there was a group of experiments that were Shuttle related. And I don't even remember the

**Dr. Lipartito:** In terms of testing the Shuttle.

**Mr. Garcia:** Yeah, they were experiments. They were science, but it was like. I don't know if you've seen it or not, but on 102 they put the pod up here and I can't remember the Shuttle lea side temperature sensors? Shuttle lea side temperature sensor. They took the tail fin, cut it off and put this pod up there. Had the liquid nitrogen in it to keep the lenses cool because they were boiling up during re-entry and it mapped the top of the vehicle

**Dr. Lipartito:** Oh.

**Mr. Garcia:** in terms of how hot does it really get versus the the the design parameters

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** and based on that they took a bunch of weight off the vehicle.

**Dr. Lipartito:** Oh really?

**Mr. Garcia:** They went from tile here to just blankets and all of this kind of stuff.

**Dr. Lipartito:** Right

**Mr. Garcia:** And there were experiments like that. Well I kept those and my boss said you work DFI and work those experiments.

**Dr. Lipartito:** Right

**Mr. Garcia:** Well after a launch or whenever, and I forget what year it was, we had, we had the orbiter. Ok, Instrumentation. The branch had two sections in it, orbiter

instrumentation and then it had ETSRB instrumentation. It had gas and all the GSE, they had merged. Remember I tell you GSE and flight?

**Dr. Lipartito:** Right

**Mr. Garcia:** Well this had the GSE instrumentation in it.

**Dr. Lipartito:** Oh, ok

**Mr. Garcia:** In this section. Well I had had some run ins with my, with my division. Oh. Bill was my Branch Chief at the time. I had had some run ins with the, not as much the Division Chief, this was the Director. I had had some run in with the Director. I can tell you

**Dr. Lipartito:** The director of your?

**Mr. Garcia:** At work, the Director of Engineering.

**Dr. Lipartito:** Oh

**Mr. Garcia:** I had had quite a few words with him.

**Dr. Lipartito:** And who might this have been?

**Mr. Garcia:** Ted Sasseen at the time.

**Dr. Lipartito:** Oh, ok. (laughter)

**Mr. Garcia:** I had had some run ins with Ted Sasseen.

**Dr. Lipartito:** Is that right.

**Mr. Garcia:** So anyway, this, this guy that's the section chief is the section chief, he worked under the the old. He was a guy that worked in Launch vehicle and they brought him over as a section chief and he was doing that.

**Dr. Lipartito:** Right

**Mr. Garcia:** Ok. Well, he was so, I mean

**Dr. Lipartito:** Right

**Mr. Garcia:** it was so, it was pitiful. And he put so much stress on himself, the poor guy was losing his hair and he couldn't stand it. And the guy was sore; they'd take a procedure, like uh, uh, vacuuming the runway. I have nothing to do with vacuuming. That comes to me and I say Lee, I'll take it home and read it. Kind of interesting. Set it aside. But I ain't redlining review and sending it back. It ain't, what have I got to do with the damn runway. Well this guy he came and he dealt with everything the same way. And the pile kept getting bigger.

END OF TAPE 1 SIDE B.

**Mr. Garcia:** He was losing his hair and all. And people would send him shit like that just say what do you want to bet he'll, he goes through correcting typos, but the pressure was getting to him, right. Anyway, he retires. He couldn't stand it. He would tell me, I can't stand, they they they don't tell me what to do every time. It's you gotta do. Oh No. Boy, he was used to being told exactly what to do and when and what not, you know

**Dr. Lipartito:** Right.

**Mr. Garcia:** It was very regimented. Here it was you got your section, take care of it. Well he couldn't handle it.

**Dr. Lipartito:** Right.

**Mr. Garcia:** You know, so he retires. Boss comes by and says, Jose, I called over personnel and you ain't applied for that job. And I says, Bill (laughter) You got to be kidding. You gonna apply for that job? I'll never get that job. He said "I don't give a . I'll handle that, You apply for that job."

**Dr. Lipartito:** Alright.

**Mr. Garcia:** I said "Bill, it's a waste." He said "God Damn it, I told you, you apply for that job." So I applied for the job and somewhere. It's a funny story. I'm taking up you guys time.

**Dr. Lipartito:** No, it's ok

**Mr. Garcia:** And he says, "God damn it stay out of Sasseen's way and I don't want no God damn run ins with Sasseen." "Ok, no problem." So he comes one day and, anyway, part of what I told you I was working was these payloads.

**Dr. Lipartito:** Hm hm.

**Mr. Garcia:** Ok. They were payloads, Shuttle related

**Dr. Lipartito:** Shuttle related payloads

**Mr. Garcia:** Ok And I had gone to Sasseen and of course they were busy on Shuttle and Payloads, you know, "I ain't got time for that crap."

**Dr. Lipartito:** Hm hm.

**Mr. Garcia:** Well I had gone to him and a power struggle. We had in addition to the. It was a funny structure because it was, which I a a a a, they don't have it now by the way, it's worked differently. But they had a structure that had, it had payloads over here and it had Shuttle over here. Both of us only worked per the rules, operational stuff. When it gets here, take care of it. They had a program office

**Dr. Lipartito:** Right.

**Mr. Garcia:** that would go out and do all the advanced. And I kept saying, ah! ah! ah! He don't have to live with it. Why do you have him out there? I'll go; I'll take time to do that see. So what I did was I go to program and I say "Hey guy I'll help you out. Let me know" and I had built a rapport with this guy.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** And then anything I had to deal with he would let me know and say "Jose, hey help me out with this whatever." So I was kind of a adviser for him, I would go help him do whatever, but I got things like I needed them rather than, some of these guys it was such an adversary, and it happened on these payloads, it was such an adversary relationship that the the engineer had, actually it was the project engineer at NASA had pissed of the program office guy. They wrote letters back and forth and threatened each other with lawyers and shit. Ok. Well I would go and say "Hey guys we got to build labs to handle these, you know." And the program office guy said "No, I'm building the labs." Well hell it wasn't his responsibility. But Dr. Grey was in power more than Kapryan so so they were; they were going off and building labs when we should be doing it. See.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Well I went in to Ted, see. And said "Ted," and he's in, they were a staff meeting and I told them and he said, "Hey, we're busy. If they want to build, let them build what the hell they want, you just go take care of your job". "Ok. I'll go take care of my job." Well, it just so happens, I'm building the labs. Well the program office guys building labs for the same thing. I tried to tell him, "Boss boss." Well he would send me away, see. So this goes on vacation, I'm in for this promotion. It's near the end of the day a guy named Art Griffen was left in charge for for Bill. And it's funny, Art was funny that way. He says Bill bill. What should I do, you didn't tell me what to do while you're gone. This, This is a Launch Vehicle guy.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** He said, Art, let the guys do their job, and if they need you they'll come to you. What do you mean? What did I tell you? Just sit in your office and be happy, if they need you they'll come to you and then help them out with whatever they need.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Uh, huh, Ok. He wanted to know exactly what to do. Well Bill was leave the guys alone, let them do their job, they'll come to you when they need you. Or they'll keep you informed, whatever. Well he was, he was, poor guy. Three o'clock or so on a Friday, Bill left on vacation. He said Jose, I don't want no Sh\*\*. I said, no worries boss. Well he leaves and he's gone for Thursday and Friday. He came back Monday. Friday afternoon about three o'clock Art comes and says "Jose, what did you do?" "I didn't do nothing." "Oh, Ted wants to see us right now." I said, "Ted wants to see us?" You know. So fine, we'll go see him. So I go down and he comes in with me, and he's got his staff in there minus Stelgis [phonetic]. Ok, and I, Charlie Mars, I'll give him credit that he was the only one that stood up. Of course I went in not knowing what it's about. Normally, I got to where I expected crap from him and when I expected crap from him, I could ignore it. But when you gouge me I jump. Ok, and I'm not pulling any punches now. ok. As soon as I walk in he says, "God damn it Jose, how in the hell can we be building labs and and, you know, the program office be building labs too? How in the hell did we get into this kind of shape." He says, "God damn it, I know, you were talking when you should have been listening." I jumped across that table. I grabbed Ted's cape, kept me from grabbing it. "You son of a bitch, I came into this fucking office and I told you what was happening and you fucking ignored me, God damn it. How did I let it happen? You let it happen." And Charlie Mars stood up and said "Ted, you know, Jose's right. He came to us.

**Dr. Lipartito:** Right.

**Mr. Garcia:** and we were so busy, remember we had this problem, that problem and we didn't take care of that when he came to us the first time." He, he, I I can remember. And he didn't have to do that

**Dr. Lipartito:** Right.

**Mr. Garcia:** But anyway, he ranted and raved and whatever and he said "Fine! Well go fix it!" And I said "Fine!, I'll fix it, but it's not because I didn't tell you, God damn it." So I walked out and Art Griffen, I thought he'd messed his pants. We were walking down the hall, he said, "Jo, Jo, Jose. How, how could you talk to the man that way?" And I'm not exaggerating, he was shaking and just "You can't do that." And I said "That son of a bitch puts his pants on the same way I do and I'll be God dammed if he" and I'm mad, I'm I'm fuming. (laughter) That son of a, and here I am in for a section a promotion, I should say. God damn it Monday I knew it, "God Damn it Jose get in here." (laughter)

**Dr. Lipartito:** He told you not to get with it.

**Mr. Garcia:** Yeah, it's funny, another funny story. You know, You got the recorder going?

**Dr. Lipartito:** Yeah, I can turn it off.

**Mr. Garcia:** No that's ok. As long as you don't quote it ok.

**Dr. Lipartito:** No, that's fine.

**Mr. Garcia:** Calls me in and he says, "God damn it I told you not" and I says, "Boss, I'm sorry," You know I will give Art credit for this. He's in there and he's chewing on me. "God damn it Jose, I told you, I specifically told you to avoid the man." "I, Well, I did. He called me into his office and I." Yeah but God damn it, you know you should have just whatever he said ignore it." I said, "I tried boss, but I couldn't." And and Art said, "Bill, he uh, Ted baited

him. Ted was the one that started it. Ted jumped on him and said some things that he shouldn't have said. He baited Jose. So Jose said some things he shouldn't have said but but Ted baited him, whatever. So Art, I give him credit for that. He calmed down and he and he told the truth, ok. He's putting me in for the job. He tells me he's already made, he told me I've already selected, I've got to go sell it to Ted now. See. Well the phone rings and I'm hearing him talk. And he says, "I don't really give a shit." He says, "You don't tell me who the fuck to hire." You know. "I hire the most qualified person, bud" and he's chewin having an argument with them. What the hell is going on? He gets off the phone. That God damn personnel, I'm sick and tired of them." Well what happened? They called me up to make sure that I knew there was a Hispanic on the on the." Me! I said well Bill what? He said "Yeah, but they'll be fucked if they think I'm picking you because they're telling me, I'm picking you because you're the most qualified." So he's chewin on them because they're telling him to hire and he says Bull shit, I hire who I want." That was, I thought that was a cute story.

**Dr. Lipartito:** That's a cute story.

**Mr. Garcia:** You know

**Dr. Lipartito:** Alright, what happened?

**Mr. Garcia:** I ended up, I ended up. I don't know. Again, I thank Bill

**Dr. Lipartito:** You got the position.

**Mr. Garcia:** Yeah, I got the job and as a matter of fact I got the job and not only that it didn't take Ted long to realize that when when I uh, that I tell it like it is, I ain't winging it like most of these guys because they're scared or, I've got no problem with telling you I really don't know, but I'll go find out, but I really don't know

**Dr. Lipartito:** Yeah

**Mr. Garcia:** and whether I should have known or not is beside the point, I don't know, but if you really want to know I'll go find out for you

**Dr. Lipartito:** Right

**Mr. Garcia:** And I was straight and what not. He was my best buddy. He come visit me after he retired. Invite me parties at his house and stuff. All I'd had I'd had some big run ins. Before that one I'd had some big ones. Ok

**Dr. Lipartito:** Was that personality or?

**Mr. Garcia:** Personality. He was a, he was,

**Dr. Lipartito:** [unintelligible]

**Mr. Garcia:** he was. I don't know anybody else that could have done the job he done during Apollo.

**Dr. Lipartito:** Oh really

**Mr. Garcia:** Seriously. He did, he was chief engineer during Apollo and and I don't know anybody else that could have done that job,

**Dr. Lipartito:** Hm hm.

**Mr. Garcia:** but it cost him his family.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** You know he was out there. I remember Marty. We were changing shifts. It was seven thirty or eight o'clock at night. We were on two twelve's. I was on night shift, and Marty was on first shift. And I came in to relieve Marty. This was early, you know, on in the Apollo program. And uh I came in to relieve him, and it had to be, you know, he he was the first one there. He'd be there at five or six in the morning

**Dr. Lipartito:** Oh really.

**Mr. Garcia:** It was eight or nine at night he was still there. And he was heading out for his car and we saw him and he's a real dry sense of humor, Marty, and he says, that son of a bitch is sneaking off early. You know, but that was, it cost him his,

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** and he had a, Ted had a, and by the way it happened to me on several occasions. Ted had a, You have a problem. And you're you're having trouble solving it and you don't know what you're going to do, whatever, And you're you're you say, we need to go to Ted. So you get all your data together and you go in and you tell him, you know, this is what happened, this is what we did and these are the results we got and so we've been heading down this way doing this doing that. And here's something that that was not his field, but he had a and he could do this with anything by the way. He'd ask you a question. And you'd answer it. And then he'd ask you another question and you'd answer. And he'd ask you a question, until the light went on, holy shit we didn't,

**Dr. Lipartito:** Oh

**Mr. Garcia:** you know he had a probing

**Dr. Lipartito:** Right.

**Mr. Garcia:** kind of troubleshooting

**Dr. Lipartito:** Right.

**Mr. Garcia:** and I can't tell you how many, you go ask any of the engineers that worked for him.

**Dr. Lipartito:** Oh really.

**Mr. Garcia:** Hated his guts because he wasn't a people person,

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok, and when h became a people person he lost his ability to do the job.

**Dr. Lipartito:** Oh.

**Mr. Garcia:** It was completely, it useless at that point.

**Dr. Lipartito:** Huh.

**Mr. Garcia:** but he became human but then he was useless. But he was an asshole as far as people was concerned, but he he had that knack of really zeroing you in,

**Dr. Lipartito:** Right.

**Mr. Garcia:** you know, on the problem. And you were working and he "holy shit boss, yeah, let me let me we're going to go back and look into this and get back with you." Sure enough, he'd zeroed you in on what the problem was. So he had that that ability and I think, I don't, I think single handed about one person that was most, from Kennedy on the Shuttle program, that Ted would be the one that that

**Dr. Lipartito:** On the Shuttle Program?

**Mr. Garcia:** On the Apollo Program.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** On the Apollo Program. Ted would be the one.

**Dr. Lipartito:** You know he wrote an autobiography. You know that

**Mr. Garcia:** I haven't, no I haven't

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** Since his wife died, I haven't seen him.

**Dr. Lipartito:** He died.

**Mr. Garcia:** Oh, that's right Ted died, but I had not seen him for, the the, because the biography. When his wife was alive

**Dr. Lipartito:** Oh, you knew each other.

**Mr. Garcia:** Yeah. Socially, I don't know why but he got to like me after all the run ins, I'd had some.

**Dr. Lipartito:** That's funny because, it's not been published. I don't, there's a copy in the Kennedy Archives and I've read it but that explains a lot because it kind of talks about his life going through a transformation

**Mr. Garcia:** He he he, it cost him his family

**Dr. Lipartito:** yeah

**Mr. Garcia:** He, he, he the Apollo program, I don't think would have gotten off the ground without. He was, in Kennedy, the single most important cog

**Dr. Lipartito:** Well let me.

**Mr. Garcia:** in that wheel. But it cost him his family

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** and everything else.

**Dr. Lipartito:** And I guess even an alcohol problem.

**Mr. Garcia:** oh yeah, drinking problems, yeah it cost him.

**Dr. Lipartito:** Yeah, he talks about that. And your point about after he kind of got his life together.

**Mr. Garcia:** He got his life together, he was no where near as effective, yeah he was nowhere near as effective.

**Dr. Lipartito:** You can see a change in personality actually, even in his book

**Mr. Garcia:** Yeah

**Dr. Lipartito:** So, I'm getting a distinct impression you know that there's this real sort of cultural difference between the launch vehicle German guys

**Mr. Garcia:** There was a

**Dr. Lipartito:** and the American. Uh that's really, that's very interesting and, you know, that kind of clarified

**Mr. Garcia:** And and, and not to say their system wouldn't work but you've got to remember, they were mainly rocket guys

**Dr. Lipartito:** Right

**Mr. Garcia:** and there was never any people on a rocket

**Dr. Lipartito:** Oh

**Mr. Garcia:** so they could make decisions and do things

**Dr. Lipartito:** alright

**Mr. Garcia:** and not just you don't like the way they do business day in and out. And I've often, guys will ask me and I've had the chance to go to the job over here and over there and go over there if you can on a trial business. Day in and day out, how you do business your way. It's whether, how we handle time cards or leave, just day in and day out. It might be a better job, but a shitty boss and a, and a bad working environment will make a great job shitty in a hurry. You want to have a good boss, you tell me you want to have a good boss and a shitty job, I'll take the good boss and the shitty job because it's livable

**Dr. Lipartito:** Right.

**Mr. Garcia:** You know. So the the fact that they they were a funny way of doing business, not just procedurally, you know, the way they handled things and their

personality, but see they they did not do, we, the Americans worked on the manned side the whole time, so the side I'm used to not only personality wise but the checks and balances, a lot of that stuff, they were not necessarily in favor of, yet you had to come around to that because that rocket could cost a guy a life too.

**Dr. Lipartito:** Right. Right.

**Mr. Garcia:** You see yet their culture was unmanned. It was always just launch another rocket. So so they had the even before we merged, it was some, I talked to a lot of people who talked about, in fact, I can't think of their names now, but they had the real running battles trying to get them to put redundancies in stuff. "Thadt Atts Veight." Yeah (laughter) but if you lose that rocket, you've lost the astronaut. This ride you have a man on top. It ain't a V-2 going to England. (laughter) V-1 or whatever they were. But anyway so so it was a even before we merged and the personalities, they they had problems with that side of the house. Even on the design, like with Huntsville. We have trouble today, you deal better, You you deal better with with JSC

**Dr. Lipartito:** Really?

**Mr. Garcia:** and with Goddard than with Huntsville,

**Dr. Lipartito:** Oh Really?

**Mr. Garcia:** because of that mentality. I'm serious here. You talked to anybody. Your interface is smoother.

**Dr. Lipartito:** Hm

**Mr. Garcia:** Because, and I still say it's the German influence and the way of doing business. They weren't used to the manned business.

**Dr. Lipartito:** That's part of it. Right. Well the other thing that people talk about is that with the Apollo Space Craft Program at Johnson, you start to bring in these other management approaches, some of which actually do come from the Air Force,

**Mr. Garcia:** Yeah

**Dr. Lipartito:** like the term quality control

**Mr. Garcia:** Right Right.

**Dr. Lipartito:** And you're, what you're saying is that evolves into this very effective checks and balances sort of thing.

**Mr. Garcia:** Exactly

**Dr. Lipartito:** and the problem comes when you completely remove

**Mr. Garcia:** When you completely remove it. In other words we were, like and we talked about this earlier

**Dr. Lipartito:** Right.

**Mr. Garcia:** we knew that we had to get more efficient and we had to launch faster

**Dr. Lipartito:** Right.

**Mr. Garcia:** cut the costs and so forth and those Process Enhancement PET teams, Process Enhancement teams

**Dr. Lipartito:** Right.

**Mr. Garcia:** Like I told you, not to get the exact figures, but we had cut the time significantly and the work force significantly and if you'd left us alone Goldin, we would have done better than what you did, except you chose to go this route

**Dr. Lipartito:** Right.

**Mr. Garcia:** that's completely unacceptable in terms of what you're doing to a, to a known process and its success rate.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And and his words were always, we're going to not check it and it's going to be safer.

**Dr. Lipartito:** yeah.

**Mr. Garcia:** I said, "God that's easy to say." You know and the way we'll find out you're wrong is when we kill somebody. Anybody and that's what I bitched

**Dr. Lipartito:** Right.

**Mr. Garcia:** The media would call me about something and I'd say where the fuck are you guys now, look at what he says in the paper and not a one. You'll be coming and want me to talk after the next accident,

**Dr. Lipartito:** Right.

**Mr. Garcia:** now's the time to question. Questions. Where's the logic in what he's saying. I'd go to managers and say guys, somebody's these. Oh man, if you said anything you'd lose your job.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** They were intimidated by Goldin.

**Dr. Lipartito:** Yeah, I know, I understand he's a very influential

**Mr. Garcia:** Oh very intimidating and he'd get rid of you in a heartbeat

**Dr. Lipartito:** Did you have any face to face meetings with him?

**Mr. Garcia:** Once or twice. And I had words with him about the letter and stuff and I guarantee, I don't know this for a fact, It's the same as Stelgis got me my job even though Sasseen wouldn't have given me the right time of day, in fact he'd have fired me if he could

**Dr. Lipartito:** Right.

**Mr. Garcia:** Stelgis saw something in me that I didn't even see in myself. I think and I've never talked to Honeycut. I had my job until I retired because of Honeycut. Goldin would have taken his lumps and fired me.

**Dr. Lipartito:** Right. Really

**Mr. Garcia:** Yeah, yeah.

**Dr. Lipartito:** How about the press. Did you get a lot of calls as a result of the letter?

**Mr. Garcia:** Oh, they inundated me with calls, yet none of them, they quote you out of context, they were looking for sound bytes. What I wanted them to do was to pursue and hold Goldin's feet to the fire

**Dr. Lipartito:** Right.

**Mr. Garcia:** and make and make any. And I said please, any time, any one of us, If I say something to you, make me prove it; make me give you some facts. Not just it's going to be better, show me how it's going to be better. Everything I gave him, I have data to to, you know. And I even had uh uh showing the the that we should be testing more not less and that was in one of my later letters, you don't have it

**Dr. Lipartito:** I probably don't have it.

**Mr. Garcia:** Ok, and that's one that really pissed me off because they got involved and got guys at KSC to turn coat and stab me in the back when they knew better

because they were ambitious to get ahead, and I've got people that are out there that I wouldn't give the right time of day to that are in the safety organization now.

**Dr. Lipartito:** Oh is that right.

**Mr. Garcia:** I, one of the subsequent letters had data, that I went out and gathered on my own time and my guys worked on their own time. No body spent any time out there to get the data and put this together. And one of the things, uh, I didn't know what to call it. You've got anomalies, you've got IPRs

**Dr. Lipartito:** Alright.

**Mr. Garcia:** We went back and researched all the IPRs

**Dr. Lipartito:** Oh, ok

**Mr. Garcia:** Ok

**Dr. Lipartito:** all right

**Mr. Garcia:** And those are problems. You had a problem.

**Dr. Lipartito:** All right

**Dr. Butler:** Interim Problem Reports

**Mr. Garcia:** Interim Problem Reports. Well we took those and they turn into problems whatever. So we really took the problems. What I was getting at was that, that to me, when I have and you look and they say look the problems are almost the same amount. It's getting almost routine. I say look, I was involved at the end of the of the Apollo Program. I was involved with the ground stations. It was the ACE ground stations, that have LPS was ACE and when I looked at the problems, I went back and looked at the problems they were having. They had initial problems, which was the newness, getting the kinks out, then they got into where it was fairly stable and the uh, the uh problems were about the same roughly, and then toward the

end of the Apollo program they were having uh uh, mortality problems. They were having problems that they'd never seen before. that that things, these problems just failed and roughly the same kind of problems, but you started having problems because of the age of the hardware, you started seeing problems that you never saw before. So I told my guys, guys, Shuttle program has been here long enough, I think we can start finding, I need some data to go show him, that we can't not look less, we need to look more. So we took a look at the problems and the problems although they were about, somebody could say oh look one hundred fifty IPRs per flow, or whatever the hell it was. I'm making that up, I don't remember what the number was. But you have this number, ok. Look, ok one hundred and fifty here. One or two you know they're all new, one hundred and fifty here, four or five are new, one hundred and fifty here two or three are new. One hundred and fifty here one is new, one hundred and fifty here, seen them before, not a new one. Seen them before, seen them before. oh, one or two new, three or four new, five or six new, seven or eight new. Guys, this is mortality. What's waiting there that's going to be catastrophic if I don't check it. There's more things happening that we've seen for the first time. Well I sent that letter off with some other data

**Dr. Lipartito:** Had they never collected that data on the mortality

**Mr. Garcia:** No nobody has done that. I collected it, I put it together and I sent it to them. Ok.

**Dr. Lipartito:** That's amazing. So.

**Mr. Garcia:** And, and I had the same thing with the, with the in flight anomalies that the the things that we were seeing when they were new. But the in flight anomalies, the way, how can I. They came back. Let me finish here if I don't lose my train of

thought. I sent the letter off and it had other things like the in flight anomalies, the same thing, ok. I send it off. It goes up, Goldin gives it to Gregory.

**Dr. Lipartito:** Uh

**Mr. Garcia:** Gregory sends it down to Joa; he was the head of safety up there.

**Dr. Lipartito:** Right.

**Mr. Garcia:** I don't know what the hell he is now but he was the head of safety.

He sends it to Joanne Morgan,

**Dr. Lipartito:** Ahhh.

**Mr. Garcia:** the head of Safety down here.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Joanne Morgan has a meeting and I got my insiders, I've got guys that are friends of mine that work over there. Come back and say Jose, they were flat told to go out and disprove

**Dr. Lipartito:** Is that right?

**Mr. Garcia:** this period. Just go out and we need to answer this for Gregory. We need to write the letter. He sent it down for them to write the letter saying this is wrong for this reason and they came up. There are, there are algorithms for everything ok, and there's ten ways to analyze this. Ok, you look at it nine ways and it shows that it is getting worse. You put in this one algorithm that shows it's staying the same. They used the one and ignored the other ten. They did a hatchet job. Ok. And I went and had words with Joanne Morgan, they could hear me all over the God Damn headquarters building. Ok. They took, and I had shown where. Their answer came back that's poo poo because there are less. Well I was looking at everything.

**Dr. Lipartito:** Right.

**Mr. Garcia:** In flight anomalies. I'm looking at everything. Well guess what they come back and say oh no. The number of in flight anomalies have gone down till they're insignificant. The son of a bitches redefined everything. They had funnies. We used to have in flight anomalies. Well they took in flight anomalies and gave them ten different names and put everything in a different area and in flight anomalies was left with nothing. So no there's no problems there. Don't look at all of them like we used to. And I, well they came back and I tried and they poo poed everything and KSC did it and wrote it and Gregory sent it back.

**Dr. Lipartito:** Is that right.

**Mr. Garcia:** And I had words with people that I knew for a long time. And by the way they're in positions of Division Chiefs and stuff now. All because they stabbed me and the Shuttle program in the back. Ok and yet and that's when I would call the press and say, here, I'm giving you a copy. You look at it and you analyze it, you do your research, you talk to your people, not someone that has a vested interest and you shove it up Goldin's ass. It's not until there's an accident they come back.

**Dr. Lipartito:** Have you gotten calls since Columbia?

**Mr. Garcia:** Oh yeah, and I, I told them to to, I won't tell you what I told them. And then that "You know honey if you could help, you really ought." I said, I've had it with the media, they're useless. They, they they, whatever. And she nipped at me that if I could help, I really should be helping. So I finally accepted, I don't know who the hell it was now.

Mrs. Garcia: ABC

**Mr. Garcia:** ABC, yeah, what's his name, Stephanopolous [phonetic] Sorry bastard. They came and I spent. They came in here and they set up, we fed him, and they spent a good twenty-four hours here.

**Mrs. Garcia:** All day long

**Dr. Lipartito:** Oh really

**Mr. Garcia:** Yeah, yeah. And interviewing her. And before we start, I said, "No sound bytes, that's all I'm asking. And I'm not going to say everything when we have an interview that you print it all. But if you ask me a question, I want the question in there and if I answer it, I want the whole answer in there. That's the minimum. I don't want you to take three words out of the middle of a sentence." "Oh yeah. we will." And the only reason I did it is because Goody Two Shoes stayed after me, "honey, you know if you can help" and I keep rubbing her nose in because of her, I agreed, knowing better. I knew better. I told her. "Oh but they promised. They said they would" And they did, they came here and they did and I called the producers that I talked to and stuff. And they said Jose, we told them and and Stephanopolous and them did what they. The very next one, we stayed here till like twenty four hours. They took off, went out to their trucks, set up their antennas and transmitted back to Washington or New York, where ever the hell he is and the very next morning, I'll be God damned if there wasn't a little sound byte make me say whatever it was they wanted me to say. They stuck me. I should have known better.

**Dr. Lipartito:** No, you can't control

**Mr. Garcia:** You can't control them. Hey and I've had experience. I've been had before and I should have known better then to listen to my wife. Again, she led me astray. (laughter) No she's very faith, she thinks positive all the time, you know and she knew how concerned. They called me wanting to do a job, a hatchet job on NASA and that. No, do I think there are things that need to be fixed? Yes. But I'm not here to do a hatchet job on NASA. I'll go

out there, I volunteered, the guys call me, I'll go help them when I can, do whatever, but I'm not going to. I've had lawyers come to me wanting me

**Dr. Lipartito:** Oh.

**Mr. Garcia:** to because of the letter to testify because of this the tile guy. No, No way. I, no way.

**Dr. Lipartito:** Um ask you a question, go back a little bit. Um. They did essentially four what they call developmental flights. At that time did you think that if this is really, you know, like an R&D type vehicle. Shouldn't we be doing more of that? or

**Mr. Garcia:** Well we kept a lot of it. After four flights we didn't get rid of all the DFI. In fact we still have got some of it now.

**Dr. Lipartito:** Really?

**Mr. Garcia:** Yeah. They've got recorders and stuff. They call them different names.

**Dr. Lipartito:** Right.

**Mr. Garcia:** You know, I don't know what they call them now. The OEX recorder

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** We call it the OEX recorder was the old DFI recorder with the

**Dr. Lipartito:** Oh really.

**Mr. Garcia:** Yeah.

**Dr. Lipartito:** Ok.

**Mr. Garcia:** And way past, we we flew all those experiments I told you was way past four.

**Dr. Lipartito:** Way past four.

**Mr. Garcia:** Yeah.

**Dr. Lipartito:** Did you, you know the official word

**Mr. Garcia:** The official word was it was operational. Oh yeah, those words come easy too, but no.

**Dr. Lipartito:** Did people buy that or did they think

**Mr. Garcia:** The workers?

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** Their saying what they have to to get the money through Congress. They're lying. What can I tell you? I can remember back when they were selling the Shuttle Program.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** I still tease Gene Sestile and his STAR report

**Dr. Lipartito:** Right.

**Mr. Garcia:** A hundred and sixty hour turn around. Gene, you could wipe your ass in a hundred and sixty hours. Well he knew it was lies. His managers making him put together. Put together the charts that you can turn around in a hundred and sixty hours.

**Dr. Lipartito:** Oh yeah.

**Mr. Garcia:** Well Gene knew it wasn't true.

**Dr. Lipartito:** Right.

**Mr. Garcia:** We all knew it wasn't true but that's what the hell they they directed you to do so Gene did it and then they went out and used it to try and get money, budgets, politics, whatever the hell it was. We all knew you couldn't turn the God damn thing

around in a hundred and sixty hours. Shit, you could barely get it to going, you know, get it in there, anyway.

**Dr. Lipartito:** Well we've seen the numbers

**Mr. Garcia:** Well a hundred and sixty hour turnaround. Well we all knew what was true.

**Dr. Lipartito:** Yeah, well most people understood that this vehicle was never going to be like an airline.

**Mr. Garcia:** And it's never going to be like an airline and I think anybody that will tell you that it's never going to be like an airline.

**Dr. Lipartito:** Right.

**Mr. Garcia:** I don't think if you had a, what do you call it, phase 2,

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** that if you took everything that you learned

**Dr. Lipartito:** Right.

**Mr. Garcia:** and and built a new vehicle, that the technology has gotten to the point that it wouldn't still be an R&D vehicle

**Dr. Lipartito:** Right.

**Mr. Garcia:** because of the environment that it's going to. You really haven't gotten the technology, you know, like the tile. Yeah we'd like not to have tile, but you know, show me something better.

**Dr. Lipartito:** Right.

**Mr. Garcia:** You know, yeah it's sensitive and all that, but show me something, we ain't got nothing better.

**Dr. Lipartito:** Better, cheaper.

**Mr. Garcia:** You know the engines. They've been working on engines and they, you know they get the maximum out of these engines but these engines are a bomb waiting to blow up.

**Dr. Lipartito:** Right.

**Mr. Garcia:** You know.

**Dr. Lipartito:** They always felt that would be one of the most sensitive points.

**Mr. Garcia:** It is. The engines and and you know. When Challenger happened, I thought it was the range safety system failed to be honest with you.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** And then the range safety guy was sitting two consoles over, the manager, in the ESA area, the manager support area, and he says know, the range safety system's fine, you know. And before we really knew what happened, I thought well shit, one of the engines and the engine guys say, no the engines were working fine, up until the end. They were funny; they were acting funny, but were working fine. What he meant was they were God damn trying to make up for the hole.

**Dr. Lipartito:** Ahh, Right.

**Mr. Garcia:** We didn't know that it was giving you a thrust, and the engines were up trying to keep you in line.

**Dr. Lipartito:** Right

**Mr. Garcia:** Trying to get it back going the other way.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Well an APU? The APU guy says no, the APUs are fine. I want to tell you a story about those APUs. They took, and I got an APU guy telling me this. They took and said you know, the damn APUs, you know, it's, you know, it's a bomb in the aft, the ass end of the vehicle, you know. You know, we don't want to take that. So they said "Let's, ok, what we'll do is we'll go see what it takes and we'll try and sell that to management,"

**Dr. Lipartito:** Hm hm.

**Mr. Garcia:** What it takes to to safe the APU so they took and they took an APU, and I forget what they told me, two inches of steel or whatever it was. And about, they enclosed it.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** Ok. And then they, if you introduce a flaw where it gets to vibrating it it'll blow. ok. Well they said, we'll try and contain it so it doesn't take the vehicle out

**Dr. Lipartito:** Right.

**Mr. Garcia:** if we lose one, see. So they had the two or three inches of steel all around it, you know, whatever and they went out there to run their test and they introduced a vibration and boom. They went out and said. "There was a hole in the ground. we couldn't find the box." (laughter) We couldn't find it. We never found the APU, never found the box, ok we've got to instrument this sucker so that, and put in an extra APU and and so that you could get to

**Dr. Lipartito:** Right.

**Mr. Garcia:** where if you had to shut one off, but we're going to instrument it and shut it off. before it. We we obviously can't contain the bomb

**Dr. Lipartito:** Oh.

**Mr. Garcia:** so we got to instrument it. So they instrumented it more and stuff so that if there is any problem at all they shut

**Dr. Lipartito:** Ahh.

**Mr. Garcia:** it down before it gets out of hand. But you, the idea was let's contain it.

**Dr. Lipartito:** Right

**Mr. Garcia:** So I thought well an APU failed and took the ass end when it blew up.

**Dr. Lipartito:** Yeah, Right.

**Mr. Garcia:** but as it turned out it was something else. But, there's so many things on there that are just state of the art. You say well we got auxiliaries power units. They're not the same, they're not light weight, they're not spinning at thirty thousand RPM. You know, their not, you know, you're trying to make things lightweight, put out the most power for the, for the buck. The APUs locally probably run off of some, we're running off of hypergolics. I don't want to be near a hypergolic, never mind a damn APU. You know what a hypergolic is?

**Dr. Lipartito:** Yeah yeah yeah.sure

**Mr. Garcia:** And they're very corrosive and their and and hey, it makes everything you do, handling them. But it gives you the most buck, you know bang for the buck and and and weight and all that, so you end up using this thing that's a bomb waiting to explode

**Dr. Lipartito:** Yeah, I mean the reality is that the space environment is nothing like earth environment.

**Mr. Garcia:** It's nothing like earth environment and when you got weight constraints

**Dr. Lipartito:** Right.

**Mr. Garcia:** and you got all these, you know, constraints, you end up doing some things that are on the hairy edge

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** and you know that, but that's the only way you can get there and accomplish what you want to do

**Dr. Lipartito:** Right.

**Mr. Garcia:** so what you got to do is try and minimize the risk, which is the checks and balances. We had a process in place that minimized the risk. We took and through the PET teams improved that process with less people, did it in less time, ok. And we would have done more and Goldin came in and said, "Screw that," yeah you did and we're going to do it with half the people and we're going to give it to a contractor to do and we're going to give an incentive that's going to make it safer than it's ever been.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Media, question it, grill it. Give me your media pass; I'll go grill his ass. (laughter) You know, but nobody would. They'll wait till the accident before. They're not interested in in a head of time.

**Dr. Lipartito:** I can't remember, I haven't read all the newspapers, but I take it you're right that he never; Goldin never really got called by the press.

**Mr. Garcia:** He never got called by the press, never. And he made some asinine statements. I would talk to who was it, Lousma; he was the head of the astronauts. He said "The guy's irrational"

**Dr. Lipartito:** really

**Mr. Garcia:** He's completely irrational." I said, "What do you mean? He said, I talked him into coming down. The astronauts, you know, you hear all this shit. The astronauts are all all concerned.

**Dr. Lipartito:** Yeah, sure.

**Mr. Garcia:** Well the astronauts are concerned, my God, their doing away with the manned program. Come down boss, give them a pep talk. He said he came down and I'm getting this from the head of the astronaut core, don't quote me.

**Dr. Lipartito:** No, that's all right.

**Mr. Garcia:** He said, he came down, had every astronaut in there, almost every astronaut in there. He tells them that man flight is a thing of the past. We got to do it with science and he gives this big science talk. He came down to pump the astronauts, basically he told them, you're going to be out of a job shortly.

**Dr. Lipartito:** Right.

**Mr. Garcia:** He said, you could have, he turned and left you could have heard a pin drop. You know, he gets back to Washington and he says they have a meeting in the morning and Lousma happens to be there, he went back on the plane with him. He says he turns to this guy. He told me his name. I don't remember who he was. One of his grunts or whatever. He says, "Where do you stand on a man back to the moon?" "Well boss it's on the back burner." "Get that son of a bitch up. I want to work on that full time, we need to push that." Excuse me,

Lousma says, why the hell didn't you say that to the guys? (laughter) Ok, the very next morning. He said, the guys irrational.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** He went to give a pep talk to the astronauts, he says, pointing and it was horrible what he did to them. And then the very next day he's talking in his meeting about pushing a man to the moon and we need to get that out, dust it off. Get it up to date and stuff because he wants to go to Congress and push the man back to the moon.

**Dr. Lipartito:** Wow.

**Mr. Garcia:** I'm thinking, the guys. And I'm talking about. Gene Thomas was deputy center director.

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** He told me, "Jose, he said, I could tell you stories, the guy is completely irrational. You get in meetings."

**Dr. Lipartito:** Really?

**Mr. Garcia:** He's completely irrational. You know that image he gives when he's on TV he looks like. He's completely different, it's like Jekyll and Hyde. He's wacko.

**Dr. Lipartito:** Interesting

**Mr. Garcia:** No body would stand up. And if anybody stood up, they were fired.

**Dr. Lipartito:** Right

**Mr. Garcia:** If you said the slightest thing.

**Dr. Lipartito:** Yeah

**Mr. Garcia:** That's why I give Honeycut. I don't know it for a fact but I think Honeycut saved my job.

**Dr. Lipartito:** Yeah, wow,

**Mr. Garcia:** Cause anybody else he would have fired.

**Dr. Lipartito:** He would have fired. I guess Goldin had a, I guess, comeuppance recently when he lost his job.

**Mr. Garcia:** Yeah, oh I, yeah. How could they hire him at the. And then somebody stood up.

Mr. Lipartito: Unintelligible.

**Mr. Garcia:** You know, I don't have the, did you ever, in among all this, you found this junk. Did you find the letter that they wrote, the letter that uh, that uh, that TRW wrote? TRW, TRW wrote NASA a letter

**Dr. Lipartito:** His former employer, right?

**Mr. Garcia:** His former employer. They wrote NASA a letter saying please do not hire this man as, and I forget who it was signed by at TRW, but do not and went on to describe and some of the things I'm telling you, you can read them in that letter. And this is before he did them, the guy's irrational, he does this, and it went on and on, and all the things it said, he ended up doing

**Dr. Lipartito:** Is that right?

**Mr. Garcia:** and they wrote that letter to NASA and NASA ignored it and hired him.

**Dr. Lipartito:** Interesting. Wow

**Mr. Garcia:** And I tell you, when I watched him on TV he sure was smooth and stuff compared to what he really was and his agenda, I don't know. Privatizing, I think is a, is a, is a payoff. In other words, if I can say "take these cafeterias away from the government." God that's something to front. And let, guess what, I have a contract, whoever votes for that can take a payoff. I'm not saying they do, but if I can get you those lucrative contracts.

**Dr. Lipartito:** Sure, sure.

**Mr. Garcia:** Say well what's wrong with the. I know the Air Force one. I used to love, we used to go over there and eat. Ask anybody if they go to the Air Force it's run by contract? If anybody goes to the Air Force to eat.

**Dr. Lipartito:** Is that right?

**Mr. Garcia:** Nobody goes anymore. But it used to be good and reasonable, and the prices were reasonable and stuff. Nobody goes over there now. But you made a mistake, how about that, if you fail, I don't want, I bring my own lunch or something. When you do that with the Shuttle program it's a different story. It's not a cafeteria.

**Dr. Lipartito:** Right.

**Mr. Garcia:** It's not a, you know what I mean, it's different. And somehow you can't, couldn't get that across to him. He didn't want to hear it. And, what's worse is when you have somebody that that is really intolerant to anyone who's not a yes man. Anything he said, if you said, "Wait a minute boss,"

**Dr. Lipartito:** Right.

**Mr. Garcia:** "I don't, have you thought about this?" That guy's gone.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Well who's going to say it next time?

**Dr. Lipartito:** Sure. I'd say so.

**Mr. Garcia:** If he was completely irrational and nobody around him would would. And I think at the lower levels, I'm talking about here at Kennedy, you have, they keep saying the good ol' boy and, bull shit, it's the yes man. And I can go and point out to you who the hell's there because of yes men. Bob Sieck, I remember his secretary did, you know, he, I went over to talk to him around this time, whatever. You know Goldin was doing all this shit; we were having meetings and stuff. I went over and says "Bob, what the fuck's going on? You went to that meeting." He said "Jose well he said we got to cut here and not do this and not do that and not do the other thing and whatever," you know. And I said, "Well what did you say?" And he said, Well I just saluted and went off to do what he told me." I said, "You represented us, stand up and tell the son of a bitch." And I'm screaming at him. His secretary's hearing this, you know. And I'm mad and he says "Jose, Jose, you know" and don't quote me on this, but Bob, you know, he says "Jose, you you know that I'm counting on you guys to to keep it safe out there." I'm thinking "Why the hell didn't you tell him that? You want me to go and ignore what he tells, which I did, the whole time I was there." I said "If I've got one guy left, he's going to be picking what's the most critical and doing it the old fashion way to make sure it's safe."

**Dr. Lipartito:** Right.

**Mr. Garcia:** If I've got two guys that's what we're going. I don't care what he says, we're going to be doing what's right.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok and I'll do what he wants me to do, but I'm going to be doing it right.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok. Well he's telling me, "I'm counting on you keeping it safe." He's telling me to do it the old way, even though I didn't have the balls to tell the boss, see, and I "God damn it Sieck you whatever", and I walk out and his secretary's sitting there. "How dare you talk to Mr. Sieck that way" and I'm mad now. "Son of a bitch puts his pants on the same way I do, but he doesn't have the same stuff in them that I do. I'd have told that sorry." She made a mistake, because I was mad at that point. But serious I'd be ashamed to tell you, that I was where the boss who was saying do something that we know is going to be catastrophic and I'm a manager and I didn't stand up and say wait a minute boss.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Ok. They kept their jobs.

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** And he's a nice guy, but as far as I'm concerned, no manager. I want George Page, Rocco Petrone. Kennedy had some

**Dr. Lipartito:** Yeah.

**Mr. Garcia:** that we stood up and were counted and they looked at us like we meant something. We didn't suck hind tit, the the, you know. When we had managers here they not only dealt with us, ok. With George Page you'd go in and you'd say. Contractor and NASA say "Hey boss, we got this and I think we ought to go left and I think we ought to go right." "Why? Why? Go his." Contra, he didn't give a shit, he'd say go his way. And you'd say "Yes sir" and you'd go off and you do it. Made decisions see. You'd go in to him and say "Boss we don't agree, I think we ought to go this way because of this and he thinks," you know, he gets up and says "I think we ought to go that way because of that." Yeah, he says, "Why don't you guys go back and work on it some more and see if you can't work it away". Go back, we work on it,

"I'm sorry but this is the way to do it" and you say, I say "I'm sorry but I just don't see it. I think it's this way." You go back. About the third time you say, "I don't give a fuck how we do it. Go back and tell him." I'm not even going anywhere. He's not going to make a decision.

**Dr. Lipartito:** Right.

**Mr. Garcia:** So we'd say, I should drop dead if I'm not exaggerating. Of course it's not something critical that could cost somebody their life. But already go, heads or tails. (laughter) And we made the, went back to Bob, we had a little discussion and we decided. Ok, ok, good decision. It was a flip of a coin that did it. But he wouldn't make a decision. ok. I can remember George Page, we were on Shuttle and I had my section chief job, oh I took payloads with me. Left DFI, took payloads, and that's staying there, but I took the payloads with me. So I was doing that in addition to being the Section Chief for SRB, all the GSE and then HAZGAS which is the hazardous Gas protection system, you know when you loading the vehicle.

**Dr. Lipartito:** Right.

**Mr. Garcia:** And it probably gets you more exposure and more closer to getting fired and all because it's on launch day it's critical,

**Dr. Lipartito:** Uh huh.

**Mr. Garcia:** you know you've got to have the systems working and you're harried, you're, you got laboratory quality instruments like mass spectrometer and you're operating it remotely instead of sitting there like a scientist

**Dr. Lipartito:** Oh really.

**Mr. Garcia:** and then you kick it in the ass every time launching. It's sitting in the MLP and then it's got to work like it's in a laboratory.

**Dr. Lipartito:** Right.

**Mr. Garcia:** It's not easy keeping the sucker working, ok.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Well, I had data again and my gut feeling. We had laun, we had had, I forget how many tests, and the ion pump failed. Ok, and I looked and said "You know, I don't care when it's failed it's never lasted more than six months. Not one time since we turned it on has that ion pump lasted more than six months." So we were coming up that the launch was going to be right about the six months. You know, six months was going to be a week before launch. So I went in a month beforehand with my contractor and said "hey let's change out the ion pump." "Oh Geez, we don't have enough time to do that it's working fine." I said, "I really don't give a shit. I want to change out the ion pump." "Oh, no, I can't I can't justify that to my management." "Let's go to management." So I went to his management and mine and they said, I wouldn't give, he wouldn't give. We went to; they went to George, ok. So uh, so uh, we explained and George said, "don't change don't change the ion pump." I said, "You've got it boss. But afterwards, you and I are going to talk after launch." So this is he was director, Launch Director

**Dr. Lipartito:** Launch Director.

**Mr. Garcia:** at the time, George.

**Dr. Lipartito:** Right.

**Mr. Garcia:** Sieck's job, you probably knew Sieck as having.

**Dr. Lipartito:** Right. I knew that Page was listed previously

**Mr. Garcia:** Wetmore's probably there now. But anyway, he made the decision. I said "Fine. I want you to know you're making the wrong decision, but I'm going to

bail you out and we're going to talk after this is all over." And he says, "You got it Jose." Go out and I'll be god dammed it wasn't three days before launch

END TAPE 2 SIDE A.

Mr. Garcia: It's a It's a it's a cavity, that has, that's in the high vacuum area of the mass spectrometer and it's got a, it's got a material on it in the high vacuum, so when the when the little bit of when you suck a vacuum, it's really a vacuum, you're in a vacuum but you've got ions going through uh uh, it it absorbs all of these ions and stuff, ok.

Dr. Lipartito: Right

Mr. Garcia: And and when it gets saturated it starts kind of, I called it, we called it burping. It spits them back out so you're getting readings that aren't on the gas.

Dr. Lipartito: Oh, ok.

Mr. Garcia: They're stuff you collected before and it spits it out and you're reading and you're getting a burp "burp"

Dr. Lipartito: Right

Mr. Garcia: and you're getting blips. Holy shit and see it did that and I knew it never lasted and a week before launch the son of a bitch starts burping,

Dr. Lipartito: Right.

Mr. Garcia: see. So, I knew I needed to go to George, told the boss, "Go tell him we're gonna work something out here." So we got and Marty, this real intelligent guy who worked for me. We got there and he says, "You know, Jose, we've got enough time that that that if we get a guy with a calculator and punch the numbers in that that even with the burp"

Dr. Lipartito: Ohh.

Mr. Garcia: Ok even with the burp

Dr. Lipartito: Right

Mr. Garcia: ok because it's only happening periodically,

Dr. Lipartito: Right

Mr. Garcia: that we cannot violate our launch commit criteria by averaging over time. You know averaging over, let's pick three samples,

Dr. Lipartito: Right

Mr. Garcia: if at three samples the reading is below spec, even though the one had popped up,

Dr. Lipartito: Right

Mr. Garcia: we're going to assume it's a burp and not, and it's still below spec so we won't violate anything whatever. So we got all that data and we went to George and said "George, here's the way we can save the launch."

Dr. Lipartito: Hm hm.

Mr. Garcia: "We got a guy with a calculator and we can." He said "Can you really?" and I said, "Yeah." We won't violate any rules or any because we know it's the system and and I showed him. I said, Look at the data. We introduced a leak, ok, and when we introduced the leak you get leak and then you get burps above the leak and then down here you still have got the leak and you still have got the leak and then it burps above the leak. So if we get a leak, we won't miss it. But we won't let a burp"

Dr. Lipartito: Right

Mr. Garcia: we violate our and we got to cancel. And we can, they're happening not enough that we can average and still be. "Can you do that? I said "Yeah". We did that, we got through the launch. George come hug my neck and said, "Jose, tell em not to

even bother coming, to do it your way. I'm telling you now whatever it is in the future, to do it your way." I said, "that's what I wanted to hear boss." (laughter) and that was a gut feel, that wasn't a half hard data

Dr. Lipartito: Right.

Mr. Garcia: and hey I'm looking, we've had them fail at different but never once go past six month. Why am I gambling, I got time to do it here a month before launch. Yeah, it'll, it'll, We'll have to work overtime. But I think it's the right thing to do.

Dr. Lipartito: Right.

Mr. Garcia: Let's get rid of it; let's not let it stab us in the back.

Dr. Lipartito: Right.

Mr. Garcia: They chose not to. It stabbed us in the back. They got through  
(laughter)

Dr. Lipartito: So that's the

Dr. Butler: Let's, let's go back

Dr. Lipartito: yeah ok.

Mr. Garcia: Go ahead.

Dr. Butler: and look at the political realities of the issue of privatization. In 1989 Reagan proposed and congress passed a law requiring NASA to commit itself to, in so far as it could possibly do so,

Mr. Garcia: Yeah

Dr. Butler: Turn things over to private industry.

Mr. Garcia: I've got no problem with that. So, next. No problem. What's the, what's the next step.

Dr. Butler: Your argument is that what is possible

Mr. Garcia: the logic is. Well you privatize. If you came along and said "I'm privatizing logistics on the Shuttle. The logistics part, the contractor's going to deliver you the parts. If they don't show up with the part on time, I don't launch. You're willing to live with that, boss, because I think they're going to screw up more than the system we got. But we don't launch. I haven't cost a life.

Dr. Butler: Hm

Mr. Garcia: Privatize it. Your going to cost you some launches, take my word for it, because of their screw-ups, but I can live with that. If you want to privatize, trying to think of something else, some lab that analyzes data, we're going to give that over to a contractor and they analyze the data after the fact and pro, and produce the data that the scientists use. Have at it, after the fact, I tem. I figure it's a mistake because of this, that and the other. It's going to cost you more. They're not going to do as good a job. I'll give you the reasons why I think, but you want to do it for the bosses, fine. It doesn't, if that's what it costs you. When you come and say take the Shuttle operation and privatize it, I tell you, it's not an airplane no matter what Goldin tells you. It's an R&D vehicle and it's not something that you can cut corners on and let a contractor, change the way you're doing business that's a known and go to a way of doing business that that that's less successful, because there's peop, lives on the line, that's why I'm telling you. If you told me to do this on the Titan rockets, I'd say, "boss it's going to cost you some rockets in the long run, I think it's a mistake, but fine, will do it." On the Shuttle it's going to cost you lives. It's not an operational vehicle; it's not an airplane, no matter what Goldin tells you. It's not so routine that they ought to process; American airlines could come in and do this. It's never going to be that. American Airlines came in and told us after Challenger.

Knowledgeable people like Dr. Feynman came in and said "Are you stu, this is never going to be, it's an R&D vehicle" and at the end in fact I think it gets worse, with the age factor coming in, I think that the more, you know, the failures, which I proved with the data I gave them, ok. It's, it's getting more first time occurrences on, which means there are things failing that have never failed before. Why? Because of age! How many are sitting there waiting to fail that we don't know about? Ok. So you really need to be doing business the same as you were and maybe even looking a little closer because of the age of the vehicle to make sure nothing costs a life. It is not the kind of thing that you can privatize. First of all you not going to save money and secondly when you privatize you compromise the safety of the Shuttle. No matter what Goldin tells you, you're compromising the safety of the Shuttle. And that is why you shouldn't privatize that. And that was our argument. Privatize, which is what he told you, privatize what you can. Well we said "Fine, privatize what you can but the operation of the Shuttle, there's people's lives on the line; you shouldn't privatize it for these reasons." Goldin chose to ignore that and just made a blanket statement, "Ah, yeah, we're checking less, but doing it safer. It's going to be safer when it's over." Nobody ever challenged the, made asinine statements that any, a second grader could have said wait a minute, that doesn't make sense and nobody challenged it. And that's the logic that they used to privatize the Shuttle was Goldin's edicts.

Dr. Butler: But the political reality were

Mr. Garcia: he had pressure to do it

Dr. Butler: That he had pressure to do it from Congress

Mr. Garcia: Yes, yes.

Dr. Butler: and from the executive branch.

Mr. Garcia: Oh, I'm not questioning that, which is what I told you before. Monetary reasons and politics, which is what you're talking about. Congress pushing. But you need to have a a, I guarantee you Webb would have said "here, we ain't doing it. Don't fund us if you want but but we're going to do it safely." Ok, what do they say now? Let's get back to flying. What are the words now? Do it safely. Do What? And now we do whatever we have to. Because of the accident? I'd have been standing up and be counted to Congress. Cancel the Shuttle Program if you want but don't ask me to take the Shuttle program and and not process it as safely as possible. And going to somebody that's got an incentive to do it with less people, do it with, in less time, do it less testing, anything to launch faster, cheaper. Faster, cheaper, better, what was his?

Dr. Lipartito: Faster, better, cheaper.

Mr. Garcia: Faster, better, cheaper. That's, everywhere except when you launch here it costs you. It costs you in my opinion, the Hubble. If we'd a, if Kennedy, my guys, checked the Hubble, we don't have an eye that don't see that I got to go replace up there now. We don't have the problems. Would it be more expensive to launch it originally? Yes. It would have been cheaper in the long run cause you wouldn't have the problems you have now. Ok. I'm convinced. What is the one that augured in? If you'd have launched, if you'd have checked that one. Augured into Mars? Where were we going when we lost it?

Dr. Lipartito: Oh God?

Mr. Garcia: I can't remember. It just happened here recently. But it was one of Goldin's.

Dr. Lipartito: Oh was that one of Goldin's?

Mr. Garcia: Oh Goldin's Better, cheaper faster. Well guess what, you would have been ahead my way now, because the odds of it working would have been better.

Dr. Lipartito: Yeah. Although you see that's where the politics

Mr. Garcia: You see but the Politics

Dr. Butler: But, but the game with the politics, If you don't get Congressional support and the odds are that you wouldn't have

Mr. Garcia: And I understand that, but I'm going to tell you to your face. And it was my job on the line and I sent it in there. I will not either, either. This is not the cafeteria; this is not the logistics that we can privatize. This is something that when you compromise it, ok, you, you're compromising safety on the Shuttle. Ok. And when the investigation committee comes in after the next accident, they're going to tell you that. I'll show it to you from the last accident where they told you that. He should have been whipping that out and saying "Look what Dr. Feynman said." See. Either, either you fund the Shuttle Program, and my job was on the line, or or don't have it at all. But don't. And we can do it cheaper and we can do it better-- the process enhancement teams. We can improve our processes, but we can't privatize it and do it safely. But Goldin didn't do that. He turned around and I know it was the pressure from Congress; he turned around and said, yes sir, and went out any cost. He lied, knowingly lied. Knowingly lied. Half the shit he said, he was smart enough to know they were not true, that it wasn't as safe. But he knowingly lied in order to satisfy Congress and satisfy the people that were putting pressure on him. Well then he's a criminal, a criminally liable, where is it in here? Has anybody been held criminally liable? I called it ahead of time? Where is it? You read this thing before I did.

Dr. Lipartito: Uh, does it say criminally liable? It may have. I can't remember.

Mr. Garcia: I damn, unless my secretary unless my secretary took it out.  
Because I used to have "didn't have the balls" and she put down intestinal fortitude and stuff.  
She was (laughter)

Dr. Lipartito: Cleaning up your act

Mr. Garcia: She was cleaning up my act. (laughter)

Dr. Lipartito: Maybe it said it, or is it a different letter?

Mr. Garcia: Might have, which letter is this one? Risk management

Dr. Lipartito: The one to Clinton, uh, '94

Mr. Garcia: "In that case KSC launch team is in the risk management business.  
Drastically changing the KSC launch team will unequivocally increase risk to the Shuttle and its crew. If these drastic changes are implemented the perpetrators should not only be held accountable for their actions, they should be held criminally liable for the consequences."  
Whose been held accountable for it? And yet they went down this path. And it contributed to this, believe me. Anyway, I, they ignored me.

Dr. Lipartito: Well.

Mr. Garcia: But anyway, I'm not sure I made my point that he should have, and I know the pressures that he had, that's why I think at the beginning I told you what's got us in the mess we're in is is budget problems and politics, influence from Congress. Uh. Let me go out and close half the God damn bases that I don't need; NASA field stations and shit. We've got one in West Virginia because that idiot

Dr. Lipartito: Ah

Mr. Garcia: Byrd, wouldn't give us our damn budget unless we put some data reduction. Shit I could have done it on the side here at Kennedy. Instead we got it up in West

Virginia. That's politics. And then you, and then he's the person that says how you're so wasteful with your money. You son of a bitch, I'm wasteful because of the way you're making me do business. I can close half of the Centers and do the work at the others and do it more efficiently and save money. You can't because of politics, which is what you're talking about.

Dr. Butler: An example on Station, uh, at one point they had contracts in 222 congressional districts.

Mr. Garcia: See, I won, I wonder why?

Dr. Lipartito: That's the way you get support.

Mr. Garcia: That's the way you get support. Well you see to me, to me that's criminal. Ok. That I have, and and something's wrong with the system that I'm buying votes. If that guy does it, I'm telling you, in my opinion, if that guy does it, I got to buy his vote. It isn't that he thinks the Shuttle Program is good or bad, and I can live with that. I don't think we need that or I disagree, but, your opinion, I value your opinion, I don't agree with it, but I understand it. Ok. But for you to come in, which they do, and say either give me this or I won't vote for you. Ok. That guy will say, hey USA or Rockwell or whatever, if I vote for privatization and you get the big old fat contract, how much. That guy will take a payoff on something. He just took a payoff now. He took a payoff and I'm convinced that that the big privatization kick is is is exactly that. Your pushing for privatization because the contract is advantageous to the contractors who that backing the politicians.

Dr. Lipartito: Yeah, well

Mr. Garcia: It's them money. It doesn't save the government money. It makes them money

Dr. Lipartito: Yeah. Yeah. Yeah.

Mr. Garcia: and I'm I'm a firm believer that the checks and balances system works better and it gives you an insurance policy which we proved when we went SPC.

Dr. Lipartito: Right.

Mr. Garcia: Every time you changed the cont, when we went USA we proved it again. If you had a NASA crew there still, ok, to step in and help, which the idea is to [unintelligible] launch Shuttle's safely, we had to step in and do a little more than we normally did, but we had the ability. You don't have the ability today. He decimated it. You're going back to doing business the way you did and you don't have the people to do it. They're all gone. You fired them, you laid them off, you ran them off. Ok, so you're going to. Hey, how long is it going to take to take these young people they'll hire now and get them back up to speed? It takes a while. So even though you're going back to doing business that way, you're not as safe as you used to be because you don't have the knowledge. And in some instances you have the knowledge, and then, you know we used to have edicts that you couldn't hire from the contractor.

Dr. Lipartito: Uh huh.

Mr. Garcia: Well they don't have those anymore.

Dr. Lipartito: Right.

Mr. Garcia: And I, I've been, I'd call my guy and say "Guys, I've had a couple of contractors call me and complain that you took the guys I left behind me." And they say, "Jose, what do you want us to do? They've told us to go hire and they've said to pick up half with experience and half new outs."

Dr. Lipartito: Right.

Mr. Garcia: He said, "and the best guy they got in HAZGAS applied for the job. I turn him down cause he, cause he's leaving USA? And he's going to make more money

making from me, working for me? Do I turn him down?" I said, "No, I think I'd hire him."

"Well that's all I did. I didn't go out proffer. We put advertisements out on the street and they apply, and they can come make more money, have a better all this stuff," because USA, it's like these companies, like it's, I'm compare it somewhat, to we have a hurricane, ok, and and we don't have enough money, Andrew hit, we can't pay all, it's oh my god we need help, what ever they say. Fine. The insurance commissioner of the state of Florida

Dr. Lipartito: Oh yes.

Mr. Garcia: is a fat cat now. Every company, ok, could change. See I've been with uh, I've been with uh State Farm, I don't know, since forty years, whatever.

Dr. Lipartito: Right.

Mr. Garcia: I happen to have grandfathered in \$50 deductible. See. They came in, they sent me my thing? My premiums tripled, ok, and I've got a thousand dollar deductible for everything. I say "Wait a minute; I had a fifty dollar deductible. Well you can't just change that arbitrarily." "Oh, no no no. We didn't change it. This is, this is, uh, uh, uh, State Farm Floridian. This is a new company, ok."

Dr. Lipartito: Oh

Mr. Garcia: "We're a subsidiary of State Farm, but we we don't have to live up to any of their commitments." Not only do they have the 2% of the value of the house that you got out of hurricane, but you got a thousand dollar deductible on any other claim you turn in. They changed it like that (snap fingers) and tripled my. Now the Insurance Commissioner, nobody, do you understand what I'm saying? What I've been saying is, "Where the hell is the money you've been collecting when we haven't had a major hurricane in the state of Florida for twenty-five years. Where the fucks the money?" Somebody changed the law to say 90% of the

money gets put away to cover the big hits. You can't just rape that money and have beaucoup profits because nothing happened and then when the shit hits the fan "We don't have enough money to cover that." See, well that's what happens with USA taking over the contract. They're looking for profit. That's what they're in business for is for profit. They're not in there, now, am I saying they would kill anybody on purpose? No. But they're going to cut corners; they're going to do anything they can to make a profit. And when you're in that, if I were in USA and I were a manager, I would be doing the same things they're doing. I would not be working there if I'm not looking to make a profit.

Dr. Lipartito: Well, we did ask that question. Uh, and the answer has been, "Well we don't make that much money on NASA contracts, it's not like a Defense contract."

Mr. Garcia: Ha ha ha. Bull Hockey. Bull hockey. They How bad did they fight for it. If it wasn't that lucrative, why in the hell did you want it?

Dr. Butler: Well, they had an answer to that as well.

Dr. Lipartito: Yeah, they actually had an answer to that too.

Dr. Butler: Their argument was that branding is what does it for them. That having their name up in space

Mr. Garcia: Bull hockey.

Dr. Butler: does more for their brand.

Mr. Garcia: Nah, they're a nobody. You understand what they are they're they're Allstate Floridian or State Farm Floridian. They're a combination, they got in bed together. That, that's a subsidiary of Rockwell and Lockheed.

Dr. Lipartito: Right.

Mr. Garcia: USA is not USA here's my product. There ain't no USA anywhere else. They're not selling cars, they're not selling airplanes. Having USA up there does what for you? If the whole world thought you were better than Apple Pie, it does shit for you, it doesn't help you anywhere. Do you understand what I'm saying, it's not as if you say "Lockheed". Now you could use that argument. You could say I get more plane contracts because of "Lockheed" in space or whatever.

Dr. Butler: This was Boeing.

Mr. Garcia: Oh well Boeing telling you that. Well USA's the big contractor. The big contract is USA on processing the Shuttle. And Boeing does, as far as I know, does the Payloads and the Station. And again, I think their making a mistake, but if the Station don't work, if a piece don't work, you eat it. It don't cost you a life. Shuttle is what, is where we're, you know, and again on any science where the government decides to make a bum decision on my opinion and do it where it's not going to be any cheaper although you claim it is and it's not going to be any safer in terms of it working or not. It might be a little less reliable, so I look and say it doesn't work. You can go put, you know, send another space mission up and put an eye on a telescope to fix the telescope

Dr. Lipartito: Right.

Mr. Garcia: type of thing. Ok. It didn't cost you any lives. See, go make your dumb decisions even though I think it's somebody getting paid off. Ok. But when You talking about on the Shuttle, that's where I draw the line. There's people on there and I can't live with myself. I couldn't live with myself if if if I didn't speak up. Now there were a lot of managers I worked with at every level that wouldn't say a word. Agreed a hundred percent, thanked me a thousand times, don't stop, keep the, I'm thinking you sorry shit, you're at a position where you

could make a difference and and you you're you're urging me on because you know it's the right thing, but none of them would stand up and be counted.

Dr. Lipartito: Well what about this. Um, You're, yeah, you're afraid of what would happen if they went to the USA contract.

Mr. Garcia: Yeah.

Dr. Lipartito: On the other hand Challenger happened. That wasn't because of privatization was it?

Mr. Garcia: No, no and see that's another argument that kept people happy. They said, "Yeah, that accident happened but it had nothing to do with, nothing to do with privatization or nothing to do with that," you know. It's just, no matter what it is; I can always say that's a price of doing business. What I look at is, what's my success rate, ok, and if ten years from now you've lost three Shuttles and we only lost one n the first ten years, uh, that's a hell of a way for me to prove my point.

Dr. Lipartito: Hm. True

Mr. Garcia: Yet that's the only way I have to prove my point. But what I do have is is is a known success rate versus people that are doing business the way you're wanting me to do business. They're right there. Go talk to them. See what their, I had the data, it was attached to this. It's verbiage in here but I had charts and shit

Dr. Lipartito: Yeah.

Mr. Garcia: that were attached to this.

Dr. Lipartito: Yeah

Mr. Garcia: Ok, with with all that. But you see, that's to me, I've got a system that's working and it's proven through, it's been proven through Mercury,

Dr. Lipartito: Ahh.

Mr. Garcia: Gemini, Apollo, and I didn't even through those figures in there.

Dr. Lipartito: That's true.

Mr. Garcia: Ok. And then the Shuttle, up to date, of what my success rate is.

And all of those launches you lost one vehicle in flight, ok, when you got to Challenger.

Dr. Lipartito: Right.

Mr. Garcia: Ok. You lost one vehicle in flight. That versus how many vehicles they lose. What's they're success rate? You wouldn't have a Shuttle fleet. By the time Challenger happened, we would not have had a Shuttle fleet had we been doing business their way. All five of them would have been gone. Do you see what I'm saying?

Dr. Lipartito: Yeah.

Mr. Garcia: Now, the other thing is, if I can think of what it was. Anyway, to me the uh, the fact that the only thing you can compare it to, is is is what you're doing and how you're doing it and what your results are versus the person that's doing business the way you're wanting me to do and what they're results are.

Dr. Lipartito: Hmm.

Mr. Garcia: Ok, that's the. Now they can come in and say "oh, we've got this, we've got that." The bottom line is that you're making it a little riskier

Dr. Lipartito: Right.

Mr. Garcia: Ok, now when the accident happens, you're going to say, well it just happened. It had nothing to do with the way we're doing business. You know it's a risk, we're in the risk management business and those accidents are going to happen But you see, the only way, and I used to tell reporters this, the only way I've got to be right, the only way I've got

to be right, I can't accept, and that is by killing a bunch of astronauts. Then you come say Jose you were right. I don't want that.

Dr. Lipartito: That's.

Mr. Garcia: Nothing would make me happier than to be wrong.

Dr. Lipartito: Right.

Mr. Garcia: You know, yet I, the other thing that I have, which if I were Goldin I would have pulled out is, we were doing business this way, ok. We went to doing business the way you want us to do. Challenger happened. An independent body investigated. And they said, this was the cause of the accident. Ok, a hardware failure. It had nothing to do with checks and balances so to speak. Ok. It was a hardware failure. ok. But when I look at what you guys are doing, the report, you can go and get the report out. Dr. Feynman told me to my face. "What is wrong with you guys, the next one would have been you. If Challenger didn't happen, the next accident was the way you're doing business. I can see it right here. You guys are heading down a path that your gonna kill somebody". I said "You're just preaching to the choir. I agree with you a hundred percent." So I'd be showing this to those people saying, hey, Dr. Feynman, Nobel prize winning, the whole commission put out the report, ok, after the last accident and told you don't, and guess what we go back, by the way, a report after the fire, and they went right back, said the same things. They went right back to doing business. We went right back within six, seven years they were right back with pressures from Congress and just back to heading down that path that after the last accident they said my god, what are you guys crazy? And now we're heading down that path. And after Columbia we're going back and guess what, seven or eight years from now, look it up, see if they're not pushing for the same shit.

Dr. Lipartito: Ok.

Mr. Garcia: I'm telling you. It's, it's and, and to me the reason is because nobody will stand up at the highest levels and tell it like it is. Say if the country can't afford the Shuttle or can't afford manned space program, we shouldn't have it if we can't afford it.

Dr. Lipartito: Right.

Mr. Garcia: But if we can afford it, we should be doing it, it's risky business, don't misunderstand, but we ought to be minimizing that risk. We ought to have the people minimizing, and we were, we minimized the risk yet we tried, I tell you, you can go back and look at the data. We were taking the Shuttle and making it more efficient.

Dr. Lipartito: Yeah.

Mr. Garcia: We were making better cheaper faster, but not privatizing. And that's where the money comes in. They can say what they want. They make more money when you privatize it than see,

Dr. Lipartito: I'm sure.

Mr. Garcia: They get the whole NASA budget; they don't get half of it.

Dr. Lipartito: Right. Right. NASA's doing metrics.

Mr. Garcia: See. So they can say what they want but, you know, I'm making this up, if you said eight billion dollars for the budget, right now, uh, uh, four will go to NASA and four will go to the contractor. Say hey we're going to privatize it; do it with six, except all six goes to the contractor.

Dr. Lipartito: Yeah.

Mr. Garcia: So to speak and that kind a, and I'm making those numbers up.

Dr. Lipartito: Yeah, I understand.

Mr. Garcia: The gist of it is this; they're getting more money when it's privatized.

Dr. Lipartito: Right.

Mr. Garcia: And they get incentives, ah, I saw those contracts, and I'm telling you, they can say what they want. The only place they, they had some, if you launch on time and they make bum decisions, by the way it really pisses me off is uh, uh, you have, you have five, three milestones, I'm making this up now

Dr. Lipartito: yeah.

Mr. Garcia: so you get the gist. Leave the OPF, leave the VAB and launch

Dr. Lipartito: Right.

Mr. Garcia: So you can get a nice little bonus if you leave on time, nice little bonus if you leave on time, nice little bonus if you launch on time. You come along, you no where near should leave the OPF and you can get the work done better and stuff. They fight and and, when I was there still, we left the OPF.

Dr. Lipartito: Right.

Mr. Garcia: We shouldn't have left the OPF.

Dr. Lipartito: Huh.

Mr. Garcia: They got their little bonus.

Dr. Lipartito: Yeah.

Mr. Garcia: We got to the VAB we had to put up scaffolding to do the work and it was harder to do and all this shit. Say we're no where near, we're further behind now. We left the VAB and they got their bonus. They left on time.

Dr. Lipartito: Right.

Mr. Garcia: We got to the pad; whoops didn't get our bonus, got to delay the launch. So much work to do, whatever.

Dr. Lipartito: Right.

Mr. Garcia: See. But they got two bonuses; they shouldn't have got either one of those. If I were in charge, they would never have left. You leave when the works done. You don't leave before the works done and get your bonus.

Dr. Lipartito: Right, right, right. (laughter)

Dr. Butler: Well there's an easy way to take care of that

Mr. Garcia: Management with Balls. That's what you need.

Dr. Butler: But you can do it also by putting on metrics and discounting your bonus if you, if you are taking your work with you.

Mr. Garcia: You can try, somehow, and I agree, but when you're trying and it gets so complex, I don't know how to explain it. The operating procedures for the Mercury and the Gemini were like this. The operating procedures for the, that that told us how to operate, how to do business, was a book like that for for Apollo. You went in and it had the. The operating procedures for the Shuttle fill this fucking room with books. Who did that? They got paid for every book and they generated a bureaucracy. You blame the government. It is our fault indirectly. But the contractor gets paid, gets paid for every book, updating every book, it's got how to wipe your god damn ass. It doesn't, its nitpicking. I look at the thing it tells you how to fix a bicycle wheel. What the hell have I got that in a Shuttle operating manuals? You go look. Go ask to look at the operating. I'm serious. Say "I want to see all the operating procedures for the Shuttle" and it'll fill this room with books

Dr. Lipartito: Interesting.

Mr. Garcia: and it's got everything. I mean, that's what happens when you got, well I'll write that I'll put in, you know, and I'll, and then they find a, and I'll put in some more. The next thing you know it's this big and nobody knows what the hell's in it and they're still getting their bonus. What you got to do is do things right. Ok. You see, but they'd never sign up, and plus I wouldn't get a payoff if I said if you leave, you get, how much you want for each milestone, I'll make it up, ten million for leaving a milestone. Ok. Ten million for leaving a and uh, twenty for uh, but if you don't make the launch, the biggest milestone its 30 million off. You owe me. Comes off.

Dr. Lipartito: Well.

Mr. Garcia: Now go ahead and cheat on these and see if you'll. You'll do it right if you're trying to get there to make it.

Dr. Lipartito: So what you're saying actually is that

Mr. Garcia: Put some negative stuff but they would never sign up to that.

Dr. Lipartito: Right. Well the other thing.

Mr. Garcia: If I got to give you if you do good, you give me if you do bad.

Dr. Lipartito: Yeah, they don't want that.

Mr. Garcia: No they don't want that.

Dr. Lipartito: So what you're saying is that in the old days, that whatever happened in the end there was essentially a government guy, a NASA guy, who had kind of authority over this. And you, you know, you mentioned Rocco Petrone,

Mr. Garcia: Yes.

Dr. Lipartito: George Page.

Mr. Garcia: Yes, he called the shots. The the

Dr. Lipartito: Yes and that the contractor couldn't get around that.

Mr. Garcia: No, the contractor did what he said period.

Dr. Lipartito: And that's kind of disappeared.

Mr. Garcia: It's disappeared is right and I think the reason it disappeared is you ended up with management that were yes men, that didn't have the balls, that didn't have, I can't say that, that didn't have the personalities. You see Bob Sieck, I love the guy. What's not, I don't know if you know Bob or not, but what's not to like.

Dr. Lipartito: Sure.

Mr. Garcia: He's as nice a guy as you ever want to meet.

Dr. Lipartito: Right.

Mr. Garcia: But God damn, I'm sorry, a milk toast.

Dr. Lipartito: Would you say was the last really strong manager for Shuttle was George Page?

Mr. Garcia: George Page was the last really strong

Dr. Lipartito: Yeah, of that world

Mr. Garcia: Oh yeah. Yeah.

Dr. Butler: You give Rocco as an example, after he went to the contractor, uh, there's one story where he called in a NASA guy and told him that his contractor was feeding him a bunch of Bull

Dr. Lipartito: Well he worked for Rockwell.

Mr. Garcia: He was working for Rockwell?

Dr. Lipartito: And he told the NASA guy not to trust the Rockwell guy.

Mr. Garcia: (laughter). I hadn't heard that one. But I wouldn't put it past him.

Dr. Lipartito: Yeah.

Mr. Garcia: I wouldn't put it past him.

Dr. Lipartito: Yeah, I know, it's. But to do that it has to be structured in a way that that that everyone knows that the buck stops with

Mr. Garcia: And that's the way it should be. It's. in my opinion, it's the way it should be and you need someone there who will make decisions.

Dr. Lipartito: Right.

Mr. Garcia: You know what I mean? You need uh. Like I said I'm just used to the and again, did George always agree with me, you were his, his guy. Hell no, he chewed my ass out. He threatened to fire me, George? You go ask around he threatened to fire me every other day for something I did, whatever. So, but, and it wasn't that he agreed with me on everything I did whatever.

Dr. Lipartito: Right.

Mr. Garcia: It wasn't that. It's the fact that I got a decision. You and I could go to him and say "God damn it, we don't know whether to buy bubble gum or regular gum." "Why do you want?" And you'd tell him and he'd say "Go buy bubble gum." Just for kicks.

Dr. Lipartito: Right.

Mr. Garcia: "Get out of here." And that was it. He made a decision. I haven't had that since George left.

Dr. Lipartito: Sure.

Mr. Garcia: Nobody will make a decision. Nobody will stand up and be counted. I've seen George stand up in front of the Center Director and in front of the Administrator.

Dr. Lipartito: Right.

Mr. Garcia: And I mean stomping and say, you know, and make his point and not be intimidated by anybody in the room. Shit, Sieck's intimidated by me if I was a GS-7 and I raised my voice, he'd cower. I mean he's intimidated by the top and the bottom.

Dr. Lipartito: Well I

Mr. Garcia: And you say you're knocking a guy for being a nice guy. No I think that's great, but you don't belong in the management making the decisions for me, I want somebody that'll stand up.

Dr. Lipartito: Right.

Mr. Garcia: for our organization and and tell it like it is. And when we lose one it ought not be because we didn't speak up.

Dr. Lipartito: Well after Page, who else was in that position?

Mr. Garcia: Uh, Walt, a nice guy, God I hate it, Walt Kapryan.

Dr. Lipartito: Walt Kapryan

Mr. Garcia: He was so; he was such a milk toast. I'd have taken; I'd have taken down with me. I'd have taken NASA down with me. ok, he was such a, such a nice guy.

Dr. Lipartito: Right.

Mr. Garcia: Ok. He took and of course we were losing. Grey, I told you the program office. Grey was forceful. He should have been our boss.

Dr. Lipartito: Oh really?

Mr. Garcia: Because, well, I didn't like the guy. He was a backstabbing. But at least, at least he was aggressive. He stood up and be counted. He stole from, from. He lied cheated and stole from Kapryan. And stole the power because he would speak up and Kapryan

Dr. Lipartito: Right.

Mr. Garcia: was meek, was nice. He'd wait his turn and he'd interrupt him in meetings and just a real bully kind of

Dr. Lipartito: Ahh.

Mr. Garcia: whatever, but he stole the power to where the the program office was running the show,

Dr. Lipartito: Oh really?

Mr. Garcia: instead of the operations running the show. Remember I told you, they were, uh, they were never before Kapryan came in and and Grey was in the head of the program office. They never spoke for us on advanced projects. They might be a, a, a lead man for us but we made the decisions, we got to live with them. We're the ones with the knowledge. They they took over to where they were calling the shots, they didn't even call you and tell you.

Dr. Lipartito: Oh really?

Mr. Garcia: If you didn't build a personal relationship with each individual, they they were running the show.

Dr. Lipartito: Huh. Interesting

Mr. Garcia: Ok?

Dr. Lipartito: Yeah.

Mr. Garcia: And anyway, he was such a, we would go out, ok, and talk about meeting, uh, meeting milestones. Come back and say "Boss, the Shuttle's, I mean it's, it's, you know, hell, you know, it's mostly in baskets. You see, they can't deliver." Fuck, the day comes, they deliver it. GSE let's them deliver. Pays them to to let it deliver. Kappy, I wouldn't sign,

Dr. Lipartito: Right.

Mr. Garcia: Somebody else sign that piece of shit, you're sending it in baskets. But they sent the Shuttle down and it, it was, I mean, they got, made their milestone. Ok, they sent the Shuttle down. Kappy was told to sign. He signs.

Dr. Lipartito: Alright.

Mr. Garcia: Three months later Kappy gets fired for being so far behind on the Shuttle. Three months later. I said "God those son of a bitches they did a job on him."

Dr. Lipartito: Geez.

Mr. Garcia: You see.

Dr. Lipartito: Yeah.

Mr. Garcia: I mean, it came down and the next thing you know we had to bring in. That's when we got our taste of of a of a California. We had to bring in all those people here to work

Dr. Lipartito: Oh yeah, yeah.

Mr. Garcia: and they were here they'd check them. You look on the roof top and there was girls making out there with guys and stuff. You'd catch; you know it was all kind of wack.

Dr. Lipartito: Right.

Mr. Garcia: All kinds of, the California bunch came out here,

Dr. Lipartito: Yeah, I've heard stories about that. Right.

Mr. Garcia: there were all kinds of stories. (laughter)

Dr. Lipartito: They had to take a drug sniffing dog

Mr. Garcia: All the, we had, we never, never had any of that before, before the California bunch.

Dr. Lipartito: Right.

Mr. Garcia: We ended up with Sheriffs out there with drug sniffing dogs in the locker. It was, I'm thinking, Jesus, you know, and I'm bringing this down to work on the Shuttle?

Dr. Lipartito: Right.

Mr. Garcia: I'll train my own and I'll be better off in the long run.

Dr. Lipartito: That's interesting

Mr. Garcia: Yeah.

Dr. Lipartito: Yeah.

Mr. Garcia: But anyway, Kappy lost his job, three months after for being so far behind. I'm thinking, excuse me? And he never said a word. I'm thinking "God damn, I'd, I'd, they would have had to peel me off the ceiling." (laughter)

Dr. Lipartito: Wow.

Mr. Garcia: But see that, that's a good example. They got Page, the [unintelligible] paid him. And they knew that thing wasn't.

Dr. Lipartito: Right.

Mr. Garcia: And they sent it down and said "Kappy here sign it". However they talked him into signing it.

Dr. Lipartito: Right.

Mr. Garcia: And then three months later they stabbed him in the back.

Dr. Lipartito: Yeah, that's pretty rough.

Mr. Garcia: See. Like he went and undid work. (laughter)

Dr. Lipartito: Yeah, right, right. You know that's. Yeah. Uh, so, Yeah.

Mr. Garcia: Anyway

Dr. Lipartito: That's, good. Yeah I've noticed that, as well, in the history of KSC, there's been certain people who emerge as critical strong managers.

Mr. Garcia: And really you need a strong manager.

Dr. Lipartito: Yeah

Mr. Garcia: You need somebody that'll tell it like it is, somebody that'll make decisions both up and down. You need,

Dr. Lipartito: Yeah.

Mr. Garcia: you need somebody and we have not had that, by the way, in a long time.

Dr. Lipartito: Well, you know it's interesting. You know, the next significant, I would say, person that I see after Page is Honeycut.

Mr. Garcia: Honeycut.

Dr. Lipartito: But he was a different type of manager.

Mr. Garcia: See, he was a different type of manager. He, he

Dr. Lipartito: I mean he certainly

Mr. Garcia: I don't want to use the wrong term,

Dr. Lipartito: Alright.

Mr. Garcia: but I want to say the only way I know how to say it.

Dr. Lipartito: Alright.

Mr. Garcia: So you get the gist of it. I'm not trying to be derogatory. He was a conniver.

Dr. Lipartito: Ahh, ok.

Mr. Garcia: You understand what I'm saying? He had the contacts

Dr. Lipartito: Right.

Mr. Garcia: to where when you would go to him, whatever, ok, he he uh, he know who to go to to get things done

Dr. Lipartito: Hmm, Ok.

Mr. Garcia: so that KSC didn't get screwed and KSC,

Dr. Lipartito: Right.

Mr. Garcia: but he worked it. He wasn't a strong personality,

Dr. Lipartito: Right.

Mr. Garcia: he was more of a politician, whatever,

Dr. Lipartito: Right.

Mr. Garcia: and and smart, in terms of, for example, he grabs Tip Talone, makes him his buddy.

Dr. Lipartito: Right.

Mr. Garcia: He grabs certain individuals, Ed Weber. He looks around and sees whose, whatever and the next thing you know he's got the guys that the troops respect and and and

Dr. Lipartito: Ohh, ok.

Mr. Garcia: he can get

Dr. Lipartito: Right.

Mr. Garcia: up and down. He's got guys up here that he can work to get things done and he's got guys down here he can work to get things done.

Dr. Lipartito: Right. Ok

Mr. Garcia: Ok.

Dr. Lipartito: Alright.

Mr. Garcia: See, yet he, he and Gene Thomas both

Dr. Lipartito: Yeah.

Mr. Garcia: for example, and they knew that they were using me but I didn't mind.

Dr. Lipartito: Yeah. Oh about the

Mr. Garcia: No and not only with this, but for example, uh they and I can't even remember what the hell, whether it was coming up with some new operating procedure or or whatever. They're putting together a team.

Dr. Lipartito: Right.

Mr. Garcia: So, I get a call from Honeycut and and Thomas. "Jose, we need your help." "What do you need?" "Well we got." "I hate that shit, what are you calling me for? I don't want. You know, I'm busy, I got real work to do." "Yeah we understand that, whatever, but but we really need you." I said, "God damn it Gene, I." He said, "Hey we need somebody rational. Somebody that that won't go along with the crowd, somebody that will stand up and tell them when, when they're going off in left field. We don't, we need you."

Dr. Lipartito: Hmm.

Mr. Garcia: "Oh Jesus," and I'm telling you every other day they're calling me up, wanting me, "we need somebody that will"

Dr. Lipartito: Yeah, yeah, you're right.

Mr. Garcia: and you go in and there's all kinds of people and you'd think they were smoking something. They've got all kinds of Ideas. Hey guys, we're here it's a simple problem. You know. Finally they always and I knew they were using me

Mr. Lipartito: Oh, ok

Mr. Garcia: and I'm thinking, "Why don't you just go tell the son of bitches."

Mr. Lipartito: Right.

Mr. Garcia: Go sit in the meeting. "You, get out of here, give me somebody, whatever, go. That's what George would do

Mr. Lipartito: Right, right, right.

Mr. Garcia: Get, get some people. You get these people and then you want me to do it, you send me in there to make sure they don't wander off on some, you know, wild eyed, whatever. Keep em, keep em rational.

Dr. Lipartito: Right.

Mr. Garcia: We need somebody to keep them rational Jose; we know that you can do that.

Dr. Lipartito: Right.

Mr. Garcia: Ok, here we go with another one. You know.

Dr. Lipartito: So he was a strategist.

Mr. Garcia: And then there all these girls, I've heard from their managers now out there

Dr. Lipartito: Uh huh.

Mr. Garcia: And my guy will say "Gee I went to MEP and was there with Sue Barton," or whatever, some of these gals that are managers out there, and they say "God, they thought you're a chauvinist. Think your just, cause you're a guy you can ramrod, won't let, just," you know. Well, hell, I was sent there to do a job (laughter) and and they they come away with boy what a son of a bitch. (laughter) "They didn't like you at all." And I say, Oh, ok. (laughter)

Dr. Lipartito: That's that's interesting. Cause I, I get the sense that, well I'm hearing it from Honeycut so tell me if I'm wrong, but you know when it came to, what do you call them, getting the efficiency down

Mr. Garcia: yeah

Dr. Lipartito: He was pretty, pretty, pretty hard ass on that

Mr. Garcia: He was and you see most of those PET teams were under him

Mr. Lipartito: Alright, alright.

Mr. Garcia: and we were getting. I wish I had the data to show you but we were getting we were.

Both Mr. Garcia and Dr. Lipartito talking

Mr. Garcia: He was pushing it and by the way I was on that, that's one of the ones they said "Jose go out there, we want." I said "Guy I've got work to do." "Yeah but

Dr. Lipartito: Right.

Mr. Garcia: this things going to meet only once a week

Dr. Lipartito: Right.

Mr. Garcia: and whatever, you know, and I need, you know. Larry Ellis is going to head it up but I need you to," See. Well, I was there the same way. They, I didn't want to be there

Dr. Lipartito: Right.

Mr. Garcia: and I'm sorry, but the bottom line is we brought people in and you be surprised the guys had ideas that that would not compromise the safety but would would make it more efficient and I was I was shocked at how much we got out of it, at how much we took off the schedule

Dr. Lipartito: Really.

Mr. Garcia: and how much uh, uh, less people we had doing the jobs.

Dr. Lipartito: Right.

Mr. Garcia: You know, you were doing the job with less people and in less time and I, I was amazed.

Dr. Lipartito: Yeah, I know,

Mr. Garcia: Ok.

Dr. Lipartito: it was twelve hundred hours to six hundred hours.

Mr. Garcia: There were you go look at different, there was, and I was amazed and it was all, I'm not taking credit for it, it was the individuals who brought in, first of all I made them feel, I thought, I made them feel at home. Hey, ain't nothing leaving here, ain't nobody, I don't care whether it's an individual problem, a hardware problem, a money problem, whatever it is, I want to know how you feel. And if we can do something about it, I'm going to, you know, go out and ask about me, I'm going to go try and help you get get it done. And they'd open up and tell you this, you know. And sometimes it was a manager that was,

Dr. Lipartito: Oh really?

Mr. Garcia: Yeah, yeah.

Dr. Lipartito: Well, I can see it.

Mr. Garcia: that you get out of the way and things improved. Yeah, Yeah, I'm serious.

Dr. Lipartito: What was the mandate, the incentive?

Mr. Garcia: The incentive came from Honeycut. Honeycut now, I'm sure above him they were pushing on him, but it came from Honeycut

Dr. Lipartito: Yeah.

Mr. Garcia: and we were making and we, they'd still be making efficiencies and probably doing it cheaper than they're, with all the crap they went through trying to go to privatizing and stuff. Had they allowed them to continue to improve the

Dr. Lipartito: Hm hm.

Mr. Garcia: and still keeping it safe.

Dr. Lipartito: Right. So you could follow the same procedures

Mr. Garcia: Yes, follow the same; basically follow the same thing just doing it more efficiently.

Dr. Lipartito: yeah.

Mr. Garcia: And we were identifying areas that said hey these areas you know, look at the history we've looked at and never had a problem. Maybe we can start looking at it every other time

Dr. Lipartito: Right.

Mr. Garcia: instead of each time,

Dr. Lipartito: Right.

Mr. Garcia: type of thing, which makes sense. Hey it's not quote if it fails somebody dies. Let, let's start changing, you know, and we were, and there was a lot more of that that could have happened. See. And the other thing was that I kept saying "Hey, if you're willing to take a schedule hit,

Dr. Lipartito: Right.

Mr. Garcia: let's take and back off the GSE world

Dr. Lipartito: Uh huh.

Mr. Garcia: to where if a piece of GSE comes up and doesn't work we miss the launch date,

Dr. Lipartito: Right.

Mr. Garcia: but we don't kill anybody.

Dr. Lipartito: Right.

Mr. Garcia: So if they really want to save let's take GSE and do business the way they want to do it business. Let's take logistics and do business the way the want. The part don't show up on time, we don't launch be we didn't kill anybody.

Dr. Lipartito: Right

Mr. Garcia: That type of thing, kept saying, "Hey, let's, if that's what they want, let's go and let's start doing that." But that wasn't enough for Goldin. Goldin wanted it across the board.

Dr. Lipartito: Yeah.

Mr. Garcia: He didn't care or didn't listen. I think its cri, like I said; I think he should be, I think he should be in jail now, personally.

Dr. Lipartito: Do you have all the other

Mr. Garcia: Are you kidding me, I couldn't find that. It would take me a year.

Dr. Lipartito: Alright.

Mr. Garcia: I've moved since. I built this myself with my own two little hands, what you're looking at here. I lived in a little house. My wife wanted a bigger, bigger closets and bigger bathrooms.

Dr. Lipartito: You built this.

Mr. Garcia: I built this.

Mrs. Garcia: He built this for me.

Dr. Lipartito: Alright.

Mrs. Garcia: Absolutely.

Dr. Lipartito: Yeah that's right. Should have done that.

Mr. Garcia: I built this myself.

Dr. Lipartito: You did that.

Mr. Garcia: Oh, yeah. I Cleared the land.

Dr. Lipartito: Really. Darn.

Mr. Garcia: Borrowed, my son-in-laws in the construction business. So I borrowed tools, borrowed his bobcat, learned how to use it. Moved the dirt, cut trees down. You know, laid forms, poured. It's funny, I've had laid the forms, you know engineer right, laid the forms, and I guess they go down and they put the forms in. Well I look at the drawing and there's a, there's a form and then there's a foot and a half and then its forty-five degree angle up until you get four inches down and then, you know. Hm. I get me a piece of wood. Cut me out a template. I'd go out and dig and put that template down. The inspector comes and he looks and said, "Oh, what the hell is this." "Well, it's like the drawing." "I've never seen, I've never." You know, they dig it out and it's kind of more or less

Dr. Lipartito: Yeah, more or less.

Mr. Garcia: Mine you could have come and measured. I mean I ran the template, I ran the template through there, you know.

Dr. Lipartito: Well you probably, yeah, but you didn't have any pipes coming up in the wrong place like they do.

Mr. Garcia: No when I got finished.

Dr. Lipartito:

Mr. Garcia: Actually, when I got finished, everything fit exactly what. And even the hurricane, it was after Andrew and my son-in-law had a, when he did a job and he had stuff left over, he'd throw it in a bucket or put it in a trailer, whatever, so all these, the reason I have ten foot ceilings in here, these windows; he had a contract to dismantle a, remodel a mall. Those windows up there, there's one in my bedroom just like that.

Dr. Lipartito: Yeah.

Mr. Garcia: He, those were display windows and had a store. He took the time to strip it

Dr. Lipartito: Right.

Mr. Garcia: before he remodeled it,

Dr. Lipartito: Right.

Mr. Garcia: which it cost him, but then he had a warehouse full of parts.

Dr. Lipartito: Right.

Mr. Garcia: So these are eight foot high

Dr. Lipartito: Ah, yeah.

Mr. Garcia: and the ceilings are ten foot, because those are out of a, out of a store. And I've got one, two, three, four

END OF TAPE