

CHILEAN MINERS RESCUE ORAL HISTORY PROJECT

EDITED ORAL HISTORY TRANSCRIPT

ALBERT CONDES
INTERVIEWED BY REBECCA WRIGHT
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WRIGHT: Today is August 2, 2011. This oral history is being conducted with Al Condes in Washington, D.C., for the NASA Headquarters History Office. Mr. Condes is the Deputy Associate Administrator for International and Interagency Relations for NASA. This interview is part of a series to capture knowledge about NASA's participation in the 2010 historic rescue of thirty-three Chilean miners. Interviewer is Rebecca Wright, assisted by Jennifer Ross-Nazzal and Dr. Bill [William P.] Barry, who is NASA's Chief Historian.

Thanks again for finding time in your schedule to visit with us today. We appreciate it, and we'd like to start with you sharing with us how NASA first got involved with this event and your involvement.

CONDES: Not too long after the cave-in, Lori [B.] Garver got an email from the gentleman that we had met when we were at the United Nations in June asking for NASA's support, mainly a psychological and medical support for the trapped Chilean miners. Ms. Garver sent me the email she received and asked if I could help to respond, and that happened over the weekend.

That Monday morning when I came into the office, I reached out to Bill [William H.] Gerstenmaier and also to Rich [Richard S.] Williams, the Chief Medical Officer, to ask their ideas on what kind of support we might be able to provide. Gerst and Rich referred me to Jeff [Jeffrey R.] Davis down at JSC [NASA Johnson Space Center, Houston, Texas] in the Health and Medical Office, to talk to them about what we could do.

At about the same time, the idea of NASA providing support was presented to Chris [Christopher J.] Scolese upstairs, and he also talked to the folks in the Chief Engineer's Office about what ideas they might have. That rolled down to [NASA] Langley Research Center [Hampton, Virginia], to the folks down there, to look at what they thought we might be able to do.

After I reached out to Jeff, he came back to me with the idea that we might be able to provide some experts that could consult with the Chileans, so we, at about the same time, started getting some ideas floating back up, some preliminary reactions from the folks at Langley in the Engineer's Office.

One of the difficulties that I encountered was at NASA we want to help with problems and we want to solve them, and there were a lot of ideas that weren't related to what the Chileans were looking for, which was health and medical support. So we tried to narrowly focus on what they had asked us for. All this stuff was happening in the space of a day, basically, because we were trying to react quickly because of the urgent situation.

I reached out to the [U.S.] State Department, to the Chilean desk, to tell them first that we had received a request from the Chileans and to ask them whether there was a coordinated U.S. government response. At that point they were just setting up their own task force, and, in fact, the guy that I ultimately talked to after a couple calls was the guy who had just been told that morning that he was going to be in charge of pulling together the coordinated U.S. response. It turned out that the Chileans were plugging in in a bunch of different areas. They were hitting a bunch of U.S. government agencies independently and asking for support, and so State was trying to pull all those together and coordinate what we could do.

Those other requests were different from ours. They wanted some stuff from the Navy related to submarines, they wanted some stuff about earthquake prediction from the [U.S.] Geological Survey, and from us just this health and medical support. State was happy to hear that we might be interested, and so they took that to a broader interagency group where they were discussing within State what the U.S. government response might be.

Also in that same time it was crystallizing that Dr. [J. Michael] Duncan would be the point of contact from JSC to work with me. When you meet with him, you can talk to him about how they decided at JSC who the various members would be, because I wasn't part of that; I was only part of working with Dr. Duncan and setting up the team.

Later that day or early the next day, the State Department was very anxious to have us support it. We had an interesting discussion about who might pay for it, because we don't have funds to do that kind of thing. There was a lot of discussion within the interagency about if there was any funding, could FEMA [Federal Emergency Management Agency] pay, could State pay, could the agencies involved pay?

It came down at the end of the day that NASA would have to pay if we wanted to do it, so I had a little bit of internal discussion with Jeff Davis and Dr. Duncan about the potential benefits that NASA could have from being involved in this activity, because we're not in the business to rescue trapped miners. It had to be something that would be beneficial to us, but also beneficial to them. We identified that there were things that we could bring back and lessons learned that might be able to help our community down at JSC. You can also talk to Dr. Duncan about that as well. In fact, we're trying to set up a workshop this fall with the Chileans to round back with them on lessons learned that are applicable to them and us to try to document even better.

Gosh, there was such a flurry of activities in a couple days. We identified the team. The Chileans reiterated their interest in our involvement. The Ambassador here in Washington asked for a meeting with the [NASA] Administrator [Charles F. Bolden, Jr.]. He ultimately came over—by the time we could get schedules to work, I think it was that Thursday, it was three or four days later, and he actually met with Charlie and reiterated their government's interest in working with us. By that time we had the team established and we had been in discussions with the Chilean government officials about starting to come.

WRIGHT: In order for NASA to work with Chile, was it mandatory to work through the State Department? Is that your normal protocol that that would have been your first place to turn?

CONDES: Yes. When we get involved overseas, we always want to coordinate with the Department of State to make sure that what we're doing is consistent with broader U.S. government interests in the countries that we're going to. In the case of Chile, they're a longstanding partner of NASA's. We have a very positive U.S. government relationship with them, and the State Department encouraged us to do whatever we could to try to help out within the scope of the funding that we had available. We were strongly encouraged to do whatever we could from the deputy assistant secretary level down to the desk folks.

WRIGHT: Just those couple of days, with all the activities going, it almost sounds like you had nothing else to do except work on the Chilean desk. Other things, I'm sure, had to be set aside to work on this.

CONDES: Yes. It was actually a difficult bureaucratic exercise because we had to figure out under what mechanism we would even have our people work with them. We didn't have an agreement in place that was suitable. We looked at what agreements we have in Chile, and we have one for aircraft flying down to Antarctica to do research, which is with an airport authority, then we had another one for the [Space] Shuttle emergency landing site agreement. Neither of those really lended themselves to being able to support this activity.

One of the concerns that we had was the liability associated with our team's involvement. If we gave advice that tragically resulted in loss of life or injury or something, or was perceived by people to do that, would we be liable, and how would we protect ourselves? There was a lot of discussion amongst our lawyers and the State lawyers about how we could do that. Unfortunately, the amount of time we had available and the situation that the folks were in, because at that time it was really dire. They weren't getting water, the air was foul, and it wasn't looking good. We really wanted to be able to react, and we didn't want this to be the reason why we couldn't.

We were able to convince ourselves after a lot of discussion that it was okay to be able to consult, that we were providing advice to the government of Chile, but it was really their call on what actions they took. We went to great lengths to make sure that people understood that we were helping them and it's their rescue; it wasn't ours. Dr. Duncan will reaffirm that, and if you look at what he said in the press, we made sure that that was an important point. It wasn't just for liability; it was also because it was their rescue, and they only asked us to help in a small part of it.

I mentioned earlier that there were a lot of great ideas floating in; there was just an abundance of them. How could we dig the hole better? How could we get air to them? How

could we get water? There were all kinds of ideas that weren't asked for. The Chileans are some of the most advanced miners in the world, and their mining safety record is really good, their abilities to mine are really good, and they didn't need our help with that kind of stuff. What they really wanted was the help in isolation and medical conditions of our folks that we've encountered with folks under stress. We had to make sure that we focused the NASA effort in that direction.

We decided, though, that there would be some value in having somebody from the [NASA Engineering and] Safety Center [NESC] at Langley Research Center be part of the team. It turned out that the gentleman that they identified had been a former submarine captain, and so it was perfect. The guys in Chile that were leading the activity were from the Navy, their lead guy was also a submariner, so that worked out perfectly. He was a nice complement to the team. Whereas we had doctors and psychologists, he was an engineering guy who could reach back with the engineering community here at NASA, because the NESC has the ability to reach out agency-wide and ask for support in whatever area they want. They were able to ask questions in different areas and get quick answers back to the Chileans on stuff that wasn't necessarily related to health and medical.

WRIGHT: You made the decision to put this team together and to let them go, how did you get them there in such a quick turnaround time, and what were their instructions from NASA and what were the expectations from NASA for that team?

CONDES: Part of our difficulty initially was just getting to the right Chileans. We had been asked by the head of the Chilean Space Agency, which was a pretty small crew. The gentleman

knew that NASA had capabilities, but he never really worked with us. The folks that were leading the rescue were really from the [Chilean] Health Ministry and also the Mining Ministry, and so in order to work effectively with them, we had to find out what their requirements were.

Dr. Duncan and I both had some email exchanges, and I had some phone calls with the Chileans trying to get to the Minister of Health to make sure we understood what it is he needed from NASA. It was about two days, the second day, I think, we were finally able to organize a telecon [telephone conference] for Dr. Duncan to talk to them and make sure that we understood what it is they wanted, and that the team that we had put together or were thinking about putting together was the right team to answer their questions. Mike can tell you about that very first telecon. It ended up that the direction we were heading was what they were after, and the folks that we identified were perfect to meet the needs that they had identified that they really wanted. They reaffirmed that they didn't want all these other ideas, that they really wanted us to focus in this one area, so we did.

WRIGHT: Clint [Clinton H.] Cragg mentioned that it was important for you that they all went together as a team, because he mentioned that he had to fly from Virginia to Houston so they could all go out together. Apparently they were greeted with great adulation when they got there. Can you share what you heard about when the team got there?

CONDES: Part of the bureaucracy was just getting them in country, and we had to be able to get visas. Even though we were doing this urgent emergency support, we still had to go through the bureaucracy of getting visas. I ended up having to write a lot of letters and make calls to the consulate down in Houston and the embassy here. In fact, I talked to the Ambassador several

times to get our folks visas so they would be able to arrive and get in country in the short amount of time that we wanted them there.

At the same time I was working with the U.S. Embassy in Santiago [Chile], and then later Dr. Duncan, about what our team would be doing. Okay, they were going to come. So then what? Who would they meet? How would they plug in? Who would they talk to? How could we understand the situation and be able to give our advice?

We had different points of contact starting to roll in on us, so we were trying to work through the embassy to make sure we had the right folks. Well, through that process the embassy helped us to understand that it really was the Ministry of Health that was driving the train, and that we should really work to focus our involvement through them and have our team there working through points of contact that they help us establish. That pushed us to make sure that the team arrived at the same time so that the embassy could be there to make sure that their interactions with the Chileans were the most effective, given the limited amount of time we had to be in country. So we encouraged Clint to join the team to be there.

The other thing that was happening was there was huge press interest, particularly in Chile, but in the U.S. it really took off. In fact, we ended up doing a press availability before the team left, to allow them to answer questions about what we were doing. Again, if you look at that stuff, you'll see that we were trying to stress that we weren't there to rescue; we were there to help.

We knew that when our team hit the ground, it was going to be a big deal, and the embassy knew it, and they had public affairs officers assigned. We had a lot of discussion about making sure that we focused our people and had them interact with the press and others in a way that wasn't undermining what the Chileans were doing in their efforts and their public outreach

on what they were doing. We didn't want to look like we came in to fix a problem; we were just there to help them. That theme flowed through everything we did, our press statements about it, our RTQs [response to queries] that we put together, the materials that we had and we provided to [Capitol] Hill and to the White House and to others to understand what our role was were carrying that same theme.

WRIGHT: Once they were there, what type of feedback were you getting about their involvement and how their suggestions and recommendations were being received?

CONDES: Dr. Duncan was calling me, I think every day. It was over the weekend; I remember he was calling me at home a couple of times. We were talking every day about how it was going, how it was working with the embassy, how it was working with the Chileans. He was helping me because I was back here writing RTQs for our PAO [NASA Public Affairs Office] folks to be able to respond to the press and Hill inquiries. We got a lot of Hill inquiries about what we were doing. There was so much U.S. press about it that a lot of people were interested in what NASA's role was and what we were doing and how we were helping, so we had a lot of questions.

WRIGHT: Were the inquiries on a positive note?

CONDES: Very positive, very positive. In fact, through this whole process I only saw one negative comment, and it was from a Chilean who accused us of not doing what we did, and that the Chileans did it themselves and they didn't use any of our support. I ended up writing him a

letter explaining to him that he was right, the Chileans led the effort, we were only advisors, and any decisions that were taken were really the Chilean government's, of course. I believe that satisfied him. I know he subsequently wrote to Clint a little of the same flavor but toned down a little bit from what he wrote to me.

WRIGHT: They were there only a short amount of time and were able to come back and, then again, make some more recommendations. Tell us about the after-trip when they came back to the United States, and then what their work was, how it continued with the Chileans, and how NASA continued their effort to help.

CONDES: Dr. Duncan can probably give you the details better. From my perspective, they went down there, they assessed the situation, they were able to come back with an understanding of what support NASA could provide, not just in health and medical. After we went down there was really when Clint started to see that there were some engineering things that we could provide them to help them with the capsule that they ultimately designed. He was reaching back to the community here while they were down there already with questions that he was fielding on the ground from folks and asking them for their thoughts. The same with Dr. Duncan. Even when they were there, they were calling back to JSC to consult with people to see how they could help.

One of the main things for us, I think, was that by going down there we identified clear points of contact on who we could talk to, to work with to get our answers and our support to effectively. They established relationships that I believe are continuing with some of these folks on providing advice in a bunch of different areas. Meeting them, having some time with them,

and building some confidence and trust resulted in them embracing some of the recommendations that we gave them and feeling free to ask us for help and just having a rapport that we wouldn't have otherwise had had they not gone, I believe.

It ended up being a really positive thing that we were able to react so quickly, get a team on the ground, assess the situation, come back, and be able to feed them advice. Then we were shifted more to a consultancy-type thing where they could call us with questions and we would continue to provide advice and guidance. I think Dr. Duncan had fairly regular telecons with them during that timeframe.

WRIGHT: What other areas of NASA were involved? You mentioned the Life Sciences Group from JSC, and we've talked about the Engineering and Safety Center out at Langley. Are there other areas within NASA, certainly within your own department, different people that helped move this faster than you would have expected in the short amount of time that you had?

CONDES: Within my office we were doing a lot of things to help logistics. I ended up paying for their travel out of my budget; we did all their orders; we did all their arrangements. In terms of technical stuff, probably the best person to ask would be Clint. I think I mentioned the NESC reaches out across the agency, so I know he was tapping experts of different places in the agency, so he's probably better to answer that question.

WRIGHT: I know that Al [Albert W.] Holland mentioned that in the beginning trying to communicate and across the cultural and language barriers, they felt that might be a challenge

that would be a bit difficult to face, but he said that a lot of the communication was sent with someone providing translation. I was curious, did that come from your office as well?

CONDES: My office manages the agency's translation support contract, and so initially I was using my very poor Spanish. Then we subsequently were able to get a professional translator up here that I made available to the folks at JSC to be able to translate documents and also to be on their telecons. When the team went down there, I also paid for local interpreters from the embassy that they arranged to be with our team and to be available for the team members to use so that they could make sure they understood what was being asked of them.

WRIGHT: It's quite an effort, because normally people think of things that we do above ground, not below ground, but yet your department reached out and made sure that these things happened. How does this fit into the overall mission of NASA and where NASA wants to move to in the future?

CONDES: Well, I think it was a great opportunity for us to use some of the capabilities that we've developed in space to have a practical application here on Earth. We do it in a lot of other areas at NASA. In Earth science in particular, some of the stuff we're doing in space has huge positive benefits here on Earth for people in their everyday lives.

This activity for me was particularly exciting because of the human element. The fact that we were able to be engaged and help these guys come out safely and healthy was a testament to our folks at JSC and some of the stuff they do and our engineers at Langley to be able to contribute. It's a return on the U.S. taxpayers' investment.

I think the lessons learned that are going to come out of this conference that we hope to hold probably will have some great applications for mining here in the United States. Once the stuff's documented, we can share with others and maybe have some positive future impact on other folks who are in similar situations.

WRIGHT: How does this work with the mission of your area as far as international cooperation and efforts? You mentioned that you already had a relationship with the Chilean Space Agency, but do you see this being possibly a breakthrough for other countries that may seek NASA's assistance that they didn't even know that they could be helped with?

CONDES: Since the inception of our agency, we've had international cooperation as part of our mandate. We've had over 3,000 agreements with over 115 countries around the world, and so we have a long history of cooperation with different countries. Most recently, though, I've had an emphasis on working with some non-traditional partners, and we've really been reaching out in Latin America, Africa, the Middle East, and Asia to some folks that we haven't really worked with in the past.

In some of the cooperation, because of their capabilities and interests, we've really been more focused on applications activities, education, Earth science, different things where NASA can spin off some of our stuff and pilot projects where they can take it. Maybe somebody else will find it useful, and they'll ultimately fund it themselves. We demonstrate that getting the data from one of our satellites is useful for fire detection or urban planning or something like that, and then they embrace it, we teach them how to use it, and then we can step back from it, and it becomes something of interest to them. That helps develop capabilities there. It's a

benefit to us because it's demonstrating the use of our stuff, and they ultimately grow into partners that we work more with.

I think in Chile now there's a strong interest in doing more with us. After the rescue, Juan Fernando [Acuña Arenas], the head of the Space Agency that originally contacted Lori, actually came up to visit me to talk about whether or not we could establish an umbrella agreement between the U.S. and Chile to do more cooperation in other areas, more focused on space and Earth science in particular.

We already do some work there through NASA-funded research where they have analog sites where it looks like Mars. They're in the high desert, so a lot of our researchers go down there with their different instruments to test and work with them. Because of that, there's a community now there in Chile that's interested in doing that. They have some observatories, they have some tracking stations, we have the Antarctic work. There's a capability and interest that I think in the future will be enhanced.

WRIGHT: You've been doing this type of work for almost twenty-five years, working with international partners, and this was a different circumstance. Can you share with me some of the lessons that you had learned before in your international work in doing negotiations of what you felt had to be in place? You talked about risk and liability, and we're all very grateful that things worked out the way that they did, but there had to be some thoughts floating in your head of what could happen if it didn't go well. Can you share those thoughts, because there had to be a lot of thoughtful decisions?

CONDES: It's different depending on the relationship and the maturity of the relationship we have with countries. We have probably fifty agreements with France, and our understanding and our working together with France, nobody even bats an eye about it. In Chile we have two agreements, and so when we go to do our third, I suspect it will be big news. It will be in the press; it will be something that the Minister will want to highlight. If we sign this umbrella agreement, who knows, we may even get the President standing behind Charlie as he signs it. The visibility of our involvement with smaller countries, our non-traditional partners, becomes pretty significant. Mr. [Michael F.] O'Brien [Associate Administrator, Office of International and Interagency Relations] went to Oman a few months ago for the first time, and he was on the front page of the widest circulated newspaper. The Minister had an arm around him and it was this big deal. So that's one thing.

I think for some of these non-traditional partners, too, they're a little bit overwhelmed by working with NASA and they're not sure how to deal with it, and it often gets escalated to the highest levels in their governments. Whereas my staff might be working with engineers and scientists and administrators at a lower level in, say, a French space agency, in Chile I'll be working with the Minister. I was talking to the Minister of Health because it's so significant for them. Well, it's good and it's bad. It's good because the Minister's embraced it and people want to do it, but it's bad because the working-level troops aren't involved, and so the details are a little bit harder to get in place. To get the relationship actually going is a little bit more difficult, it's a little more bureaucratic because you're working at such a high level. When you're working at that high level, all of a sudden the State Department is very interested because you're meeting with ministers; you're getting exposed to the president. So it makes it a little bit more difficult to work.

Throughout my career, though, the NASA logo, the NASA program is embraced positively around the world. Anywhere you go, people want to work with us. They just want to be part of NASA and work with us and do what we do, so it's always been a really positive experience everywhere that I've been and that our staff has been, that I'm aware of, just wanting to cooperate and have some part of what we do.

WRIGHT: Now it's been almost a year since this event happened. Sitting here and listening to you think back on it, it all sounds like everything just started to fall into place the way it should. Can you remember any glitches or any times you didn't think things were going to make it through?

CONDES: Yes. It was really hectic at the outset, just simple stuff, like I mentioned visas, but just finding the points of contact to even have a dialogue with. They wanted help, but we couldn't get anybody to call us back to tell us what the help was. I think I mentioned it took two days before Dr. Duncan was actually able to talk to the Minister, who was really the person we had to talk to to find out what support they wanted. So that was happening.

Being able to fund this activity. I actually went up to the Administrator and I told him that I thought it would be a great idea if we did this, told him I could fund it out of our office, and that it would be beneficial, and he agreed, and we did it. It could have gone a different way, and we could have, like some other U.S. government agencies, said, "Sorry, we really can't unless somebody helps fund us."

I think at the end of the day we were probably one of the very few that contributed in the U.S. government. Even the State Department's support, we had to reimburse them. There's just no funds available to do this kind of activity, so that was difficult and it almost went off there.

I mentioned the liability. Right before our team's going, we had some fairly significant and lengthy discussions with the State Department, our lawyers here, the embassy in Chile about whether or not we could get an agreement in place. We actually drafted something that we presented to the Chileans, and it overwhelmed them, frankly. Bill's familiar with them, but we do these agreements that have boilerplate legal language, particularly in the area of liability, that if you've not been exposed to it before, it'll scare the hell out of you. So we laid that on them, and they got scared.

We ultimately received a very simple letter that said something along the lines of, "Your team is waived of any liability, and the government of Chile is taking all the decisions," or something. It was four sentences that somebody had written down in response to me expressing concern about liability. At the end of the day, that's what we ended up with.

WRIGHT: And it worked.

CONDES: Yes, thankfully.

WRIGHT: I have to assume the communication got better, too, like you found the right people. Speaking to the other members of the team, they each had a counterpart on the other side, and you said yours was actually the Minister of Health.

CONDES: His counterpart was a lot of people. In a small country like that, you very quickly get to the top, as opposed to NASA, where we have thousands of people. But, yes, the Chief of Mission at the embassy here, the Chilean Embassy, he and I spent a lot of time working together. The Ambassador here was very supportive and very interested in making sure that NASA was involved and supported, and the Minister, as well as Juan Fernando, the head of the Chilean Space Agency, he did everything he could.

Our embassy in Santiago was really the star. Those guys were working tirelessly for us to make sure that we had everything we needed when our team hit the ground, and that we were thinking about the right things and meeting the right people, and making sure that when we were doing press events, that they were well handled and professional, and helping us to make sure that we were a success as well.

WRIGHT: While they were there, your team was involved in a couple of press conferences. Were you able to watch those?

CONDES: Some of them. Some of them I was able to listen. Some of them I got feedback afterwards, but they were all very positive, and I was getting stuff near real time from the embassy folks saying, "You guys are doing a great job. Keep it up." I was watching them from afar to make sure that we were staying on track.

WRIGHT: As in all good government work, reports always have to be filed. Did you have to do any specific reporting when this was over, or was it just part of the rest of what you do in this office?

CONDES: It's pretty much what we do. We're not saving people every week, but we're doing international relations all the time, and because of NASA's mission, frequently they're on an urgent basis like this. You know from being at JSC, some of the stuff we do on the [International] Space Station, we've got to have it yesterday and we have to get it through [U.S.] Customs and it's got to get up on orbit or something's going to happen. We're always doing that. Or we have spacecraft that are going to be launching in a week, and we'd better have some arrangement to get something into the country or to get someone in or to do some work on it. We're like that all the time because we have so many operational programs. But that's what makes it fun, right? I come in here every day and it's always different. Like you popped up today.

WRIGHT: So many people were appreciative of what NASA did, including the President of the United States [Barack Obama]. Could you share with us the event at the White House and how that happened?

CONDES: I didn't get to go to the White House event. They only asked for the people that were down in Chile, and so I didn't get to go to that. I did get to go to a small reception that Charlie and Lori hosted for us after they returned from the White House, and that's where Charlie presented me with the medal, an Exceptional Achievement Medal for my involvement, and so did the other team members. The five of us got medals from Charlie. That was pretty neat. Dr. Duncan did a really nice presentation down in our auditorium here that you might want to look at if you haven't seen it. It was a great summary of all of our activities, and he talked a little bit

about his meeting the President. There's a great picture we tease Mike about where the President's talking, he's looking in a different direction, so you can ask him about that when you interview him. What was he looking at out the window?

WRIGHT: Where were you the night that they rescued the miners?

CONDES: I didn't go to the reception. The Ambassador called me, and, unfortunately, I wasn't able to do it because of a family event, but I was watching it on TV with my family and it was pretty doggone exciting. It was really just heartwarming. It was neat to have played a role in that and to be able to tell people that I played a role in it. It was really rewarding. It was one of the most positive things I've done since I've been here.

WRIGHT: That's a nice thought. J.D. [James D. Polk] mentioned that he felt like they went down representing the government, but they all left as friends. It's nice to know that you all have developed some great friendships and relationships down there.

CONDES: Yes, it is.

WRIGHT: Our time's getting close to the end, but I was going to ask Jennifer or Bill if they had a couple of questions. Bill, you have anything?

BARRY: No, I think you've covered the waterfront pretty much.

CONDES: Can I just add one thing?

WRIGHT: Oh, please. Yes.

CONDES: You didn't really ask me about it, but it really made me feel good about what we were doing—Dr. Duncan can tell you more—but there was discussions about circadian rhythms and the lighting that the folks had down in the mine, and there was some idea that there was better lighting that can be provided to the miners. So a guy who owns a company down in Florida [Lighting Science Group], on his own initiative, developed some lighting and engineered it so that it could be sent down in the Paloma [capsule] to get to the miners.

I spent some time working with him on how to get it out of the United States and get it down to the miners. Ultimately, it didn't get used, but the idea that this guy wanted to contribute it and provide it free of charge to the Chileans, I mean he paid for the design, the development, the shipment, everything, and he just did it out of the goodness of his heart because he wanted to contribute. I thought that was really amazing and a neat thing.

WRIGHT: Al Holland mentioned him as well.

CONDES: Fred [Maxik].

WRIGHT: He talked about the fact that there was that issue with Customs, that he did everything on his own and then it just couldn't get through, so it was a disappointment. In fact, Al didn't know if it had actually ever gotten used, so do you know for sure?

CONDES: I was told that it didn't get used. I was working with the Embassy. We were working the Chileans. We just couldn't get it. That was an example of bureaucracy that was ridiculous. It surprised me. On the bureaucratic front, it surprised me that more people weren't jumping through the hoops that we were to help these guys, because at the time we thought they were going to die. It was a pretty bad situation, and just to have to deal with some of the bureaucracy as if it was an everyday occurrence, trying to go to Chile as a tourist. There were just these bureaucratic things. I was shocked that they couldn't be overcome in our government and the Chilean. Just the way it is.

WRIGHT: A couple of the team members had mentioned that right away they had come up with a quick list of recommendations, and I know that the engineering folks came up with a "what if" list, and they sent those through, but they weren't quite sure they had ever reached the other side. Do you know if they initially got across to the Chilean team?

CONDES: Well, we think they did. I saw the correspondence. It's hard to know, because they were running in so many different directions, and like I said, the Minister was running the whole thing. It's a small team, and so it just went into this hole. When I talked to the team afterwards, they were saying they saw some of their recommendations being implemented, so they felt like they had been read by some folks and that actions were taken because of them. I think they were. They just weren't immediately responded to, but you would expect that with all the stuff they were doing.

WRIGHT: Things did seem to progress a lot faster than was originally estimated. Do you believe that NASA would have been able to stay in for the long commitment if it had lasted another two or three months? Do you think that you'd have been able to sustain that relationship that long if they would have needed you?

CONDES: I don't know. I was pushing the edge of the envelope on the funding that I had available to support the initiative. We probably would have had to talk some more with folks about it. I think the positive press associated with our involvement would have helped us to overcome that, but you never know. I mentioned we had a lot of congressional inquiries. Well, I always like to think that they were for positive reasons, but sometimes they may not be. They may be for other interests, wanting to understand why we were doing something that maybe necessarily wasn't our main focus for the agency. So I don't know.

WRIGHT: It's good we didn't have to think about it, didn't have to worry about it.

CONDES: Yes.

WRIGHT: Jennifer, do you have a question?

ROSS-NAZZAL: You talked about how some other federal agencies didn't join in, they weren't as active because of funding issues. Was DoD [Department of Defense] involved, and were you involved working with them? Because obviously they worked in submarines, they worked with people in isolation. Were you working in tandem with them to develop recommendations?

CONDES: No. I wasn't. I don't know. You can ask Clint whether he reached out to them. The hub of the wheel was State, and so they were reaching out to us, they were reaching out to DoD, they were reaching out to Geological Survey and these other folks, and we didn't necessarily come together. It was really through them. I had no direct involvement with DoD. I was aware they were talking to them, and somewhere in my notes I can tell you exactly what they were asking for and who they were talking to, but we didn't have a direct involvement.

Ross-NAZZAL: You mentioned that Chile reached out to you because the agency had experience with people in isolation, perhaps people under distress. Can you elaborate on that a little bit more in terms of besides being at, say, Space Station or in Skylab, maybe in terms of NEEMO [NASA Extreme Environment Mission Operations], maybe some work in Antarctica? Can you elaborate on some of those different fields you may have tapped into?

CONDES: Probably Dr. Duncan would be a better person to ask that question to. I think the Chileans were aware of our expertise and that's why they came to us, but Dr. Duncan's probably the better person to talk to.

Ross-NAZZAL: Rebecca had just mentioned that they were in the country for a limited time when they went down. Was that primarily because of funding issues, or was there a specific reason they were only there for a short time?

CONDES: Really it was a fact-finding trip, so there wasn't a need for them to stay for an extended period of time. They were really going down to see the situation, see how we could help, and then come back and be available on an advisory capacity, because, again, it wasn't our rescue, right? We were really just feeding their experts, their doctors, their engineers on their activities, and it didn't really require us to be there full-time.

There was some discussion about potentially having the team go down again, but things got pretty positive not too long after our team was down there. They made contact, and then things started to stabilize once they were able to get food and water and air to them and get into a steady-state operation where they can sustain them down there and keep them alive. Once that happened, it made it a lot easier.

When we got involved, it was not looking too good. They had just made contact with them a few days earlier. They hadn't had water. They'd lost a lot of weight. Dr. Duncan can give you some of the feedback. Somewhere I have a report that he initially wrote for me on that first telecon that we had with the Minister, when he gave the state of affairs of the miners, and it wasn't very good. The heat was unbearable, and the conditions they were under were pretty extreme.

WRIGHT: Are there any other thoughts you can think of before we close out?

CONDES: No.

WRIGHT: That was a simple answer.

[End of interview]